SUBMISSION COVER SHEET

Registered Entity Identifier Code (optional): 13-151 **Date: April 24, 2013**

***IMPORTANT*: CHECK BOX IF CONFIDENTIAL TREATMENT IS REQUESTED.** ☒

ORGANIZATION	**Chicago Mercantile Exchange Inc.**

FILING AS A: ☐ **DCM** ☐ **SEF** ☒ **DCO** ☐ **SDR** ☐ **ECM/SPDC**

TYPE OF FILING

- **Rules and Rule Amendments**
  - ☐ Certification under § 40.6 (a) or § 41.24 (a)
  - ☐ "Non-Material Agricultural Rule Change" under § 40.4 (b)(5)
  - ☐ Notification under § 40.6 (d)
  - ☐ Request for Approval under § 40.4 (a) or § 40.5 (a)
  - ☐ Advance Notice of SIDCO Rule Change under § 40.10 (a)
- **Products**
  - ☒ Certification under § 39.5(b), § 40.2 (a), or § 41.23 (a)
  - ☐ Swap Class Certification under § 40.2 (d)
  - ☐ Request for Approval under § 40.3 (a)
  - ☐ Novel Derivative Product Notification under § 40.12 (a)

RULE NUMBERS

N/A

DESCRIPTION

39.5 Submission for OTC FX

Confidential treatment is requested for certain documents included in this submission

Jason Silverstein
Executive Director and Associate General Counsel
Legal Department

April 24, 2013

BY ELECTRONIC SUBMISION

Ms. Melissa Jurgens
Office of the Secretariat
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, N.W.
Washington, DC 20581

Re: **Supplemental 39.5 Submission for OTC FX Swaps**
CME Submission No. 13-151

Dear Ms. Jurgens:

In connection with the Commodity Futures Trading Commission's (the "Commission") request to Chicago Mercantile Exchange Inc. ("CME") relating to the Commission's mandatory clearing determinations, dated February 1, 2012, CME is hereby supplementing its February 22, 2012 submission No. 12-053 (the "CME Submission 12-053") to the Commission with additional information relating to OTC FX swaps that CME was accepting for clearing after the date of enactment of the Dodd-Frank Act and as of the date of such request. In CME Submission 12-053, we informed the Commission that we were clearing 38 OTC FX products that were either Non-Deliverable Forwards ("NDF") or Cash-Settled Forwards ("CSF" and together with the NDFs, the "Cleared FX Swaps"). We are supplementing CME Submission 12-053 with information about the Cleared FX Swaps in accordance with Regulation 39.5.

Pursuant to Regulation 39.5(b)(3)(i), CME states that it is eligible to accept the Cleared FX Swaps for clearing as it they are within a group, category, type or class of swaps that CME already clears. Should the Commission determine that any such swaps are required to be cleared, CME will be able to maintain compliance with the DCO core principles set forth in Section 5b(c)(2) of the Commodity Exchange Act and the regulations promulgated thereunder. This supplemental letter provides specific information required by Commission Regulation 39.5 and incorporates CME Submission 12-053 as appropriate.

In accordance with Regulation 39.5(b)(3)(ii)-(viii), we are providing the following information in support of this submission:

39.5(b)(3)(ii)(A): Outstanding Notional Exposures, Trading Liquidity and Pricing Data

Enclosed is the 2010 Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity. The Report provides the total average daily volume of outright forwards in the currencies of the NDF cleared by CME. Please note that the report does not specify NDF activity separate from the outright forward transaction information. The report is attached as Exhibit A.

39.5(b)(3)(ii)(B): Rule Framework, Capacity, Operational Expertise and Resources, Credit Support Infrastructure

We incorporate by reference CME Submission 12-053, attached as Exhibit B, and note that the Cleared FX Swaps are subject to the Base Financial Safeguards including the Base Guaranty Fund as further described in the CME Rulebook which is available at http://www.cmegroup.com/market-regulation/rulebook/index.html. CME Rule Submissions 11-360R and 11-144, enclosed herein as Exhibit C, provide product rules for each of the Cleared FX Swaps. Additionally, we are enclosing our operational guide for clearing members titled the "Operational Handbook for CME Cleared OTC FX" and which is designated for confidential treatment.

39.5(b)(3)(ii)(C): Effect on Mitigation of Systemic Risk

While markets in certain OTC derivatives asset classes continued to function well during the recent financial crisis, the crisis demonstrated the potential for systemic risk arising from the interconnectedness of OTC derivatives market participants and the limited transparency of bilateral counterparty relationships. To help mitigate systemic risk in the OTC derivatives markets, the G-20 Leaders agreed that all standardized OTC derivatives contracts should be cleared through central counterparties by the end of 2012. One of the key goals of the Dodd-Frank Act is the reduction of systemic risk through the use of central clearing for OTC derivatives.

As a central counterparty, CME Clearing interposes itself between counterparties to the swaps (and other derivatives products) that it clears, becoming the buyer to every seller and the seller to every buyer. For each swap that it clears, CME Clearing provides all clearing house services, including a mark-to-market function, on a daily basis. Depending upon the particular asset class, CME Clearing may standardize contract-critical dates *(e.g.,* start dates, last trade dates, expiry dates) and other contract terms. This may enable customers who hold positions to liquidate or to adjust positions simply by buying back or selling the relevant contracts. The associated benefits are considerable:

- *Centralized clearing.* Clearing the Cleared FX Swaps through CME Clearing allows market participants to free up counterparty credit lines. The daily mark-to-market process employed by CME Clearing enhances customer risk management.
- *Operational efficiencies.* Centralized clearing of swaps reduces operational burdens in several ways. Standardization and centralized clearing enables consolidation of collateral management and cash flows and eliminates the need for novations or tear-ups.
- *Ease of position adjustment.* In non-cleared markets, the only means to completely eliminate the risk of a swap is to (i) enter into a tear-up agreement with the swap counterparty, or (ii) enter into a novation *(i.e.,* find another entity willing to assume its side of the swap). In either case, the tearup or the novation must be approved by the bilateral swap counterparty. For most asset classes, central clearing may be used to offset by a contra trade.

CME Clearing has the necessary resources available to clear the swaps that are the subject of this submission. With respect to margining in particular, please see CME Submission 12-102RR that describes the HVaR margin methodology for the Cleared FX Swaps also enclosed herein and is enclosed as Exhibit D.

39.5(b)(3)(ii)(D): Effect on Competition – Fees and Charges

CME Group does not believe that there will be a material effect on competition. The Commission has previously noted its concerns regarding the effect on competition when considering a proposed clearing

determination.[1] We believe the acceptance on the Cleared FX Swaps is consistent with the Commission's analysis and do not believe CME's clearing of the Cleared FX Swaps will have a negative impact on competition. The Fee Schedule for the Cleared FX Swaps is enclosed herein as Exhibit E.

39.5(b)(3)(ii)(E): Reasonable Legal Certainty in DCO or Clearing Member Insolvency

Please refer to our response in CME Submission 12-053 which is incorporated herein.

39.5(b)(3)(iii): Product Specifications

The product rules and specifications are contained in CME Rule Submission 11-360R and CME Rule Submisision 11-144 which are enclosed herein.

39.5(b)(3)(iv): Participant Eligibility Standards

The Cleared FX Swaps are cleared by CME OTC Clearing Members. We have enclosed the *CME Handbook for OTC Clearing Membership*[2] detailing the various requirements for OTC clearing membership at CME Clearing as Exhibit F. In addition, please see CME Rule 8F004 (OTC Clearing Member Obligations) which provides for the minimum requirements for a CME OTC Clearing Member.[3]

39.5(b)(3)(v): Pricing Sources, Models and Procedures

The product rules contained in CME Submission 11-360R and the Operational Handbook for CME Cleared OTC FX describe the pricing sources and procedures for the Cleared FX Swaps.

39.5(b)(3)(vi): Risk Management Procedures

CME Submission 12-102RR provides detail on the risk methodology for the Cleared FX Swaps which is incorporated herein. The Cleared FX Swaps are subject to the Base Financial Safeguards including the Base Guaranty Fund as further described in the CME Rulebook.

39.5(b)(3)(vii): Applicable Rules, Manuals, Policies and Procedures

Links to the applicable rulebook and copies of manuals and handbooks are included in this submission.

39.5(b)(3)(viii): Notice of Submission

Notice of this submission (without enclosures, many of which have been designated for Confidential Treatment) has been concurrently posted on CME's web site at http://www.cmegroup.com/market-regulation/rule-filings.html.

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[1] See 77 Fed. Reg 47183
[2] The Handbook can also be found at http://www.cmegroup.com/company/membership/files/CME-OTC-Clearing-Membership-Handbook.pdf
[3] http://www.cmegroup.com/rulebook/CME/I/8F/8F.pdf

Should you have any questions regarding this submission, or if any additional information is required, please contact me at (212) 299-2228 or via e-mail at jason.silverstein@cmegroup.com.
moon

Sincerely,

/s/ Jason Silverstein
Executive Director & Associate General Counsel

Enclosures

EXHIBIT A

2010 Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity

BANK FOR INTERNATIONAL SETTLEMENTS

Triennial Central Bank Survey

Report on global foreign exchange market activity in 2010

Monetary and Economic Department

December 2010

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Conventions used in the tables and graphs

0 = Value close to zero.

... = Reported to be nil, not reported, not shown for reasons of confidentiality, not meaningful or not applicable.

Owing to rounding and incomplete reporting of various breakdowns, the component items do not always sum to the total for the category in question.

Lhs, rhs = left-hand scale, right-hand scale

Participating institutions

Data on foreign exchange national turnover and amounts outstanding were provided by the following institutions:

Argentina	Central Bank of Argentina
Australia	Reserve Bank of Australia
Austria	Central Bank of the Republic of Austria
Bahrain	Bahrain Monetary Agency
Belgium	National Bank of Belgium
Brazil	Central Bank of Brazil
Bulgaria	Bulgarian National Bank
Canada	Bank of Canada
Chile	Central Bank of Chile
China	People's Bank of China
	State Administration of Foreign Exchange
Chinese Taipei	Central Bank of China
Colombia	Bank of the Republic
Czech Republic	Czech National Bank
Denmark	National Bank of Denmark
Estonia	Bank of Estonia
Finland	Bank of Finland
France	Bank of France
Germany	Deutsche Bundesbank
Greece	Bank of Greece
Hong Kong SAR	Hong Kong Monetary Authority
Hungary	Magyar Nemzeti Bank
India	Reserve Bank of India
Indonesia	Bank Indonesia
Ireland	Central Bank of Ireland
Israel	Bank of Israel
Italy	Bank of Italy
Japan	Bank of Japan
Korea	Bank of Korea
Latvia	Bank of Latvia
Lithuania	Bank of Lithuania
Luxembourg	Central Bank of Luxembourg
Malaysia	Central Bank of Malaysia
Mexico	Bank of Mexico
Netherlands	Netherlands Bank
New Zealand	Reserve Bank of New Zealand
Norway	Central Bank of Norway
Peru	Central Reserve Bank of Peru
Philippines	Bangko Sentral ng Pilipinas
Poland	National Bank of Poland
Portugal	Bank of Portugal
Romania	National Bank of Romania
Russia	Central Bank of the Russian Federation
Saudi Arabia	Saudi Arabian Monetary Agency
Singapore	Monetary Authority of Singapore
Slovakia	National Bank of Slovakia
South Africa	South African Reserve Bank
Spain	Bank of Spain
Sweden	Sveriges Riksbank
	Statistics Sweden
Switzerland	Swiss National Bank
Thailand	Bank of Thailand
Turkey	Central Bank of the Republic of Turkey
United Kingdom	Bank of England
United States	Federal Reserve Bank of New York

A. Summary of main findings on global foreign exchange markets

Previous triennial surveys have used the expression "traditional foreign exchange markets" to refer to spot transactions, outright forwards and foreign exchange swaps. This expression excluded currency swaps and currency options, which were discussed separately. Starting with the 2010 survey, the expression "global foreign exchange markets" includes all five categories of foreign exchange instruments. The analysis distinguishes between *spot transactions* and *other related foreign exchange instruments* (outright forwards, foreign exchange swaps, currency swaps, currency options and other foreign exchange products).

In addition, the format of the 2010 survey includes the following main refinements and clarifications of reporting procedures compared with the 2007 survey:

- The list of currency pairs has been expanded in order to capture transactions involving currencies typically used in carry trade strategies, namely AUD/JPY, NZD/JPY, USD/ZAR and USD/HKD. Trades in the Brazilian real, Chinese renminbi, Indian rupee and Korean won against the US dollar were also collected.
- A more detailed counterparty breakdown for each instrument has been collected for identification of execution method in order to include a distinction between "with reporting dealers, local" and "with reporting dealers, cross-border".

Despite these changes, the data presented here can be considered as being largely comparable with those of the previous triennial survey in 2007, notwithstanding the different structure of the results. Weighted average coverage of foreign exchange markets in reporting countries increased from 96% in 2007 to 97% in 2010.

1. Turnover in April 2010

- Global foreign exchange market turnover was 20% higher in April 2010 than in April 2007, with average daily turnover of $4.0 trillion compared with $3.3 trillion. The increase was driven by the 48% growth in turnover of *spot* transactions, which represent 37% of foreign exchange market turnover. Spot turnover rose to $1.5 trillion in April 2010 from $1.0 trillion in April 2007.
- The increase in turnover of *other foreign exchange instruments* was more modest at 7%, with average daily turnover of $2.5 trillion in April 2010. Turnover in outright forwards and currency swaps grew strongly (by 31% and 36%, respectively). Turnover in the large foreign exchange swaps segment was flat relative to the previous survey, while trading in currency options fell.
- As regards counterparties, the higher global foreign exchange market turnover is associated with the increased trading activity of "other financial institutions" – a category that includes non-reporting banks, hedge funds, pension funds, mutual funds, insurance companies and central banks. Turnover by this category grew by 42%, rising to $1.9 trillion in April 2010 from $1.3 trillion in April 2007. At 13%, the share of trading with non-financial customers was the lowest since 2001.
- Foreign exchange market activity became more global, with cross-border transactions representing 65% of trading activity in April 2010, while local transactions accounted for 35%, the lowest share ever.
- The relative ranking of foreign exchange trading centres has changed slightly from the previous survey. Banks located in the United Kingdom accounted for 37% of all foreign exchange market turnover, against 35% in 2007, followed by the United States (18%), Japan (6%), Singapore (5%), Switzerland (5%), Hong Kong SAR (5%) and Australia (4%).

2. Amounts outstanding and market values at end-June 2010

- Growth in the positions of OTC foreign exchange instruments was moderate at 9%, compared with an increase of 83% in notional amounts outstanding of currency instruments in the 2004–07 period.
- In contrast, market values of these instruments almost doubled against a backdrop of increased financial market volatility during mid-April and early June 2010.

B. Turnover in the global foreign exchange markets in April 2010

1. Growth of global foreign exchange turnover

The 2010 triennial survey shows another substantial increase in global foreign exchange market activity (spot transactions, outright forwards, foreign exchange swaps, currency swaps, currency options and other foreign exchange products[1]) since the last survey in 2007, following the unprecedented 72% rise in activity between 2004 and 2007.[2] In the wake of the financial crisis, global foreign exchange market turnover was 20% higher in April 2010 than in April 2007 (Table B.1). This increase brought average daily turnover to $4.0 trillion (from $3.3 trillion) at current exchange rates. Because euro/dollar exchange rates were almost unchanged in April 2007 and 2010, growth calculated at constant exchange rates was similar at 18%.[3, 4]

Global foreign exchange market turnover[1]

Daily averages in April, in billions of US dollars

Instrument/maturity	1998	2001	2004	2007	2010
Foreign exchange instruments	**1,527**	**1,239**	**1,934**	**3,324**	**3,981**
Spot transactions[2]	568	386	631	1,005	1,490
Outright forwards[2]	128	130	209	362	475
Up to 7 days	65	51	92	154	219
Over 7 days	62	80	116	208	256
Foreign exchange swaps[2]	734	656	954	1,714	1,765
Up to 7 days	528	451	700	1,329	1,304
Over 7 days	202	204	252	382	459
Currency swaps	10	7	21	31	43
Options and other products[3]	87	60	119	212	207
Memo:					
Turnover at April 2010 exchange rates[4]	*1,705*	*1,505*	*2,040*	*3,370*	*3,981*
Estimated gaps in reporting	*49*	*30*	*116*	*152*	*144*
Exchange-traded derivatives[5]	*11*	*12*	*26*	*80*	*168*

[1] Adjusted for local and cross-border inter-dealer double-counting (ie "net-net" basis). [2] Previously classified as part of the so-called "Traditional FX market". [3] The category "other FX products" covers highly leveraged transactions and/or trades whose notional amount is variable and where a decomposition into individual plain vanilla components was impractical or impossible. [4] Non-US dollar legs of foreign currency transactions were converted into original currency amounts at average exchange rates for April of each survey year and then reconverted into US dollar amounts at average April 2010 exchange rates. [5] Sources: FOW TRADEdata; Futures Industry Association; various futures and options exchanges. Reported monthly data were converted into daily averages of 20.5 days in 1998, 19.5 days in 2001, 20.5 in 2004, 20 in 2007 and 20 in 2010.

Table B.1

---

[1] Instrument definitions are provided in Section D (Methodology). See M King and C Mallo, *BIS Quarterly Review*, December 2010 (forthcoming), for a discussion of methodological issues that are important for correct interpretation of the survey data.

[2] Growth rates in this section refer to changes over three years unless otherwise noted.

[3] Foreign exchange growth in the earlier period was driven – apart from valuation effects – by factors such as low levels of financial market volatility and of risk aversion, and by expansion in hedge fund activity.

[4] For more details on the results of the 2007 triennial survey, see G Galati and A Heath, "What drives the growth in FX activity? Interpreting the 2007 triennial survey", *BIS Quarterly Review*, December 2007.

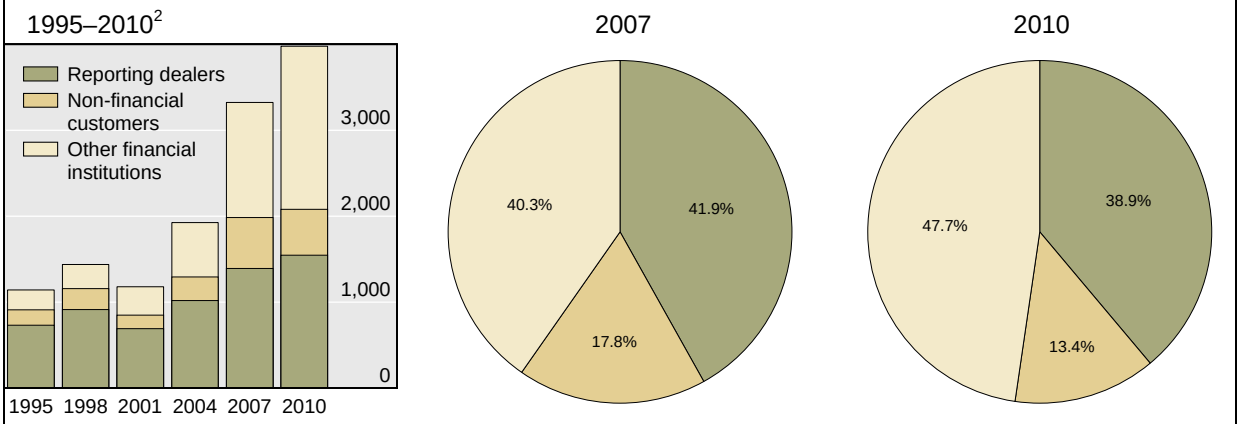
Turnover of outright forwards, foreign exchange swaps, currency swaps, currency options and other OTC foreign exchange products continues to be many times larger than the volumes traded on organised exchanges. Daily turnover for currency instruments on organised exchanges was $168 billion, less than 7% of the $2.5 trillion average daily turnover in those instruments (Table B.1).

2. Turnover by counterparty

Data for turnover by counterparty show that the increase in global foreign exchange market turnover in 2010 is largely due to the enlarged trading activity of *other financial institutions* – a category that includes non-reporting banks, hedge funds, pension funds, mutual funds, insurance companies and central banks[5] (Graph B.1). Turnover by this category grew by 42% to $1.9 trillion in April 2010 from $1.3 trillion in April 2007.

Reported foreign exchange market turnover by counterparty[1]

Daily averages in April



[1] Adjusted for local and cross-border inter-dealer double-counting, ie "net-net" basis. Excludes estimated gaps in reporting. Due to incomplete counterparty breakdown, components do not always sum to totals. [2] In billions of US dollars.

Graph B.1

Although a surge in activity with other financial institutions had already accounted for most of the growth in total turnover in 2007, this category's share (48%) surpassed transactions between reporting dealers (39%) for the first time in 2010 (Graph B.1). Other financial institutions increased their activity mainly in the spot market, with their share of turnover rising from 39% to 51%. In outright forwards, their share rose from 44% to 54% (Annex Table E.1).

Transactions between *reporting dealers* in the interbank market grew by 11% to $1.5 trillion in April 2010 from $1.4 trillion in April 2007 (Table B.2). Some of the factors identified as drivers of the downward trend in the share of the interbank market in analyses of previous triennial surveys, such as the increased concentration of the banking sector and the spread of electronic broking platforms, may also have had a dampening effect on interbank turnover.[6]

---

[5] M King and D Rime, *BIS Quarterly Review*, December 2010 (forthcoming), analyse in depth how the trading activity of participants in the "other financial institutions" sector has contributed to recent foreign exchange market turnover growth.

[6] See G Galati and M Melvin, "Explaining the surge in FX turnover", *BIS Quarterly Review*, December 2004, and G Galati, "Why has global FX turnover declined? Explaining the 2001 triennial survey", *BIS Quarterly Review*, December 2001.

Global foreign exchange market turnover by counterparty[1]

Daily averages in April, in billions of US dollars and per cent

Instrument/counterparty/ maturity	1998		2001		2004		2007		2010	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
TOTAL	1,527	100	1,239	64	1,934	100	3,324	100	3,981	100
with reporting dealers	961	63	719	37	1,018	53	1,392	42	1,548	39
with other financial institutions	299	20	346	18	634	33	1,339	40	1,900	48
with non-financial customers	266	17	174	9	276	14	593	18	533	13
Local	698	46	525	42	743	38	1,274	38	1,395	35
Cross-border	828	54	713	58	1,185	61	2,051	62	2,586	65

[1] Adjusted for local and cross-border inter-dealer double-counting (ie "net-net" basis). Due to incomplete reporting, components do not always sum to totals.

Table B.2

The lower share of turnover between reporting dealers is consistent with ongoing concentration in the FX industry. Among the top 13 global FX centres (covering 90% of global turnover), a decrease in the number of banks accounting for 75% of the turnover was reported between 2007 and 2010 in most centres. In contrast, in Denmark, Hong Kong SAR and Korea, an increase in competition is evident (Table B.3).

Concentration in the banking industry

Number of banks accounting for 75% of foreign exchange turnover[1]

Country	1998	2001	2004	2007	2010
Switzerland	7	6	5	3	2
Denmark	3	3	2	2	3
Sweden	3	3	3	3	3
France	7	6	6	4	4
Canada	6	5	4	6	5
Germany	9	5	4	5	5
Australia	9	10	8	8	7
United States	20	13	11	10	7
Japan	19	17	11	9	8
United Kingdom	24	17	16	12	9
Singapore	23	18	11	11	10
Hong Kong SAR	26	14	11	12	14
Korea	21	14	12	12	16

[1] Spot transactions, outright forwards and FX swaps.

Table B.3

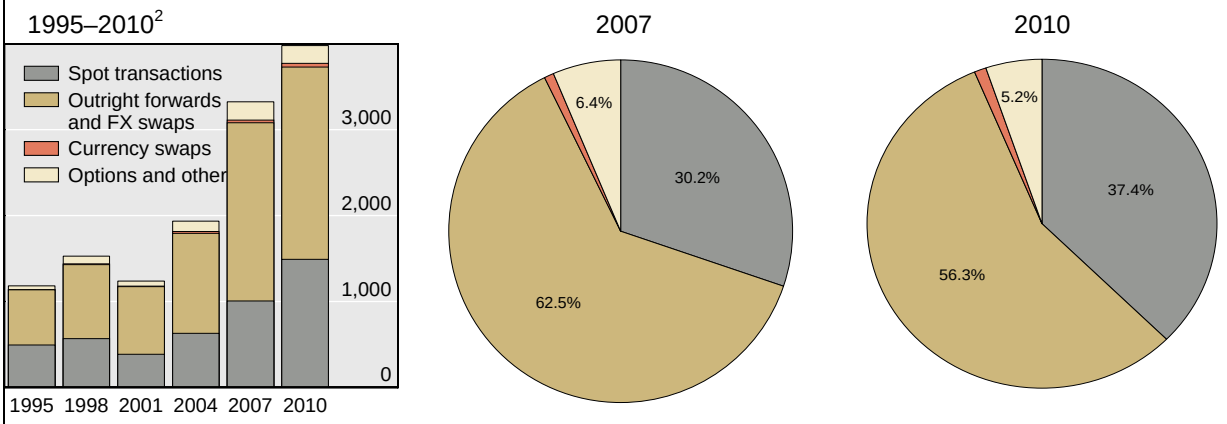
Foreign exchange market transactions with *non-financial customers* declined by 10%, falling to $533 billion in April 2010 from $593 billion in April 2007 (Table B.2). This category, which includes corporations and governments, now represents around 13% of global foreign exchange market activity, its lowest share since 2001. An increase in spot transactions by these counterparties was offset by a decrease in the use of foreign exchange swaps and currency options. The use of outright forwards and currency swaps by non-financial customers was relatively unchanged (Annex Table E.1).

3. Turnover by instrument

Foreign exchange *spot* turnover rose to $1.5 trillion in April 2010 from $1.0 trillion, an increase of 48% at current exchange rates (Table B.1). The increase in spot market turnover to a share of 37% of the global activity accounts for three quarters of the overall increase in global foreign exchange market activity relative to the previous survey (Graph B.2). The higher turnover in spot transactions is largely due to more active trading by other financial institutions, followed by inter-dealer trading (Annex Table E.1).

Reported foreign exchange market turnover by instrument[1]

Daily averages in April



[1] Adjusted for local and cross-border inter-dealer double-counting, ie "net-net" basis. Excludes estimated gaps in reporting. [2] In billions of US dollars.

Graph B.2

Trading activity in *other related foreign exchange instruments* continued to expand, but at a much more moderate pace than in the three years to April 2007. Average daily turnover in these instruments grew by 7% to $2.5 trillion in April 2010, compared with an increase of 78% in the previous three-year period (Table B.1). Turnover in *outright forwards* increased by 31% to $475 billion. Trading in *currency swaps* also grew strongly, by 39%, albeit from a much lower level, to $43 billion.

Foreign exchange swaps, the most actively traded foreign exchange instrument by far, are widely used by banks to raise liquidity across money markets for different currencies.[7] The dominance of reporting banks in this market has declined markedly over time, falling from 70% of total turnover in 1998, and around 60% in 2001 and 2004, to just 47% in 2010. At $1.8 trillion (+3%), the level of turnover is largely unchanged from the prior survey. The distribution of trading across other counterparties and maturities was also largely unchanged from 2007 (Annex Table E.1).

Finally, the use of *currency options* declined by 2% between surveys, with average daily turnover of $207 billion in April 2010. However, turnover in currency options with other financial institutions increased, their share in this sector rising from 43% to 55% (Annex Table E.1).

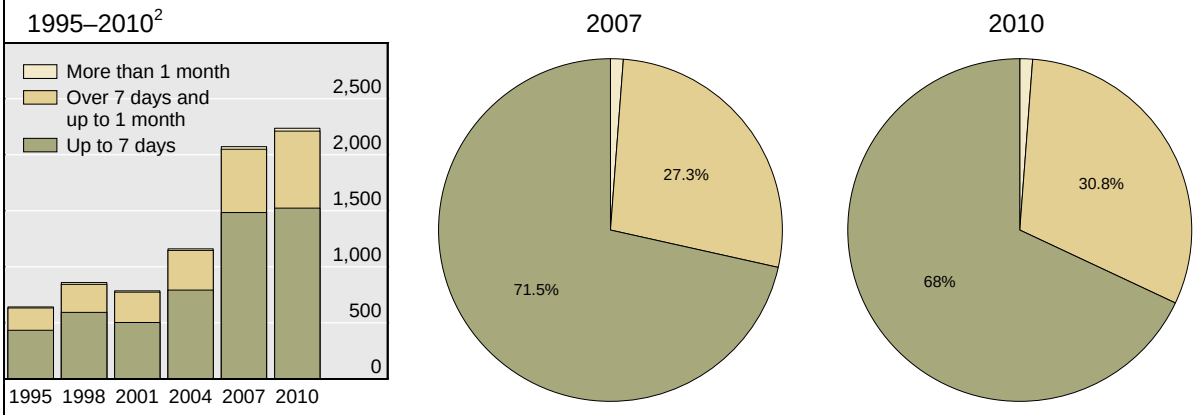
[7] Disruptions to the foreign exchange swap market during the 2007–09 financial crisis attracted considerable attention; see N Baba and F Packer, "From turmoil to crisis: dislocations in the FX swap market before and after the failure of Lehman Brothers", *BIS Working Papers*, no 285, July 2009.

4. Turnover by maturity[8]

The distribution of turnover by maturity, which is collected only for outright forwards and foreign exchange swaps (Table B.1 and Graph B.3), shows that the increase in instruments with a maturity of up to seven days was instrumental in the surge in turnover reported in 2007. Since then, the maturity distribution has remained fairly stable, with the share of short-term instruments dropping back slightly from 72% to 68% of turnover. With spot transactions having increased by almost half since 2007, it would, however, be unwarranted to conclude that the significance of short-term trades in the foreign exchange market has decreased.

Reported foreign exchange market turnover by maturity[1]

Daily averages in April



[1] Adjusted for local and cross-border double-counting, ie "net-net" basis. Excludes estimated gaps in reporting. Due to incomplete maturity breakdown, components do not always sum to totals. [2] In billions of US dollars. Graph B.3

5. Turnover by currency

The *currency composition* of turnover has changed only slightly over the past three years, with the relative share of the main currencies diverging somewhat (Table B.4).[9] The market share of the top three currencies (the US dollar, euro and Japanese yen) increased by 3 percentage points, with the market share of the top 10 increasing by only 1.4 percentage points. The biggest increases were seen for the euro and yen, and the biggest decline for sterling. The most significant increases in emerging market currencies were seen for the Turkish lira, Chinese renminbi and Korean won, followed by the Brazilian real and Singapore dollar.[10] The renminbi now accounts for almost 1% of global turnover, on a par with the Indian rupee and the Russian rouble.

---

8 Original maturity.

9 Because each transaction involves two currencies, the shares sum to 200%.

10 The shares of some currencies, in particular the Brazilian real, the Chinese renminbi and the Korean won, have benefited at the margin from a refinement in the data collection process, which encouraged reporting banks to report turnover for a more comprehensive set of currency pairs. For more details on the set of currencies covered by the survey, see the statistical notes in Section D.

Currency distribution of global foreign exchange market turnover[1]

Percentage shares of average daily turnover in April

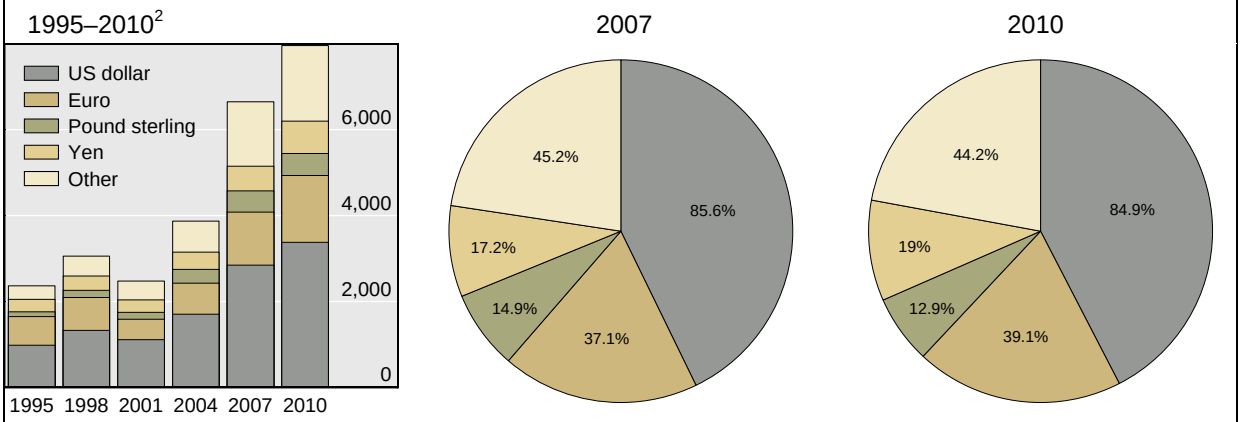
Currency	1998	2001	2004	2007	2010
US dollar	86.8	89.9	88.0	85.6	84.9
Euro	...	37.9	37.4	37.0	39.1
Japanese yen	21.7	23.5	20.8	17.2	19.0
Pound sterling	11.0	13.0	16.5	14.9	12.9
Australian dollar	3.0	4.3	6.0	6.6	7.6
Swiss franc	7.1	6.0	6.0	6.8	6.4
Canadian dollar	3.5	4.5	4.2	4.3	5.3
Hong Kong dollar	1.0	2.2	1.8	2.7	2.4
Swedish krona	0.3	2.5	2.2	2.7	2.2
New Zealand dollar	0.2	0.6	1.1	1.9	1.6
Korean won	0.2	0.8	1.1	1.2	1.5
Singapore dollar	1.1	1.1	0.9	1.2	1.4
Norwegian krone	0.2	1.5	1.4	2.1	1.3
Mexican peso	0.5	0.8	1.1	1.3	1.3
Indian rupee	0.1	0.2	0.3	0.7	0.9
Russian rouble	0.3	0.3	0.6	0.7	0.9
Chinese renminbi	0.0	0.0	0.1	0.5	0.9
Polish zloty	0.1	0.5	0.4	0.8	0.8
Turkish lira	...	0.0	0.1	0.2	0.7
South African rand	0.4	0.9	0.7	0.9	0.7
Brazilian real	0.2	0.5	0.3	0.4	0.7
Danish krone	0.3	1.2	0.9	0.8	0.6
New Taiwan dollar	0.1	0.3	0.4	0.4	0.5
Hungarian forint	0.0	0.0	0.2	0.3	0.4
Malaysian ringgit	0.0	0.1	0.1	0.1	0.3
Thai baht	0.1	0.2	0.2	0.2	0.2
Czech koruna	0.3	0.2	0.2	0.2	0.2
Philippine peso	0.0	0.0	0.0	0.1	0.2
Chilean peso	0.1	0.2	0.1	0.1	0.2
Indonesian rupiah	0.1	0.0	0.1	0.1	0.2
Israeli new shekel	...	0.1	0.1	0.2	0.2
Colombian peso	...	0.0	0.0	0.1	0.1
Romanian leu	...	...	0.0	0.0	0.1
Saudi riyal	0.1	0.1	0.0	0.1	0.1
Argentine peso	0.1	...	0.0	0.0	0.0
Peruvian nuevo sol	...	0.0	0.0	0.0	0.0
Lithuanian litas	...	...	0.0	0.0	0.0
Other currencies	8.7	6.6	6.5	7.6	4.6
All currencies	**200.0**	**200.0**	**200.0**	**200.0**	**200.0**

[1] Because two currencies are involved in each transaction, the sum of the percentage shares of individual currencies totals 200% instead of 100%. Adjusted for local and cross-border inter-dealer double-counting (ie “net-net” basis).

Table B.4

Reported foreign exchange market turnover by currency[1]

Daily averages in April



[1] Adjusted for local and cross-border inter-dealer double-counting, ie "net-net" basis. Excludes estimated gaps in reporting. Because two currencies are involved in each transaction, the sum of transactions in individual currencies comes to twice the total reported turnover. [2] In billions of US dollars.

Graph B.4

The *US dollar* continued the slow retreat from its 90% peak share of all transactions, reached in the 2001 survey just after the introduction of the euro. The share of foreign exchange transactions involving the US dollar has fallen over time, to 85% in April 2010 (Graph B.4). This decline benefited the *euro*, which gained 2 percentage points in market share since the last survey and accounted for 39% of all transactions. The *Japanese yen* also increased its market share by 2 percentage points, to 19%, a recovery relative to the 2007 survey but still below its 2001 peak of 24%.

Currency and instrument distribution of global foreign exchange market turnover[1]

Percentage shares of average daily turnover in April 2010

Currency	Spot	Outright forwards	Foreign exchange swaps	Currency swaps	Options and other instruments
US dollar	35.2	11.6	47.4	1.1	4.7
Euro	44.4	9.6	39.2	1.1	5.6
Japanese yen	39.7	15.2	36.9	0.9	7.2
Pound sterling	41.6	10.7	43.4	0.5	3.9
Swiss franc	36.4	7.5	50.2	0.7	5.3
Australian dollar	36.8	9.6	46.7	1.9	5.1
Canadian dollar	37.0	12.5	46.2	1.4	2.9
Swedish krona	21.5	9.8	64.4	0.8	3.4
Hong Kong dollar	19.9	4.0	74.0	0.4	1.8
Norwegian krone	23.4	11.7	60.0	1.2	3.6
Korean won	35.1	29.9	27.5	1.6	5.9
Mexican peso	36.3	10.8	47.5	0.7	4.6
New Zealand dollar	34.2	8.0	52.3	1.0	4.4
Singapore dollar	27.7	7.8	59.6	0.1	4.8
Danish krone	21.2	12.4	65.0	0.5	0.9
South African rand	31.7	9.9	54.3	0.5	3.6
Russian rouble	50.6	6.3	39.7	0.5	2.9
Polish zloty	22.4	11.1	59.4	0.6	6.5
New Taiwan dollar	31.9	35.9	25.0	0.5	6.7
Indian rupee	35.8	36.1	18.0	0.1	9.9
Brazilian real	31.3	47.3	2.9	1.4	17.1
Czech koruna	17.4	8.0	71.3	0.4	2.8
Thai baht	37.1	14.5	45.8	1.4	1.2
Hungarian forint	24.1	10.6	57.8	0.3	7.2
Chilean peso	38.8	48.2	9.0	3.5	0.5
Malaysian ringgit	38.0	37.9	20.2	1.2	2.7
Chinese renminbi	23.7	41.6	19.9	0.2	14.6
Israeli new shekel	23.1	7.3	58.6	1.3	9.6
Turkish lira	27.2	10.4	43.1	6.5	12.8
Philippine peso	33.5	35.7	17.7	2.8	10.2
Indonesian rupiah	40.9	44.2	11.1	1.1	2.7
Saudi riyal	50.6	11.6	37.8	0.0	0.1
Colombian peso	43.6	24.3	0.8	30.9	0.4
Argentine peso	85.0	13.9	0.3	0.0	0.7
Bulgarian lev	91.2	1.0	7.7	0.2	0.0
Bahraini dinar	31.1	22.2	45.6	0.7	0.4
Estonian kroon	39.5	4.6	55.9	0.0	0.0
Lithuanian litas	19.4	0.8	79.7	0.0	0.0
Latvian lats	18.8	2.4	78.8	0.0	0.0
Peruvian nuevo sol	64.6	34.6	0.3	0.3	0.2
Romanian leu	34.8	4.3	58.7	0.7	1.6
All currencies	**37.4**	**11.9**	**44.3**	**1.1**	**5.2**

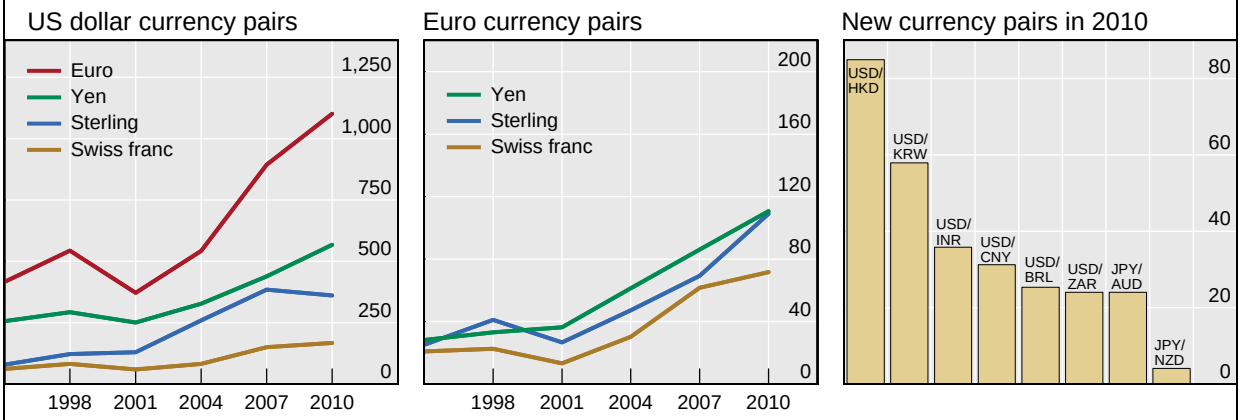
[1] Adjusted for local and cross-border inter-dealer double-counting (ie “net-net” basis).

Table B.5

6. Turnover by currency pair

Reported foreign exchange market turnover by currency pair[1]

Daily averages in April, in billions of US dollars



[1] Adjusted for local and cross-border double-counting, ie "net-net" basis. Excludes estimated gaps in reporting. Graph B.5

Turnover by *currency pair* in April 2010 (Table B.6) showed no major changes in ranking from three years earlier, although absolute turnover in the major currency pairs tended to increase, with the exception of dollar/sterling transactions (Graph B.5). USD/EUR remained by far the dominant pair (with a 28% share), followed at some distance by USD/JPY with a slight increase to 14% of turnover. The USD/GBP pair continued to retreat from its 2004 peak to a 9% share or about the level reached in pre-euro 1998, but the EUR/GBP pair gained almost 60% in absolute terms.

Global foreign exchange market turnover by currency pair[1]

Daily averages in April, in billions of US dollars and percentages

Currency pair	2001		2004		2007		2010	
	Amount	%	Amount	%	Amount	%	Amount	%
US dollar/euro	372	30	541	28	892	27	1,101	28
US dollar/yen	250	20	328	17	438	13	568	14
US dollar/sterling	129	10	259	13	384	12	360	9
US dollar/Australian dollar	51	4	107	6	185	6	249	6
US dollar/Swiss franc	59	5	83	4	151	5	168	4
US dollar/Canadian dollar	54	4	77	4	126	4	182	5
US dollar/Swedish krona	6	0	7	0	57	2	45	1
US dollar/other	193	16	300	16	612	18	705	18
Euro/yen	36	3	61	3	86	3	111	3
Euro/sterling	27	2	47	2	69	2	109	3
Euro/Swiss franc	13	1	30	2	62	2	72	2
Euro/other	22	2	44	2	123	4	162	4
Other currency pairs	28	2	50	3	139	4	149	4
All currency pairs	1,239	100	1,934	100	3,324	100	3,981	100

[1] Adjusted for local and cross-border inter-dealer double-counting (ie "net-net" basis).

Table B.6

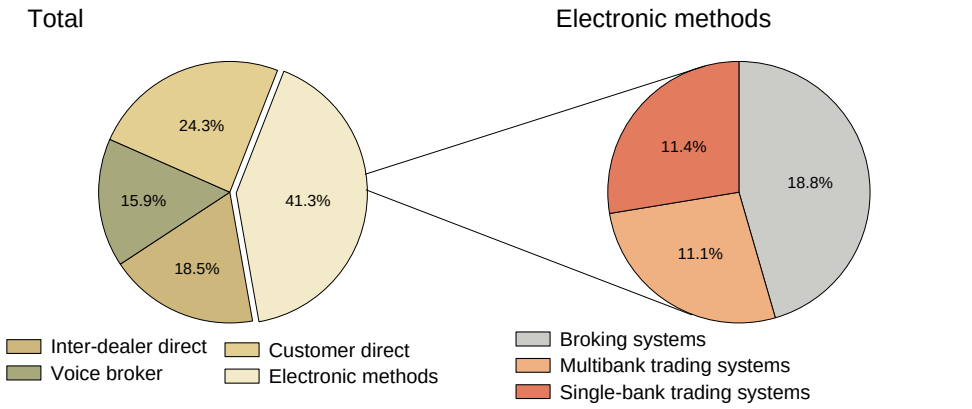
The 2010 survey has expanded the detailed coverage of emerging economy currencies, including additional currency pairs. New currency pairs relate mainly to transactions between the US dollar and Asian currency pairs (Graph B.5).

7. Turnover by execution method

Reporting institutions were asked to provide information on the execution method[11] used to settle their foreign exchange transactions. In the 2010 survey, the data on execution method now distinguish between trades "with reporting dealers, local" and those "with reporting dealers, cross-border", to allow more accurate elimination of double-counting. Separate information was requested for spot transactions, outright forwards, foreign exchange swaps and options: the data reveal that 40% of spot transactions are conducted on electronic trading systems[12] (Annex Table E.24), compared with 12–27% for other foreign exchange instruments. As noted in previous surveys, the spread of electronic trading platforms has also contributed to greater activity by other financial institutions, particularly algorithmic trading (Graph B.6).

Foreign exchange market turnover by execution method[1]

Daily averages in April 2010



[1] Adjusted for local and cross-border inter-dealer double-counting, ie "net-net" basis. Graph B.6

8. Geographical distribution of turnover

Foreign exchange market activity was more global in April 2010, with the share of cross-border transactions increasing to 65% from 62% in April 2007 (Table B.2). Local transactions fell to 35% of total turnover. Cross-border trading has increased slowly but steadily over the past five surveys.

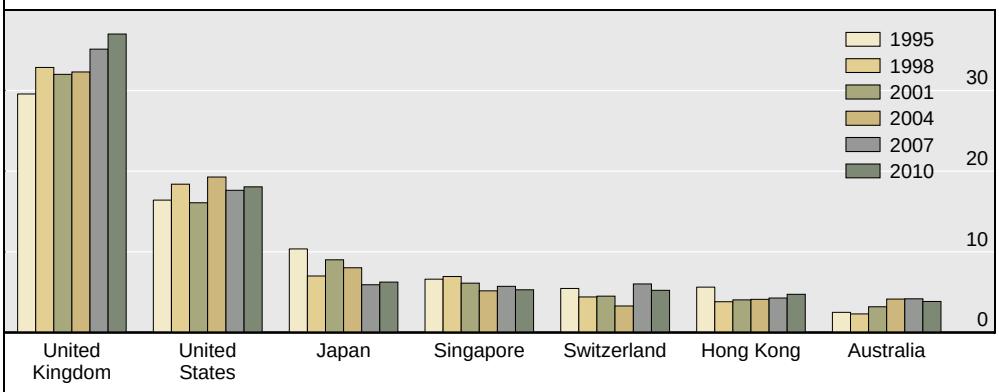
The geographical distribution of foreign exchange trading typically changes slowly over time, and the 2010 results are no exception (Table B.8). Banks located in the United Kingdom accounted for 37% of global foreign exchange market turnover, followed by those in the United States (18%), Japan (6%), Singapore (5%), Switzerland (5%), Hong Kong SAR (5%) and Australia (4%). Japan has recovered its third-place ranking, which it lost in the 2007 survey. Singapore has moved ahead of Switzerland in 2010 (Graph B.7).

[11] Detailed definitions of execution methods are provided in Section D.7 of the Methodology.

[12] Most inter-dealer trading is also executed electronically.

Geographical distribution of foreign exchange market turnover[1]

Daily averages in April, in per cent



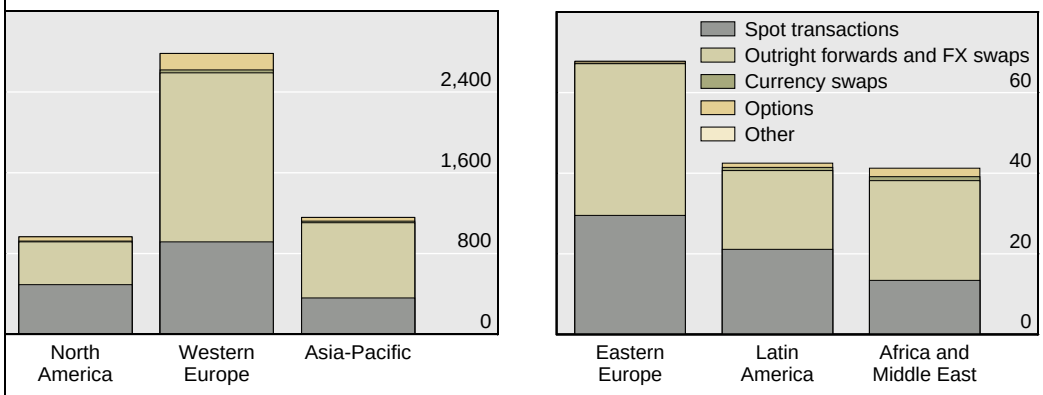
[1] Adjusted for local double-counting, ie "net-gross" basis.

Graph B.7

In dollar terms, the greatest increases in trading activity were in the United Kingdom ($370 billion), the United States ($159 billion), Japan ($62 billion) and Hong Kong SAR ($57 billion). Other countries that saw significant growth relative to the 2007 survey include Denmark, France, Singapore, Finland, Turkey, Australia and Spain.[13]

Regional foreign exchange turnover by instrument[1]

Daily averages in April 2010, in billions of US dollars



[1] Regional aggregates are adjusted for local inter-dealer double-counting, ie trades between reporting dealers located in the same countries were halved, ie "net-gross" basis. Regional aggregates are not adjusted for intra-regional double-counting, ie trades between reporting dealers located in different countries of the same region were not halved.

Graph B.8

[13] D Mihaljek and F Packer, *BIS Quarterly Review*, December 2010 (forthcoming), discuss in depth what distinguishes turnover in FX derivatives in emerging markets from that in developed countries.

Foreign exchange trading is concentrated in western Europe, which accounts for 55% of global turnover on a net-gross basis, thanks to the presence of the London market and a number of other important trading centres. The Americas and Asia account for about 20% each (Graph B.8). These shares are approximate, since the data do not allow double-counting between reporting dealers located in different countries of the same region to be corrected. Regional turnover by instrument is fairly evenly divided between spot transactions, which account for about 50% of turnover in North and Latin America and for about a third of turnover in other regions, and outright forwards and FX swaps, which account for almost two thirds of turnover in most regions but around 45% in the Americas. The remainder comprises options, which account for around 5% of turnover (Table B.7).

Regional FX turnover by instrument[1]

Daily averages in April 2010, in billions of US dollars

Region	Spot	Outright forwards and FX swaps	Currency	Options	Total
North America	491	423	10	42	966
Western Europe	916	1,672	29	163	2,780
Asia-Pacific	361	743	16	38	1,159
Eastern Europe	30	38	0	0	68
Latin America	21	20	1	1	42
Africa and Middle East	13	25	1	2	41
All regions (“net-gross”)	1,832	2,921	57	246	5,056
Adjustment for cross-border double-counting	-342	-681	-14	-39	-1,075
Global turnover (“net-net”) [2]	1,490	2,240	43	207	3,981

[1] Regional aggregates are adjusted for local inter-dealer double-counting, ie trades between reporting dealers located in the same countries were halved, ie “net-gross” basis. Regional aggregates are not adjusted for intraregional double-counting, ie trades between reporting dealers located in different countries of the same region were not halved. [2] Global aggregates are adjusted for both local and cross-border inter-dealer double-counting, ie “net-net” basis.

Table B.7

Geographical distribution of global foreign exchange market turnover[1]

Daily averages in April, in billions of US dollars and per cent

Country	1998		2001		2004		2007		2010	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Argentina	2	0	…	…	1	0	1	0	2	0
Australia	48	2	54	3	107	4	176	4	192	4
Austria	12	1	8	0	15	1	19	0	20	0
Bahrain	3	0	3	0	3	0	3	0	5	0
Belgium	27	1	10	1	21	1	50	1	33	1
Brazil[2]	5	0	6	0	4	0	6	0	14	0
Bulgaria	…	…	…	…	…	…	1	0	1	0
Canada	38	2	44	3	59	2	64	1	62	1
Chile	1	0	2	0	2	0	4	0	6	0
China[3]	0	0	…	…	1	0	9	0	20	0
Chinese Taipei	5	0	5	0	9	0	16	0	18	0
Colombia	…	…	0	0	1	0	2	0	3	0
Czech Republic	5	0	2	0	2	0	5	0	5	0
Denmark	28	1	24	1	42	2	88	2	120	2
Estonia	…	…	…	…	0	0	1	0	1	0
Finland	4	0	2	0	2	0	8	0	31	1
France	77	4	50	3	67	3	127	3	152	3
Germany	100	5	91	5	120	5	101	2	109	2
Greece	7	0	5	0	4	0	5	0	5	0
Hong Kong SAR	80	4	68	4	106	4	181	4	238	5
Hungary	1	0	1	0	3	0	7	0	4	0
India	2	0	3	0	7	0	38	1	27	1
Indonesia	2	0	4	0	2	0	3	0	3	0
Ireland	11	1	9	1	8	0	11	0	15	0
Israel	…	…	1	0	5	0	8	0	10	0
Italy	29	1	18	1	23	1	38	1	29	1
Japan	146	7	153	9	207	8	250	6	312	6
Korea	4	0	10	1	21	1	35	1	44	1
Latvia	…	…	…	…	2	0	3	0	2	0
Lithuania	…	…	…	…	1	0	1	0	1	0
Luxembourg	23	1	13	1	15	1	44	1	33	1
Malaysia	1	0	1	0	2	0	3	0	7	0
Mexico	9	0	9	1	15	1	15	0	17	0
Netherlands	43	2	31	2	52	2	25	1	18	0
New Zealand	7	0	4	0	7	0	13	0	9	0
Norway	9	0	13	1	14	1	32	1	22	0
Peru	…	…	0	0	0	0	1	0	1	0
Philippines	1	0	1	0	1	0	2	0	5	0
Poland	3	0	5	0	7	0	9	0	8	0
Portugal	4	0	2	0	2	0	4	0	4	0
Romania	…	…	…	…	…	…	3	0	3	0
Russia	7	0	10	1	30	1	50	1	42	1
Saudi Arabia	2	0	2	0	2	0	4	0	5	0
Singapore	145	7	104	6	134	5	242	6	266	5
Slovakia	…	…	1	0	2	0	3	0	0	0
Slovenia	…	…	0	0	0	0	0	0	…	…
South Africa	9	0	10	1	10	0	14	0	14	0
Spain	20	1	8	0	14	1	17	0	29	1
Sweden	16	1	25	1	32	1	44	1	45	1
Switzerland	92	4	76	4	85	3	254	6	263	5
Thailand	3	0	2	0	3	0	6	0	7	0
Turkey	…	…	1	0	3	0	4	0	17	0
United Kingdom	685	33	542	32	835	32	1,483	35	1,854	37
United States	383	18	273	16	499	19	745	17	904	18
Total[4]	**2,099**	**100**	**1,705**	**100**	**2,608**	**100**	**4,281**	**100**	**5,056**	**100**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). [2] Data for 1998 only cover spot transactions. [3] Data from 1998 to 2004 only cover spot transactions. [4] Estimated coverage of the FX market ranged between 90% and 100% in most countries.

Table B.8

C. Amounts outstanding at end-June 2010

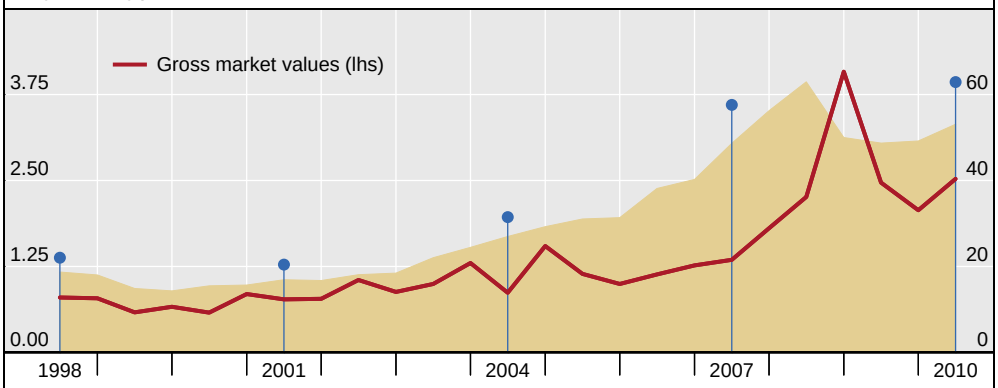
1. Growth of global foreign exchange positions

This part of the report focuses on the results of the second part of the Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity together with those of the semiannual OTC derivatives market statistics, both at end-June 2010. The triennial survey provides a benchmark for the regular semiannual survey of positions in the global OTC derivatives market. Graph C.1 combines the triennial end-June survey data (blue dots on vertical lines) with the more frequent semiannual data. While the semiannual survey relies on data provided by 59 major dealers in the G10 countries, the triennial survey expands coverage to over 400 market participants in 42 countries and jurisdictions worldwide (including the regular semiannual participants). Both surveys cover the worldwide consolidated positions of reporting dealers (notional amounts outstanding and gross market values) of foreign exchange instruments traded in OTC markets (outright forwards, foreign exchange swaps, currency swaps, currency options and other foreign exchange instruments). The coverage of the triennial surveys has been 9% higher than that of the semiannual surveys in terms of amounts outstanding in both 2007 and 2010.

Global OTC foreign exchange market[1]

BIS triennial and semiannual surveys, notional amounts outstanding,[2] in trillions of US dollars

By data type



[1] Outright forwards, foreign exchange swaps, currency swaps, currency options and other foreign exchange instruments. [2] Dots mark triennial survey dates and notional amounts outstanding in the triennial survey data.

Source: BIS. Graph C.1

Global positions in OTC derivatives markets by type of instrument[1]

Amounts outstanding, in billions of US dollars

	Positions at end-June 2007			Positions at end-June 2010		
	Notional amounts	Gross market values	%[2]	Notional amounts	Gross market values	%[2]
Foreign exchange contracts	57,604	1,612	2.8	62,933	3,158	5.0
Outright forwards and FX swaps	29,775	668	2.2	31,935	1,330	4.2
Currency swaps	14,130	666	4.7	18,890	1,372	7.3
Options	13,662	279	2.0	12,107	456	3.8
Other	37	...	...	1	...	...
Memo: Exchange-traded currency contracts[3]	326	...	...	386	...	...

[1] Adjusted for inter-dealer double-counting. [2] Gross market values as a percentage of notional amounts. [3] Sources: FOW TRADEdata; Futures Industry Association; various futures and options exchanges.

Table C.1

Growth in the positions of OTC *foreign exchange* instruments was moderate at 9%, compared with an increase of 83% in notional amounts outstanding of currency instruments in the 2004–07 period. The 2007 and 2010 BIS triennial surveys bracket a period of strong growth in amounts outstanding, as shown by comparison with the semiannual data in Graph C.1. Notional amounts outstanding in all instruments peaked in June 2008, declined thereafter and recovered somewhat by June 2010.

Notional amounts outstanding provide useful information on the structure of the OTC foreign exchange market but should not be interpreted as a measure of the counterparty risk of these positions. While no single comprehensive measure of risk exists, a useful concept is the cost of replacing all open contracts at the prevailing market prices. This measure, called *gross market value*, increased at a considerably higher rate (96%) than notional amounts during the reporting period, to $3.2 trillion at the end of June 2010.

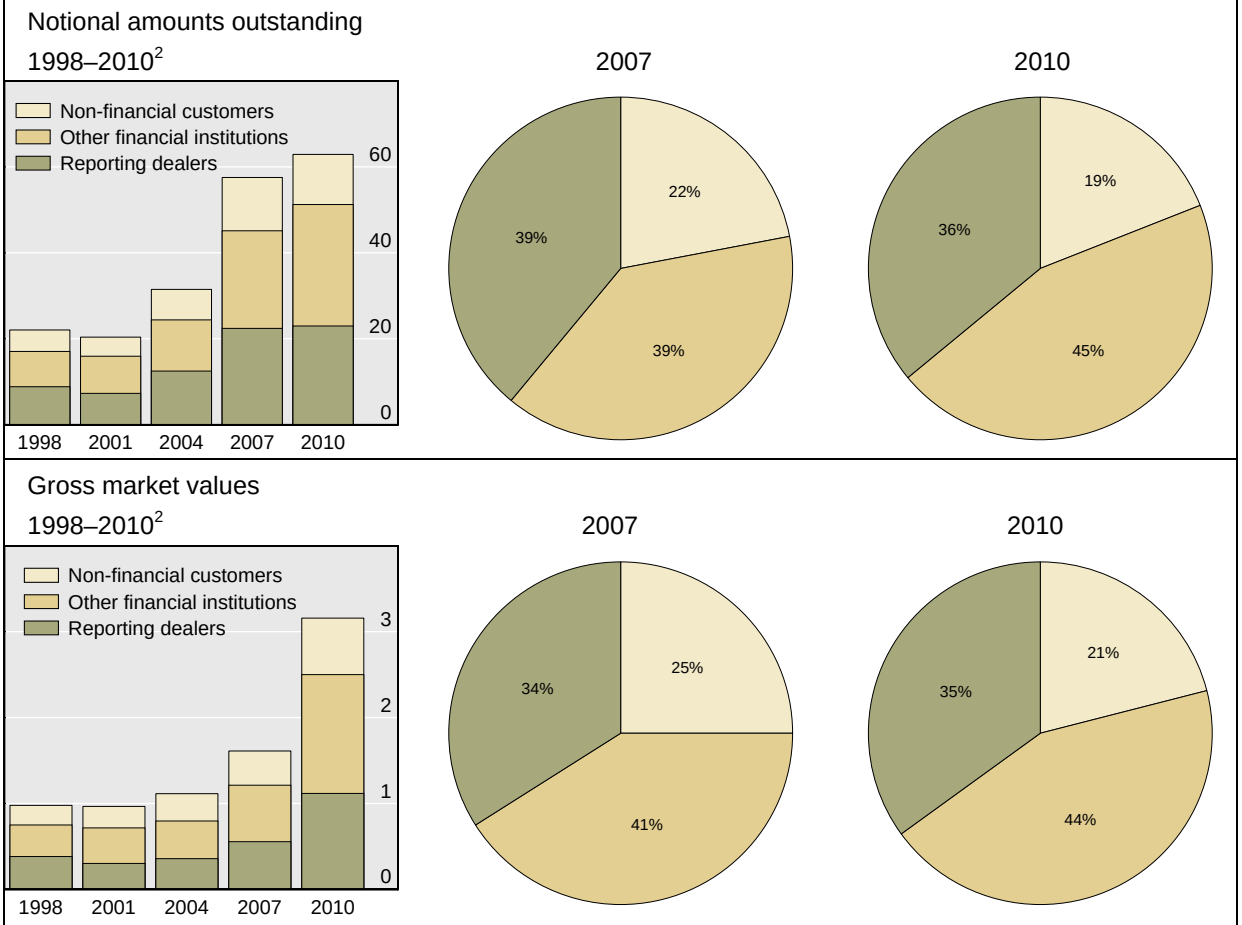
Sharp asset price movements following the bankruptcy of Lehman Brothers in September 2008 resulted in a strong rise of gross market values (Graph C.1, left-hand scale) in the second half of 2008. Gross market values declined rapidly again in subsequent periods as prices moved closer to their pre-crisis values, but increased again in the first half of 2010 as foreign exchange markets went through another bout of turbulence.

2. Positions by counterparty

Data for amounts outstanding by counterparty show that the increase in global foreign exchange market positions in 2010 is also due mainly to the enlarged trading activity of *other financial institutions* (counterparties such as non-reporting banks, hedge funds, pension funds, mutual funds, insurance companies and central banks). While a surge in activity with both reporting dealers and other financial institutions had already accounted for most of the growth in total amounts outstanding in 2007, the latter category's share (45%) surpassed transactions between reporting dealers (36%) for the first time in 2010 (Graph C.2). Reporting dealers and non-financial customers had both accounted for a 39% share of outstanding OTC foreign exchange instruments in June 2007.

In terms of counterparty risk, as measured by gross market values, the position appears largely the same in relative terms. While absolute amounts at risk have doubled (Graph C.2), this doubling has been distributed fairly evenly in all market segments.

Global positions in OTC foreign exchange market by counterparty[1]

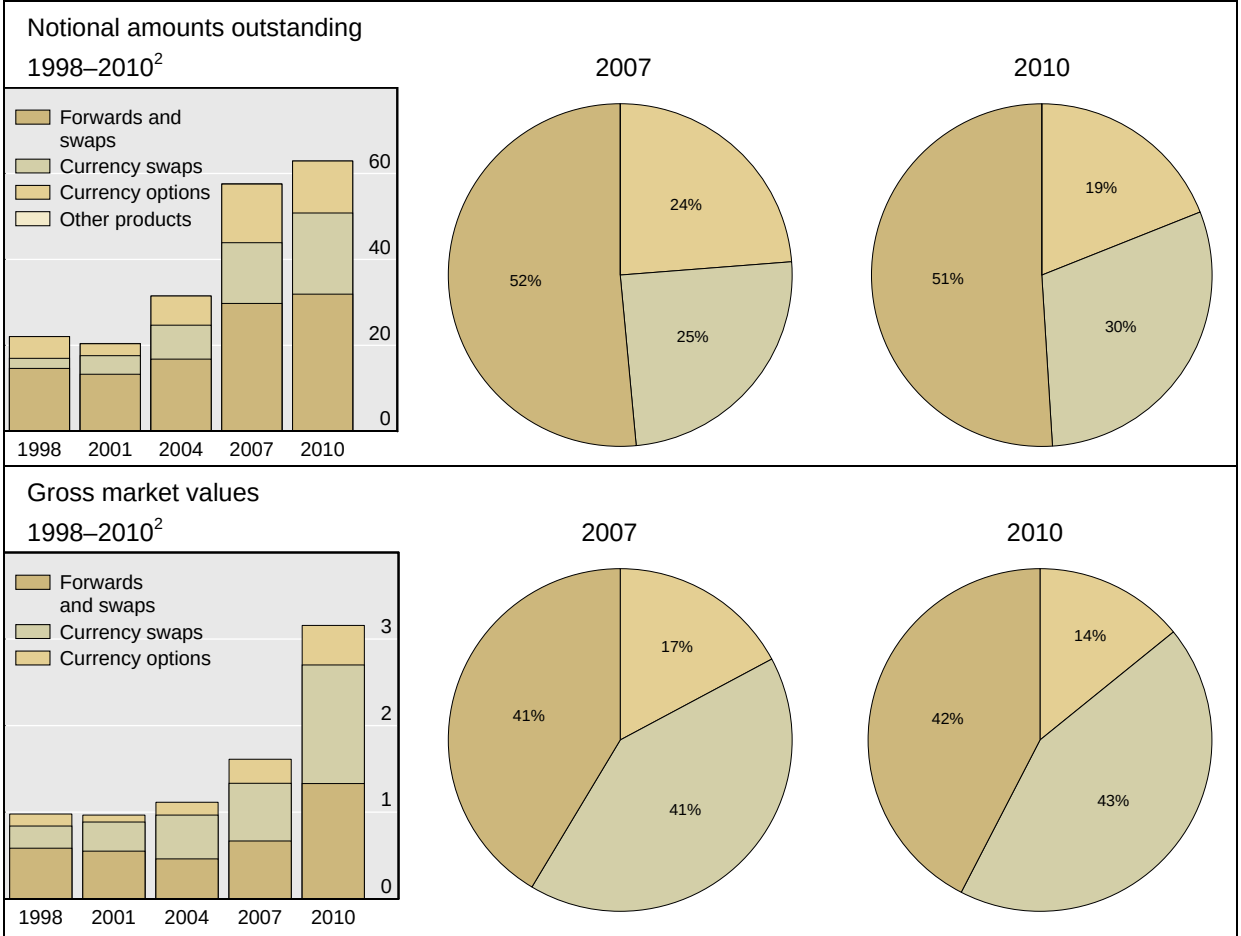


[1] Adjusted for inter-dealer double-counting. [2] In billions of US dollars. Graph C.2

3. Positions value by instrument

Not all foreign exchange OTC instruments showed limited growth in amounts outstanding. Currency swaps increased to almost $19 trillion outstanding in June 2010, growing by a third relative to 2007, increasing their share of outstanding instruments to 30% (Graph C.3). In contrast, currency options outstanding fell 12% to $12 trillion, or 19% of the total outstanding. Gross market values, which had been rather low in June 2007, despite large amounts outstanding, doubled for most instruments against a backdrop of currency volatility, with the value of options trailing behind somewhat, but still increasing by 63%.

Global positions in OTC foreign exchange market by instrument[1]



[1] Adjusted for inter-dealer double-counting. [2] In billions of US dollars. Graph C.3

4. Positions by maturity

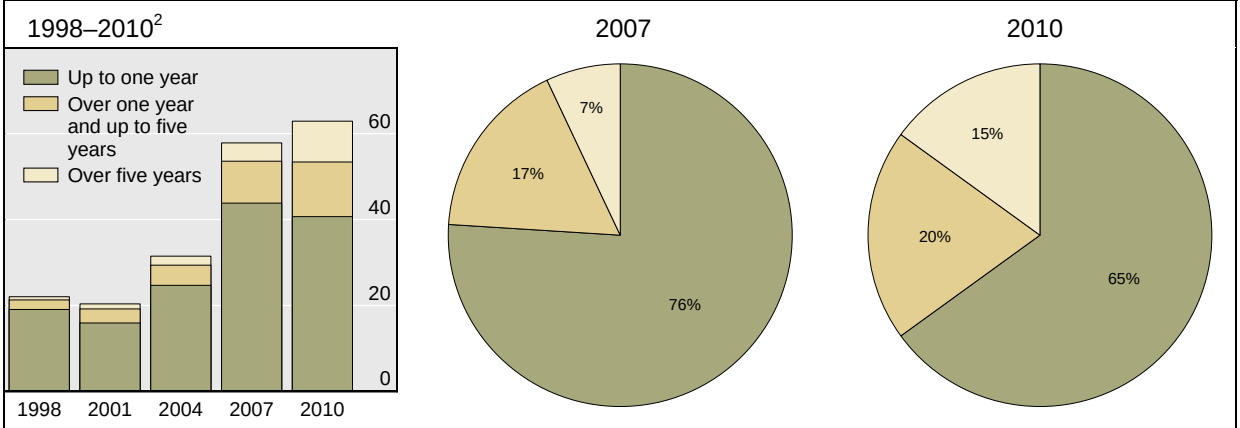
The maturity distribution of outstanding instruments is dominated by short-term instruments, with 65% of the outstanding total having a remaining maturity of less than a year (Graph C.4), which is consistent with the dominance of very short-term (seven days or less) instruments in turnover.

The instrument breakdown for notional amounts outstanding of FX derivatives reflects typical differences in the maturities of the various types of contracts. Outright forwards and FX swaps, which tend to have comparatively short maturities (Table C.2), accounted for a noticeably smaller share of open positions (42%) than of turnover (56%). By contrast, currency swaps, which tend to have much longer maturities than forwards or FX swaps, had a share of 43% in notional amounts outstanding, but only of 1% in turnover.[14]

[14] The maturity distribution of currency swaps, outright forwards and FX swaps is not reported individually in the reporting template for amounts outstanding.

Global positions in OTC foreign exchange market by maturity[1]

Notional amounts outstanding



[1] Adjusted for inter-dealer double-counting. [2] In billions of US dollars..

Graph C.4

5. Positions by currency[15]

Global positions in OTC foreign exchange markets by currency (Graph C.5) showed only limited change in amounts outstanding. US dollar-denominated instruments were up slightly, being involved on one side of 85.5% of total amounts outstanding, compared with 83.0% in 2007. The weight of instruments denominated in sterling fell, with only 11.7% of positions including the currency on one side, compared with 15.5% in April 2007.

[15] Because each transaction involves two currencies, the shares sum to 200%.

Global positions in OTC foreign exchange markets[1]

Amounts outstanding at end-June, in billions of US dollars

	Total[2]			Of which					
				Forwards and swaps[3]			Options		
	2004	2007	2010	2004	2007	2010	2004	2007	2010
Total	31,499	57,604	62,933	24,702	43,905	50,825	6,789	13,662	12,107
by currency									
US dollar	28,402	47,783	53,821	22,024	37,407	44,205	6,378	10,376	9,615
Euro	11,726	21,356	22,710	9,248	16,205	18,528	2,478	5,151	4,182
Yen	7,265	12,178	12,611	5,178	7,130	8,411	2,088	5,048	4,200
Pound sterling	5,078	8,933	7,383	4,013	7,701	6,426	1,065	1,232	957
Swiss franc	1,590	3,451	4,319	1,276	2,424	3,358	313	1,027	961
Canadian dollar	1,261	2,604	2,801	1,044	2,183	2,482	217	421	318
Australian dollar	1,583	3,056	3,892	1,169	2,344	3,265	414	712	627
Swedish krona	877	1,601	1,590	790	1,434	1,453	88	167	136
Other	5,216	14,246	16,739	4,663	10,984	13,521	538	3,189	3,216
by maturity[4]									
One year or less	24,706	43,830	40,671	18,618	5,519	6,328	6,089	10,605	8,388
Over 1 year and up to 5 years	4,712	9,793	12,744	4,114	1,267	1,787	598	2,702	2,584
Over 5 years	2,067	4,222	9,526	1,966	535	746	101	375	1,136

[1] Adjusted for inter-dealer double-counting. [2] Including "other" instruments. Counting both currency sides of every foreign exchange transaction means that the currency breakdown sums to 200% of the aggregate. [3] Outright forwards, foreign exchange swaps and currency swaps. [4] Due to incomplete maturity breakdown, components do not always sum to totals.

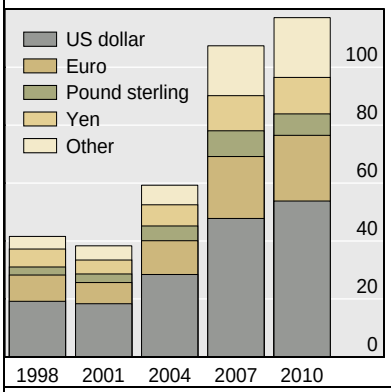
Table C.2

Gross market values increased particularly strongly in euro- and sterling-denominated instruments by end-June 2010. Market values for US dollar-denominated instruments declined on a relative basis from 91% of the total to 81% (Graph C.5).

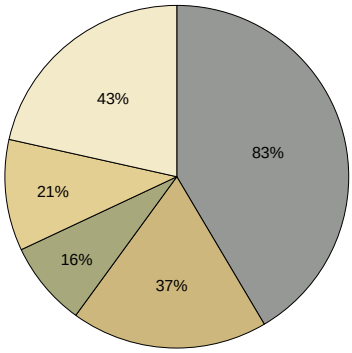
Global positions in OTC foreign exchange market by currency[1]

Notional amounts outstanding

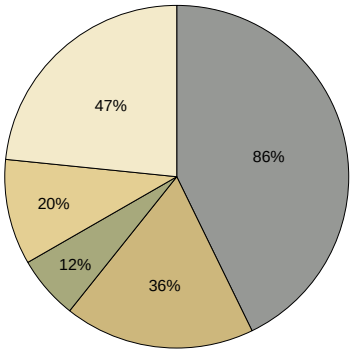
1995–2010[2]



2007

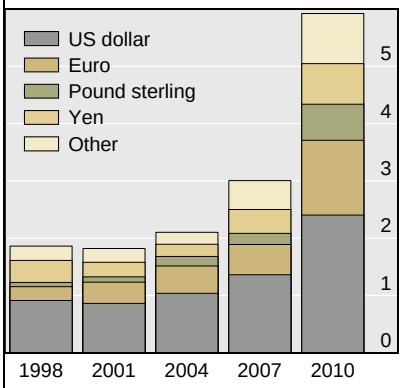


2010

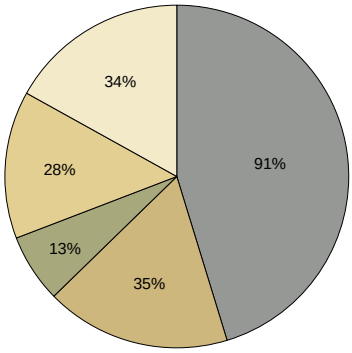


Gross market values

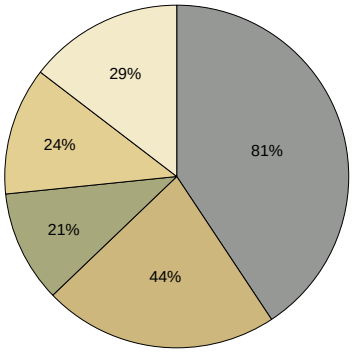
1998–2010[2]



2007



2010



[1] Adjusted for inter-dealer double-counting. [2] In billions of US dollars.

Graph C.5

D. Methodology

I. Background to the Triennial Central Bank Survey

In April and at end-June of this year, 53 and 42 central banks and monetary authorities, respectively, participated in both parts of the eighth Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity ("the triennial survey"). The objective of the survey is to provide the most comprehensive and internationally consistent information on the size and structure of global foreign exchange markets, allowing policymakers and market participants to better monitor patterns of activity in the global financial system.[16] Coordinated by the BIS, participating institutions collect data in April from 1,309[17] banks and other dealers (so-called reporting dealers) on turnover in foreign exchange instruments. For the survey, each participating institution is requested to collect data from the reporting dealers in its jurisdiction and calculate aggregate national data. These data are then provided to the BIS, which compiles and publishes the global aggregates. In addition, more than 4,000 institutions located around the world participated in the second part of the triennial survey, which covers data on amounts outstanding at end-June 2010 and complements the turnover data collected in the first part of the survey.[18] The triennial survey has been conducted every three years since April 1989, covering data on amounts outstanding since 1995.

It should be noted that previous triennial surveys have used the expression "traditional foreign exchange markets" to refer to spot transactions, outright forwards and foreign exchange swaps. This expression excludes currency swaps, currency options and other foreign exchange instruments, which are classified under OTC derivative instruments. Starting with the 2010 survey, the expression "global foreign exchange markets" includes all six foreign exchange instruments. The analysis will henceforth distinguish between *spot transactions* and *other related foreign exchange instruments* (outright forwards, foreign exchange swaps, currency swaps, currency options and other foreign exchange products).

II. Statistical notes

This section contains a description of the methodology, general definitions, classification principles and compilation procedures for the most recent Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity carried out by central banks and monetary authorities in April and at end-June 2010. The main purpose of the statistics collected by the triennial survey is to provide a measure of the size and structure of foreign exchange and other derivatives markets and to monitor key developments in these segments. In conjunction with the banking and securities statistics, the data provide a more comprehensive picture of activity in global financial markets.

Two main statistical frameworks are implemented by the BIS for the collection of foreign exchange and derivatives statistics: the triennial survey and the semiannual OTC derivatives market statistics. The triennial survey covers data not only on turnover in foreign exchange in the month of April, ie the first part of the triennial survey, but also on OTC derivatives amounts outstanding at end-June, ie the second part of the triennial survey. The amounts outstanding part of the survey covers positions across a wider range of market risk categories and is used to benchmark the representativeness of the more frequent semiannual survey on OTC derivatives market activity.[19]

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[16] The triennial survey complements more frequent regional surveys conducted in the following financial centres by local foreign exchange committees: Australia, Canada, Hong Kong SAR, London, New York, Singapore and Tokyo.

[17] Compared with 1,260 in 2007.

[18] The second part of the triennial survey is conducted on a consolidated basis and covers not only positions in FX-related instruments but also those in interest rate, equity-linked, commodity, credit and other derivative products.

[19] Detailed results of the June 2010 semiannual and triennial Surveys are available on the BIS website at www.bis.org/publ/otc_hy1011.htm.

The present report is focused exclusively on the statistics covering foreign exchange market instruments.

The format of the 2010 survey includes the following main refinements and clarifications of reporting procedures as compared with the previous survey:

– The list of currency pairs has been expanded in order to capture transactions involving currencies typically used in carry trade strategies, namely AUD/JPY, NZD/JPY, USD/ZAR and USD/HKD. Trades in the Brazilian real, Chinese renminbi, Indian rupee and Korean won against the US dollar were also collected.

– A more detailed counterparty breakdown for each instrument has been collected for identification of execution method in order to include a distinction between "with reporting dealers, local" and "with reporting dealers, cross-border". The more detailed counterparty breakdown allows for a more accurate correction of inter-dealer double-counting.

Despite these changes, the data presented here can be considered as being largely comparable with those of the previous triennial survey in 2007, notwithstanding the different structure of the results. Weighted average coverage of foreign exchange markets in reporting countries increased from 96% in 2007 to 97% in 2010.

1. Coverage and basic features of the 2010 survey

The triennial survey collects data on the following foreign exchange instruments that can be divided into two groups: spot transactions, for which only turnover data are collected; and outright forwards, foreign exchange swaps, currency swaps, currency options and other foreign exchange instruments, for which both turnover and amounts outstanding are reported.

In the turnover part, the instrument breakdown distinguishes between spot transactions, forwards, swaps, options and other foreign exchange products (see Section B.3). The counterparty breakdown distinguishes between transactions with reporting dealers, with other financial institutions and with non-financial customers. A further local/cross-border breakdown was requested (see Section B.4). The currency breakdown includes separate reporting of all reporting countries' currencies (see Section B.5). The maturity breakdown distinguishes between transactions with original maturity up to seven days, over seven days and up to one year, and over one year (see Section B.6). Information on the execution method was also requested for foreign exchange transactions (see Section B.7). Central banks and monetary authorities were also requested to provide information on the percentage coverage of the survey in their country, the number of banks covering 75% of the reported totals, the number of participants, the number of trading days[20] and the nature of the turnover in April 2010 and during the preceding six months. The results are shown in Table D.1.

The second part of the triennial survey covers notional amounts outstanding and gross market values of foreign exchange, but also of interest rate, equity, commodity, credit and other derivatives. The following instrument breakdown was requested for the foreign exchange market risk category: forwards and swaps,[21] currency swaps, currency options sold, currency options bought and other foreign exchange products. As in the turnover part of the survey, data for the OTC foreign exchange instruments are broken down by counterparty (see Section C.2), currency (see Section C.5) and remaining maturity (see Section C.4).

[20] Trading days are requested so that daily averages can be calculated.

[21] This category covers outright forwards and foreign exchange swaps.

Basic features of the April 2010 foreign exchange market survey[1]

	Coverage, in per cent	Banks covering 75%	Number of participants	Trading days	Nature of turnover	
					April	Preceding six months
Argentina	98	10	67	20	Above normal	Increasing
Australia	95	7	27	19	Normal	Steady
Austria	92	3	14	21	Below normal	Steady
Bahrain	90	4	26	24	Below normal	Decreasing
Belgium	95	3	4	21	Normal	Steady
Brazil	70	7	14	20	Normal	Increasing
Bulgaria	90	3	11	20	Below normal	Decreasing
Canada	99	5	16	21	Normal	Steady
Chile	100	9	29	21	Normal	Steady
China	70	10	15	22	Normal	Steady
Chinese Taipei	86	16	29	21	Above normal	Increasing
Colombia	85	13	17	20	Normal	Steady
Czech Republic	95	5	13	21	Normal	Steady
Denmark	98	3	6	18	Normal	Steady
Estonia	96	2	3	21	Normal	Steady
Finland	99	1	12	20	Normal	Steady
France	98	4	35	21	Normal	Increasing
Germany	90	5	27	20	Normal	Steady
Greece	89	4	5	20	Below normal	Decreasing
Hong Kong SAR	95	14	67	19	Normal	Steady
Hungary	88	6	10	21	Normal	Steady
India	75	19	19	20	Normal	Steady
Indonesia	76	19	20	21	Normal	Normal
Ireland	100	5	20	21	Normal	Steady
Israel	100	4	12	19	Normal	Steady
Italy	88	4	35	21	Normal	Increasing
Japan	98	8	45	21	Normal	Increasing
Korea	99	16	41	22	Normal	Steady
Latvia	31	3	5	20	Normal	Steady
Lithuania	96	2	7	21	Normal	Steady
Luxembourg	100	10	148	20	Normal	Steady
Malaysia	100	6	10	22	Normal	Steady
Mexico	92	7	17	20	Normal	Steady
Netherlands	95	3	7	20	Normal	Steady
New Zealand	95	3	5	20	Above normal	Steady
Norway	90	2	7	19	Normal	Steady
Peru	95	6	16	20	Normal	Steady
Philippines	100	9	32	19	Normal	Increasing
Poland	93	8	17	21	Normal	Steady
Portugal	100	4	75	21	Normal	Steady
Romania	99	8	33	21	Normal	Steady
Russia	94	16	40	22	Normal	Steady
Saudi Arabia	90	5	16	30	Normal	Steady
Singapore	99	10	54	21	Normal	Steady
Slovakia	60	5	3	20	Normal	Steady
South Africa	95	5	11	19	Below normal	Steady
Spain	91	2	9	20	Normal	Steady
Sweden	90	3	4	20	Normal	Steady
Switzerland	100	2	27	19	Normal	Steady
Thailand	100	10	27	18	Normal	Steady
Turkey	86	7	20	21	Normal	Increasing
United Kingdom	99	9	47	20	Normal	Steady
United States	95	7	24	21	Normal	Increasing

[1] Spot transactions, outright forwards and FX swaps.

Table D.1

2. Types of data collected

2.1 Turnover data

Turnover data provide a measure of market activity as well as an indication of market liquidity. Turnover is defined as the absolute gross value of all new deals entered into during the month of April 2010, and is measured in terms of the nominal or notional amount of the contracts.

No distinction is made between sales and purchases (ie a purchase of $5 million against sterling and a sale of $7 million against sterling would amount to a gross turnover of $12 million). Direct cross-currency transactions are counted as single transactions; however, cross-currency transactions passing through a vehicle currency are recorded as two separate deals against the vehicle currency. The gross amount of each transaction is recorded once, and netting arrangements and offsets are ignored. For turnover of transactions with variable nominal or notional principal amounts, the nominal or notional principal amount on the transaction date is reported.

The basis for reporting is in principle the location of the sales desk of any trade, even if deals entered into in different locations are booked in a central location. Thus, transactions concluded by offices located abroad are not reported by the country of location of the head office, but by that of the office abroad (insofar as the latter is a reporting institution in one of the other 52 reporting countries). Where no sales desk was involved in a deal, the trading desk is used to determine the location of deals.

In all cases, transactions are reported to the BIS in US dollar equivalents, with non-dollar amounts generally converted into US dollars using the exchange rate prevailing on the date of the trade.

As in the previous triennial foreign exchange market surveys, turnover data are collected over a one-month period, the month of April, in order to reduce the likelihood of very short-term variations in activity contaminating the data. The data collected for the survey reflect all transactions entered into during the calendar month of April 2010, regardless of whether delivery or settlement was made during that month.

In order to allow a comparison across countries, daily turnover averages are computed by dividing aggregate monthly turnover for the country in question by the number of days in April on which the foreign exchange and derivatives markets in that country were open. The number of trading days ranged from 18 to 22 in April 2010, with the exception of Saudi Arabia (30 days) and Bahrain (24 days).

2.2 Nominal or notional amounts outstanding

Nominal or notional amounts outstanding provide a measure of market size, and can also provide a rough proxy for the potential transfer of price risk in derivatives markets. They are also comparable to measures of market size in related underlying cash markets and shed useful light on the relative size and growth of cash and derivatives markets.

Nominal or notional amounts outstanding are defined as the absolute gross nominal or notional value of all deals concluded and still open on the last business day of June 2010; end-June is chosen to provide consistency with the semiannual OTC derivatives market statistics for the G10 countries.

As in the case of the turnover data, no distinction is made between sales and purchases of derivative instruments and the resulting claims and liabilities of open contracts. In the case of foreign exchange swaps, which are concluded as spot/forward transactions, only the unsettled forward part of the deal is reported. If foreign exchange swaps are executed on a forward/forward basis, amounts outstanding are reported separately for both legs. For other forward contracts and swaps, the transactions are always reported as one transaction only. For transactions with variable notional principal amounts, notional principal amounts at the reporting date are provided.

In contrast to the turnover part of the survey, data on notional amounts outstanding data are collected on a consolidated basis, ie including positions of all branches and (majority-owned) subsidiaries of a given institution. All these positions were added together and reported by the parent institution only to the monetary institution in the country where the parent institution had its head office. In addition, all in-house deals and deals with other domestic and foreign offices of the same institution were netted out.

Amounts outstanding are reported to the BIS in US dollar equivalents, with non-dollar amounts converted into US dollars using end-of-period exchange rates.

2.3 Gross market values

Another measure of the size of derivatives markets is provided by the gross market values. Gross market values also supply information about the scale of gross transfer of price risks in the derivatives markets. Furthermore, gross market values at current market prices provide a measure of derivatives market size and economic significance that is readily comparable across markets and products.

Gross market values are defined as the sums of the absolute values of all open contracts with either positive or negative replacement values calculated at market prices prevailing on the reporting date. Replacement value denotes the price to be received or paid if the instrument were sold in the market at the time of reporting. Market values are therefore the amounts at which a contract could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. If a quoted price was available for a contract, the number of trading units was multiplied by that market price. If a quoted market price was not available, the reporting institution provided its best estimate of market value based on the quoted price of a similar contract or on valuation techniques such as discounted cash flows.

Gross market value is defined as the value of all open contracts before counterparty or any other netting. Thus, the gross positive market value of a firm's outstanding contracts is the sum of all positive replacement values of a firm's contracts. Similarly, the gross negative market value is the sum of all negative values of a firm's contracts.

The term "gross" is used to indicate that contracts with positive and negative replacement values with the same counterparty should not be netted. Nor should the sums of positive and negative contract values be set off against each other within a risk category.

In the case of forwards and swaps, the market (or replacement) value of outstanding contracts to which the reporter is a counterparty is either positive, zero or negative, depending on how underlying prices have moved since the contract's initiation.

Unlike forwards or swaps, OTC options have a market value at initiation, which is equal to the premium paid to the writer of the option. Throughout their life, option contracts can only have a positive market value for the buyer and a negative market value for the seller. If a quoted market price is available for a contract, the market value for that contract is the product of the number of trading units of the contract multiplied by that market price. If a quoted market price is not available, the market value of an outstanding option contract is determined on the basis of secondary market prices for options with the same strike prices and remaining maturities as the options being valued, or by using option pricing models. In an option pricing model, current quotes of forward prices for the underlying (spot prices for American options) and the implied volatility and market interest rate relevant to the option's maturity would normally be used to calculate the "market" values.

In the case of options, the gross positive market value is the sum of the current market values of all purchased options, and gross negative market value is the sum of the values of sold options. As is the case for other instruments, options sold and purchased with the same counterparty are not netted against each other, nor are options that are bought and sold against the same underlying offset against each other.

Data on gross market values are reported, in US dollar equivalents, with non-dollar amounts converted into US dollars using end-of-period exchange rates.

3. Instruments

Foreign exchange transactions are broken down into spot transactions and three types of *plain vanilla derivative instrument*, ie forwards, swaps and options. Plain vanilla instruments are defined as products traded in generally liquid markets according to more or less standardised contracts and market conventions. If a transaction is composed of several plain vanilla components, each part is in principle to be reported separately. In addition, there is a separate category for "other foreign exchange products". This mainly includes transactions with a variable notional principal amount or contract features which act to multiply leverage.

The definitions used for foreign exchange market instruments are the following:

Spot transaction: single outright transaction 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.

Outright forward: transaction involving the exchange of two currencies at a rate agreed on the date of the contract for value or delivery (cash settlement) at some time in the future (more than two business days later). This category also includes non-deliverable forwards and other forward contracts for differences.

Foreign exchange swap: transaction which involves 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 of the contract (the long leg).

Currency swap: contract which commits two counterparties to exchange streams of interest payments in different currencies for an agreed period of time and usually to exchange principal amounts in different currencies at a pre-agreed exchange rate at maturity.

Currency option/warrant: option contract that gives the right to buy or sell a currency with another currency at a specified exchange rate during a specified period. This category also includes exotic currency options such as average rate options and barrier options.

Currency swaption: option to enter into a currency swap contract.

Other foreign exchange products: the options section takes precedence in the instrument classification, so that any foreign exchange derivative product with an embedded option is to be reported as an option. All other foreign exchange derivative products are in principle to be reported in the forwards or swaps section. However, foreign exchange derivative instruments which involve several features and where a breakdown into individual plain vanilla components is impractical or impossible, such as swaps with underlying notional principal in one currency and fixed or floating interest rate payments based on interest rates in currencies other than the notional (differential swaps or diff swaps), are to be allocated to the residual category of "other" foreign exchange products.

4. Counterparties

Following the methodology of previous triennial central bank surveys, reporting institutions were requested to provide a counterparty breakdown for each instrument depending on whether the counterparty was a reporting dealer, another financial institution or a non-financial customer.[22] In the turnover part of the survey, reporters were also requested to

[22] One of the main purposes of this counterparty breakdown is to eliminate double-counting; see Section 8.

provide separate information on local and cross-border transactions according to the location of the counterparty.[23]

To enable survey participants to identify other reporting dealers and thereby perform the counterparty allocation, a list containing all institutions that participated in the turnover part of the survey was circulated to all market participants together with the main reporting templates. For the amounts outstanding part, however, the list of institutions circulated for the counterparty allocation comprised only those 59 reporters that regularly participate in the semiannual OTC derivatives survey. The reason for not including all reporting institutions was to ensure consistency with the regular derivatives market statistics and to limit the reporting burden. While this approach makes it difficult to accurately eliminate double-counting of trades between non-regular reporters (see Section 8), the amounts involved are believed to be small.

The following three counterparty categories are covered in both parts of the triennial survey:

"Reporting dealers" are defined as financial institutions that actively participate in local and global foreign exchange and derivatives markets. These are mainly large commercial and investment banks and securities houses that (i) participate in the *inter-dealer* market and/or (ii) have active *business with large customers*, such as large corporate firms, governments and other non-reporting financial institutions; in other words, *reporting dealers* are institutions that are actively buying and selling currency and OTC derivatives both for their own account and/or to meet customer demand. In practice, *reporting dealers* are often those institutions that actively or regularly deal through electronic platforms, such as EBS or Reuters dealing facilities. The category of reporting dealers also includes the branches and subsidiaries of institutions operating in multiple locations that have sales desks, but not necessarily trading desks, which conduct active business with large customers.

"Other financial institutions" are defined as those financial institutions that are not classified as *reporting dealers*. Thus, the term mainly covers all other financial institutions, such as smaller commercial banks, investment banks and securities houses, and in addition mutual funds, pension funds, hedge funds, currency funds, money market funds, building societies, leasing companies, insurance companies, financial subsidiaries of corporate firms and central banks.

"Non-financial customers" are defined as any counterparty other than those described above, ie mainly non-financial *end users*, such as corporations and governments.

5. Currency and other market risk breakdowns

5.1 Turnover

In order to obtain consistent data on turnover in principal currency segments of the foreign exchange market, reporting institutions are asked to report turnover data on foreign exchange contracts and to identify the main currency pairs. Thus, data should be provided separately for trading in the domestic currency, the US dollar and the euro against each other and against the individual currencies listed below.

- JPY: Japanese yen
- GBP: pound sterling
- CHF: Swiss franc
- CAD: Canadian dollar
- AUD: Australian dollar
- SEK: Swedish krona
- Other currencies

[23] In other words, not according to its nationality.

Due to the importance of carry trade activities, data are also collected for transactions involving certain combination of currencies that – not being explicitly listed with the main currency pairs above – are typically present in carry trade strategies, namely USD/ZAR, USD/HKD, AUD/JPY and NZD/JPY. Data on trades in the Brazilian real, Chinese renminbi, Indian rupee and Korean won against the US dollar were also collected.

Moreover, given the increasing interest in the identification of turnover in all reporting countries' currencies, reporting dealers were requested to provide supplementary information on total turnover for the following currencies:

Argentine peso, Australian dollar, Bahraini dinar, Brazilian real, Bulgarian lev, Canadian dollar, Chilean peso, Chinese renminbi, New Taiwan dollar, Colombian peso, Czech koruna, Danish krone, Estonian kroon, Hong Kong dollar, Hungarian forint, Indian rupee, Indonesian rupiah, Israeli new shekel, Japanese yen, Korean won, Latvian lats, Lithuanian litas, Malaysian ringgit, Mexican peso, New Zealand dollar, Norwegian krone, Peruvian new sol, Philippine peso, Polish zloty, Romanian leu, Russian rouble, Saudi riyal, Singapore dollar, South African rand, Swedish krona, Swiss franc, Thai baht, Turkish lira and pound sterling.

5.2 Amounts outstanding

For amounts outstanding of foreign exchange contracts, the following currency breakdown was requested: USD, EUR, JPY, GBP, CHF and other currencies.

In addition, reporting institutions were asked to identify amounts for other individual currencies if they had a material amount of outstanding contracts in those currencies, ie if a notional amount outstanding in a currency for a given instrument was greater than 2% of the total notional amounts outstanding for that instrument. However, participating central banks had discretion in defining a "material" amount for reporting of other individual currencies.

In contrast to the turnover part of the survey, amounts outstanding of foreign exchange contracts are broken down on a single currency basis. This means that the notional amount outstanding and the gross positive or negative market value of each contract are reported twice, according to the currencies making up the two "legs" of the contract. The total of the amounts reported for individual currencies thus sums to 200% of total contracts outstanding, while total reported contracts represent only half of the sum of the individual currency components. For example, a reporting institution entering into a forward contract to purchase US dollars in exchange for euros with a notional principal amount of $100 million will have reported $100 million in the US dollar column, another $100 million in the euro column and $100 million in the "Total" column.

6. Maturities

6.1 Turnover

Transactions in outright forwards and foreign exchange swaps are broken down on an *original maturity* basis according to the following maturity bands:

- seven days or less
- over seven days and up to one year
- over one year

For *outright forward* contracts, the maturity band of the transaction is determined by the difference between the delivery date and the date of the initiation of the contract. For both *spot/forward* and *forward/forward foreign exchange swaps*, the maturity band for the contract is determined by the difference between the due date of the second or long leg of the swap and the date of the initiation of the contract.

6.2 Amounts outstanding

For amounts outstanding of foreign exchange contracts, a breakdown is requested by *residual maturity* between the following bands:

- one year or less
- over one year and up to five years
- over five years

In the case of transactions where the first leg has not come due, the remaining maturity of each leg is determined as the difference between the reporting date and the settlement or due date, respectively, of the near- and far-end legs of the transaction.

7. Execution methods

Reporting institutions were asked to provide information on the execution method used to settle their foreign exchange transactions. Separate information was requested for spot, outright forwards, foreign exchange swaps and currency options.

Amounts outstanding are reported separately according to the following categories:

Interbank direct (inter-reporting dealer)	Executed between two dealers participating in the triennial survey and not intermediated by a third party. For example, a transaction executed via direct telephone communication or direct electronic dealing systems such as Reuters Conversational Dealing.
Customer direct (inter-dealer/customer)	Executed between a reporting dealer and either a customer or a non-reporting dealer, and not intermediated by a third party. For example, a deal executed via direct telephone communication or direct electronic dealing systems such as Reuters Conversational Dealing.
Electronic broking systems	Executed via automated order matching system for foreign exchange dealers. Examples of such systems are EBS and Reuters Matching 2000/2.
Electronic trading systems	Executed via a single-bank proprietary platform or a multibank dealing system. These systems are generally geared towards customers. Examples of multibank systems include FXAll, Currenex, FXConnect, Globalink and eSpeed.
Voice broker	Executed via telephone communication with a foreign exchange voice broker.

8. Elimination of double-counting

Double-counting arises because transactions between two reporting entities are recorded by each of them, ie twice. In order to derive meaningful measures of overall market size, it is therefore necessary to halve the data on transactions between reporting dealers. To permit this, reporters are asked to distinguish deals contracted with other reporters (dealers) (see Section 4). The following methods of adjustment are applied for the three different types of data collected in the survey: turnover, notional amounts outstanding and gross market values.

Double-counting and the specific case of overnetting

In the case of turnover data, the procedure used to eliminate double-counting between reporting dealers across countries implicitly assumes that each transaction is reported twice. This assumption can introduce a bias at the currency level if, for example, one country accurately reports cross-border transactions in their local currency with reporting dealers in the rest of the world, but counterparties in the rest of the world do not separately identify those deals under the relevant currency but under the residual category instead. In this case, the method of halving inter-dealer cross-border transactions will underestimate the size of trade for this currency. The resulting effect is referred to as overnetting.

Overnetting is likely to be more relevant for currencies with lower turnover since they are less likely to be separately identified by large centres. The consequence can be that the global turnover for the segment "with reporting dealers, cross-border" for a given currency could be less than the turnover reported by the currency's home country.

One way of partially correcting for overnetting is to use only the domestic report of cross-border trade in local currency as an estimate in cases where the overnetting is evident. The reasoning behind this methodology is that global turnover for each currency should be at least equal to the turnover reported by the currency's home country.

After measuring the extent to which the overnetting could affect each individual currency covered by the survey, results suggested that, at an aggregate level, some cases of overnetting can be found in currencies such as the Hong Kong dollar, Russian rouble, Slovak koruna and Danish krone. A selection of the currencies affected by this bias is presented in Table D.2 below.

Overnetting estimation for inter-dealer cross-border transactions

Foreign exchange turnover in April 2010, in millions of US dollars[1]

	Reported by country of origin	Reported by rest of the world	Calculated net-net figure	Overnetting
Bulgarian lev	47	11	29	18
Colombian peso	321	152	237	85
Danish krone	11,627	6,714	9,171	2,457
Hong Kong dollar	37,935	17,295	27,615	10,320
Lithuanian litas	783	736	760	24
Russian rouble	4,766	4,270	4,518	248

[1] Including spot transactions, outright forwards, foreign exchange swaps, currency swaps, currency options and other foreign exchange transactions.

Table D.2

It is acknowledged that this bias can also be present for other major currencies; however, the lack of a vis-à-vis country breakdown makes it impossible to measure the size of the bias.

8.1 Double-counting: netting of turnover data

In the case of turnover data, in order to obtain country aggregates, the BIS deducts one half of the amounts reported under "with local reporting dealers" to arrive at the so-called "net-gross" figure, ie country aggregates net of local inter-dealer double-counting. In a second step, to obtain global aggregates, the BIS performs an additional calculation, which is the deduction of one half of the amount reported under "with cross-border reporting dealers", to arrive at the so-called "net-net" figure, ie the overall global turnover figure net of local and cross-border inter-dealer double-counting. Based on this principle, country aggregates are systematically shown in all tables as net-gross figures while global aggregates are presented as net-net totals.[24]

8.2 Double-counting: netting of data on amounts outstanding

The same methodology is applied to notional amounts outstanding. The only distinction from the turnover data is that amounts outstanding are collected on a worldwide consolidated basis, which implies that there is no relevant local/cross-border distinction. Double-counting is therefore eliminated by deducting half of the amount reported under "with reporting dealers".

8.3 Double-counting: netting of gross market values

In the case of gross market values, for which data are also collected on a worldwide consolidated basis without distinction between local and cross-border deals, the adjustments for double-counting are performed as follows: in a first step, gross positive and negative market values of contracts held by reporting institutions are added together to obtain data on a "gross-gross" basis; in a second step, the gross negative market value of contracts with other reporting dealers is subtracted from the "gross-gross" data to immediately arrive at "net-net" figures. For gross market values reported by non-regular reporting institutions, ie dealers that did not participate in the regular derivatives market statistics exercise in the G10 countries, the adjustments for double-counting are assumed to be proportionate to those of the regular reporting institutions.

9. Gaps in reporting

Gaps in reporting stem from two sources: incomplete reporting, ie deals between two non-reporters in the countries providing data, and less than full country coverage. The second type of gap is mitigated by the existence of counterparty reports. The bulk of the cross-border business of institutions located in non-reporting countries is very likely to be captured by the reports of their counterparties if they are reporting dealers in countries participating in the survey. However, transactions between dealers in non-reporting countries, and between non-reporting dealers and customers or other financial institutions, are not captured.

An estimate of both gaps is provided for turnover in foreign exchange instruments (see Table D.3). The basis for estimating gaps due to incomplete reporting in the countries providing the data is the information supplied on the coverage of the survey in each participating country. For example, if in a given country the coverage of the survey as compared with total market activity was 90%, the gap from incomplete reporting is estimated to represent the remaining 10% of the total market turnover in that country.

Gaps are not estimated for notional amounts outstanding and gross market values because it can be assumed that the coverage for the two latter types of data is almost complete due to the worldwide consolidated reporting by all major dealers in the participating countries.

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[24] In some cases, tables by country also include gross-gross aggregates for information purposes.

Measures of global foreign exchange market activity[1]

Daily averages in April, in billions of US dollars

	1998	2001	2004	2007	2010
Total reported gross turnover	2,488	1,959	2,953	4,717	5,529
Adjustment for local double-counting[2]	–370	–245	–344	–436	–472
Total reported turnover net of local double-counting (“net-gross”)	2,117	1,713	2,609	4,281	5,056
Adjustment for cross-border double-counting[3]	–543	–446	–674	–957	–1,075
Total reported net turnover	1,527	1,239	1,934	3,324	3,981
Of which: cross-border transactions	777	677	1,185	2,051	2,586

[1] Including spot, outright forward, foreign exchange swap, currency swap, currency options and other foreign exchange products. [2] Made by halving positions vis-à-vis other local reporting dealers. [3] Made by halving positions vis-à-vis other reporting dealers abroad.

Table D.3

10. Intertemporal comparisons

Intertemporal comparisons are complicated by changes in coverage and definition, and by the movement of exchange rates over the three-year periods separating the surveys in the participating countries.

Changes in coverage may be of two kinds. First, within national markets the coverage of dealers active in national markets may have changed. An increase in the number of reporting institutions, for example, does not necessarily denote greater coverage. If institutions which were not active before, and were therefore not covered in earlier reports, begin to deal on a substantial scale, it is legitimate to compare the total turnover of the larger number of reporting institutions with the total turnover of the smaller number reporting their transactions in the previous period. The same applies, of course, in the case of a decrease in the number of reporting institutions due to a reduction or the transfer to another country of their activity, and to their relative importance in the market.

The second type of change in coverage relates to the inclusion of a larger number of countries and of new features since the inception of the survey in 1986. For instance, in 1995 the coverage of market activity was significantly expanded to include most financial derivatives. In 1998 the number of reporting countries increased from 28 to 43 and the coverage of derivatives market activity was further expanded to include separate data on credit-linked derivatives. In 2001, 2004 and 2007 the number of reporting countries increased further to 48, 52 and 54, respectively, while in 2010 the number of participating countries dropped to 53. For all these periods, the coverage of market segments remained the same as in 1998.

While the additional information provided by new reporting countries is valuable, not all of it relates to transactions that were not captured before. The bulk of these countries’ cross-border transactions with dealers can be presumed to have been included in the reports of their counterparties in earlier years. In new reporting countries, the business not previously captured therefore relates to local inter-dealer transactions and transactions with non-reporting financial institutions and customers.

Another complication involves changes in definitions. Most changes in definitions reflect improvements in compilation procedures. In particular, greater effort has been made following the 1992 survey to classify counterparties accurately, and a finer counterparty

breakdown has been used. As a result, it is now possible to arrive at more accurate estimates of double-counting and to compile net figures on turnover for all items.

However, intertemporal comparisons have to be interpreted carefully. The current procedure introduces biases to the extent that the share of inter-dealer business has changed over time. In 2004, an effort was made to clarify the concept of reporting dealers, in order to better distinguish between inter-dealer and customer transactions. In addition, the reporting basis for the location of trades was further clarified as being, in principle, that of the *sales desk* of any reporting institution. See Section 2.1 of these statistical notes for more details.

The extension of the currency breakdown in 2010 is another factor to be considered when analysing movements in a particular currency or currency pair. The effect of the template expansion of selected currency pairs in the 2010 survey is shown in Table D.4. Some caution is therefore needed when making intertemporal comparisons on turnover for the currencies involved.

Effect of the template expansion on selected currency pairs

Foreign exchange turnover in April 2010[1], in millions of US dollars

	Total	Of which: due to template expansion	% share of total
USD/BRL	25,359	17,142	67.6
USD/CNY	31,283	21,551	68.9
USD/HKD	84,951	33,509	39.4
USD/INR	35,820	15,678	43.8
USD/KRW	57,900	23,465	40.5
USD/ZAR	24,045	16,835	70.0
JPY/AUD	24,040	12,840	53.4
JPY/NZD	4,089	4,050	99.0

[1] Adjusted for local and cross-border inter-dealer double-counting. Including spot, outright forward, foreign exchange swap, currency swap and options transactions.

Table D.4

11. Data at constant exchange rates

Another question often raised with intertemporal comparisons is the impact on aggregate turnover of movements in exchange rates vis-à-vis the US dollar from one reporting date to the next. For instance, turnover in the Japanese yen/pound sterling sector may have remained unchanged from one reporting period to the next in terms of these currencies. But if the dollar rises against both currencies, total turnover in the segment reported in dollar terms will be lower, thus signalling a decline where none has in fact taken place. Even in currency pairs involving the dollar, exchange rate movements will impact on turnover. For example, if a trade for a fixed amount of yen against US dollars is transacted, the trade will enter the aggregates with a smaller or larger US dollar amount, depending on how the yen moves against the dollar from one reporting date to the next. To provide some guidance on the impact of actual exchange rate movements on total reported aggregates, pre-2010 totals have been additionally recalculated at constant exchange rates, replacing historical exchange rates by average April 2010 exchange rates. All transactions in a given currency, say the yen, are converted into original currency terms at the historical exchange rate and then recalculated using the average April 2010 dollar/yen exchange rate, as appropriate. In the case of foreign exchange transactions, the dollar side of transactions remains

unchanged, since the exchange rate for dollar amounts is constant (and equal to one) over time. The sums of all recalculated transactions are divided by two. This takes account of the joint contribution of two currencies to each foreign exchange transaction.

12. Annex tables

The detailed aggregated results of the Central Bank Survey of Foreign Exchange and Derivatives Market Activity in April and at end-June 2010, as far as foreign exchange instruments are concerned, are presented in the following set of annex tables in two separate sections (E.1 and E.2):

Section E.1 covers turnover in global foreign exchange markets, ie turnover in spot transactions, outright forwards, foreign exchange swaps, currency swaps, currency options and other foreign exchange products.

Section E.2 comprises notional amounts outstanding and gross market values of OTC foreign exchange derivatives markets.

Country aggregates are systematically shown in all tables as net-gross figures, while global aggregates are presented as net-net totals (see Section 8).

In some cases, the sum of sub-items does not equal the total for particular categories. Apart from rounding, this can result from incomplete classification of data, use of residual categories and suppression of data for confidentiality reasons.

12.1 Turnover on foreign exchange markets (Section E.1)

Tables E.1 to E.4 show total reported foreign exchange market turnover net of both local and cross-border inter-dealer double-counting[25] by market segment, counterparty and currency. No adjustments were made for gaps in reporting in these or any other annex tables.

Because two currencies are involved in each deal, the sum of transactions in all individual currencies shown in Table E.1 equals twice the total shown in the first column. Information by currency pair is shown for the US dollar in Table E.2, for the euro in Table E.3 and for the yen in Table E.4. Because the data in these latter tables relate to currency pairs, the sum of all transactions equals the total for the currency in question, not twice that total. The totals for the currencies in Tables E.2, E.3 and E.4 therefore correspond to the figures in the second, third and fourth columns of Table E.1. The information on currencies relates only to separately reported transactions. If transactions in a given currency were not identified separately, but placed with residual (or other) currencies, global turnover in that currency may be understated (see Section 8 and the box on overnetting). For the major currencies, the amount of underestimation from this source can be presumed to be minimal.

The data on transactions in “currencies of other reporting countries” relate to transactions that have been individually identified as the local currency of another country participating in the survey (see Section 5 for the full list of currencies identified in the survey). Data in the “residual currencies” column represent the difference between the total and sum of components.

Tables E.5 to E.9 provide information on reported foreign exchange market turnover by country and currency net of local inter-dealer double-counting. No adjustment was made for cross-border inter-dealer double-counting or for gaps in reporting. The totals at the foot of these tables are the sum of the items in the columns in question. They do not correspond to those in Tables E.1 to E.4 because of the absence of an adjustment for cross-border inter-dealer double-counting.

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[25] See Section 8.

As in Table E.1, the sum of transactions in each individual currency in Table E.5 equals twice the total transactions because two currencies figure in every deal. Because the data in Tables E.6 to E.9 relate to currency pairs, the total for all transactions sums to the total for the currency, not to twice the total.

Tables E.10 to E.15 contain information on reported foreign exchange market turnover by country, counterparty and market segment, and on the maturity breakdown of reported outright forward and foreign exchange swap transactions by country net of local double-counting. No adjustment was made for cross-border inter-dealer double-counting.

Tables E.16 and E.17 contain information on the maturity breakdown of reported outright forward and foreign exchange swap transactions by currency net of local and cross-border inter-dealer double-counting.

Tables E.18 to E.23 provide an intertemporal comparison of reported foreign exchange turnover net of local inter-dealer double-counting by country and market segment.

Table E.24 provides information on reported turnover of foreign exchange contracts by execution method. The data broken down by instrument are calculated net of both local and cross-border double-counting.

12.2 Positions (amounts outstanding) on derivatives markets (Section E.2)

Table E.25 contains detailed data on reported notional amounts outstanding of foreign exchange derivatives, broken down by instrument, counterparty and market risk factor (ie mainly currency). The data are adjusted for inter-dealer double-counting.

Table E.26 contains detailed data on reported gross positive and negative market values of foreign exchange derivatives by instrument, counterparty and market risk factor (ie mainly currency). The data are not adjusted for inter-dealer double-counting.

Table E.27 provides information on the maturity breakdown of notional amounts outstanding of foreign exchange derivatives by instrument and counterparty. The data are adjusted for inter-dealer double-counting.

Table E.28 provides an intertemporal comparison of reported notional amounts outstanding and gross market values of foreign exchange derivatives by instrument and counterparty. The data are adjusted for inter-dealer double-counting.

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Conventions used in the tables

0 = Value close to zero.

... = Reported to be nil, not reported, not shown for reasons of confidentiality, not meaningful or not applicable.

Owing to rounding and incomplete reporting of various breakdowns, the component items do not always sum to the total for the category in question.

“Gross” refers to data for which no adjustment has been made for estimated double-counting; “net-gross” refers to data for which adjustments have been made for estimated local double-counting; and “net-net”, or “net”, refers to data adjusted for both local and cross-border double-counting.

1. Turnover in April 2010

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Total reported transactions in all currencies

Daily averages, in millions of US dollars

	Total	Specified currency against all other currencies[2]					
		US dollar	Euro	Yen	Pound sterling	Swiss franc	Canadian dollar
Spot	**1,490,205**	**1,187,699**	**691,210**	**300,214**	**212,976**	**92,090**	**77,831**
with reporting dealers	517,996	421,171	232,767	97,655	70,395	28,203	23,825
local	175,900	145,414	68,722	27,309	23,949	8,915	6,413
cross-border	342,096	275,757	164,045	70,346	46,446	19,288	17,413
with other financial institutions	755,203	598,504	361,401	152,144	115,907	52,433	41,628
local	301,247	242,285	147,602	60,048	43,739	22,773	14,878
cross-border	453,955	356,217	213,799	92,096	72,168	29,661	26,751
with non-financial customers	217,006	168,025	97,042	50,415	26,674	11,454	12,378
local	91,339	67,744	30,137	24,425	9,389	3,354	6,836
cross-border	125,667	100,281	66,905	25,991	17,285	8,100	5,542
Outright forwards	**475,007**	**391,501**	**149,687**	**115,111**	**54,844**	**19,076**	**26,332**
with reporting dealers	112,510	96,325	34,039	12,039	11,275	5,203	4,545
local	28,634	23,950	8,558	3,157	3,127	1,627	1,345
cross-border	83,875	72,375	25,481	8,882	8,148	3,576	3,199
with other financial institutions	254,172	207,497	83,368	57,319	34,405	10,315	17,277
local	99,098	74,530	36,704	19,816	17,457	3,773	7,156
cross-border	155,073	132,967	46,664	37,503	16,947	6,542	10,122
with non-financial customers	108,326	87,680	32,279	45,752	9,164	3,558	4,510
local	54,062	39,901	19,187	15,061	5,864	2,210	2,963
cross-border	54,265	47,778	13,092	30,691	3,300	1,348	1,547
Up to 7 days	218,778	181,689	69,926	75,000	27,281	10,058	13,847
Over 7 days and up to 1 year	244,894	200,687	76,244	39,145	26,406	8,847	12,138
Over 1 year	11,335	9,123	3,516	966	1,157	172	347
Foreign exchange swaps	**1,765,210**	**1,600,101**	**609,801**	**278,897**	**222,214**	**127,078**	**97,049**
with reporting dealers	837,004	775,490	273,064	125,552	96,787	65,017	38,061
local	241,165	229,167	61,008	35,164	32,611	11,919	11,289
cross-border	595,838	546,323	212,055	90,388	64,176	53,098	26,772
with other financial institutions	757,769	685,372	267,399	126,072	102,805	49,334	49,426
local	221,017	196,326	77,799	32,917	41,028	14,306	13,930
cross-border	536,752	489,047	189,601	93,155	61,777	35,029	35,496
with non-financial customers	170,437	139,238	69,338	27,273	22,621	12,726	9,562
local	71,757	53,033	27,758	16,222	10,018	3,852	4,313
cross-border	98,680	86,205	41,580	11,051	12,604	8,875	5,250
Up to 7 days	1,303,954	1,208,255	419,682	201,122	161,342	90,265	72,330
Over 7 days and up to 1 year	444,209	376,210	186,218	75,844	58,828	35,430	23,815
Over 1 year	14,522	13,039	3,903	1,932	2,043	1,382	904

For footnotes, see facing page.

Table E.1

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Total reported transactions in all currencies

Daily averages, in millions of US dollars

Specified currency against all other currencies[2]								
Australian dollar	**Swedish krona**	**Brazilian real**	**Renminbi**	**Czech koruna**	**Danish krone**	**Hong Kong dollar**	**Forint**	
111,107	**18,787**	**8,518**	**8,123**	**1,330**	**4,785**	**18,713**	**4,144**	**Spot**
37,564	6,799	2,275	6,415	657	1,989	8,862	1,780	with reporting dealers
12,028	1,751	1,602	4,723	95	301	3,759	665	local
25,536	5,049	673	1,692	563	1,688	5,103	1,115	cross-border
56,135	9,641	4,672	1,419	413	1,627	6,448	2,008	with other financial institutions
19,953	2,456	2,446	385	117	293	1,951	730	local
36,182	7,185	2,226	1,034	296	1,334	4,497	1,278	cross-border
17,408	2,347	1,571	289	260	1,169	3,402	356	with non-financial customers
9,994	1,096	1,460	144	198	858	2,271	189	local
7,414	1,251	111	145	62	311	1,132	167	cross-border
28,836	**8,578**	**12,866**	**14,248**	**612**	**2,794**	**3,725**	**1,816**	**Outright forwards**
6,951	2,544	2,538	6,052	103	777	1,090	360	with reporting dealers
1,702	643	703	1,235	16	297	428	135	local
5,249	1,901	1,835	4,817	87	480	661	224	cross-border
17,197	4,123	8,585	5,467	213	865	1,505	1,052	with other financial institutions
8,274	1,788	2,574	1,332	107	599	673	394	local
8,923	2,335	6,011	4,135	106	266	831	658	cross-border
4,688	1,911	1,743	2,729	296	1,152	1,131	404	with non-financial customers
3,295	1,379	1,063	1,959	189	1,049	859	254	local
1,393	532	681	769	107	103	272	150	cross-border
12,607	4,420	3,875	1,849	174	1,521	1,887	549	Up to 7 days
15,912	4,080	8,343	10,377	421	1,215	1,564	1,249	Over 7 days and up to 1 year
316	78	649	2,022	17	58	274	18	Over 1 year
140,794	**56,198**	**791**	**6,825**	**5,446**	**14,681**	**69,538**	**9,937**	**Foreign exchange swaps**
71,439	28,866	187	2,879	3,474	8,103	36,484	3,418	with reporting dealers
20,111	2,717	53	2,566	543	1,207	14,982	1,209	local
51,328	26,149	134	313	2,931	6,896	21,502	2,209	cross-border
59,520	18,096	419	3,163	1,303	3,217	30,227	4,442	with other financial institutions
14,844	5,814	166	3,028	483	1,441	3,247	1,120	local
44,676	12,282	253	134	820	1,776	26,980	3,322	cross-border
9,835	9,236	184	784	669	3,361	2,827	2,076	with non-financial customers
4,049	4,701	142	748	367	2,749	2,138	212	local
5,786	4,534	43	36	302	613	690	1,865	cross-border
112,494	39,596	278	4,130	4,370	9,843	55,821	8,088	Up to 7 days
27,942	16,180	404	2,603	1,070	4,814	12,285	1,713	Over 7 days and up to 1 year
357	418	110	93	6	24	1,432	136	Over 1 year

[1] Adjusted for local and cross-border inter-dealer double-counting. Due to incomplete reporting, the maturity breakdown does not always sum to totals. Due to incomplete counterparty breakdown, components do not always sum to totals. [2] Because two currencies are involved in each transaction, the sum of transactions in individual currencies comes to twice the total reported turnover.

Table E.1 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Total reported transactions in all currencies

Daily averages, in millions of US dollars

	Specified currency against all other currencies[2]							
	Indian rupee	**Rupiah**	**Won**	**Mexican peso**	**Norwegian krone**	**New Zealand dollar**	**Philippine peso**	**Zloty**
Spot	**13,527**	**2,464**	**21,144**	**18,158**	**12,335**	**21,643**	**2,249**	**7,193**
with reporting dealers	7,081	1,436	12,821	6,925	4,475	7,798	1,679	3,108
local	5,544	803	9,769	2,125	1,156	2,636	1,123	960
cross-border	1,537	633	3,052	4,800	3,319	5,162	556	2,148
with other financial institutions	2,947	621	6,229	8,366	6,105	11,299	375	3,176
local	878	176	3,183	2,812	1,285	3,416	201	950
cross-border	2,070	445	3,046	5,555	4,820	7,883	174	2,226
with non-financial customers	3,498	407	2,094	2,867	1,755	2,546	195	909
local	2,881	350	1,714	1,599	830	1,330	159	604
cross-border	618	56	380	1,268	925	1,216	36	305
Outright forwards	**13,620**	**2,659**	**18,018**	**5,392**	**6,153**	**5,076**	**2,396**	**3,559**
with reporting dealers	4,811	1,368	11,002	1,425	1,619	1,324	1,248	693
local	1,466	337	1,667	434	366	380	170	201
cross-border	3,345	1,031	9,335	992	1,253	944	1,079	492
with other financial institutions	5,059	1,070	5,639	3,014	3,301	2,976	891	2,159
local	1,513	322	1,865	1,140	1,649	1,354	217	923
cross-border	3,546	749	3,774	1,874	1,652	1,621	674	1,236
with non-financial customers	3,750	221	1,377	952	1,233	776	257	707
local	3,259	175	942	318	941	457	213	430
cross-border	491	45	435	634	292	319	44	277
Up to 7 days	3,263	552	2,590	2,117	3,102	2,621	370	1,160
Over 7 days and up to 1 year	9,458	2,071	14,808	3,164	2,986	2,398	1,983	2,334
Over 1 year	899	37	620	111	64	57	43	65
Foreign exchange swaps	**6,789**	**667**	**16,597**	**23,735**	**31,602**	**33,148**	**1,188**	**19,074**
with reporting dealers	6,030	569	13,823	10,683	14,863	16,028	1,004	7,083
local	5,243	417	12,908	2,302	2,269	4,894	841	1,986
cross-border	787	152	915	8,382	12,594	11,134	163	5,097
with other financial institutions	637	68	1,781	9,742	11,984	14,450	171	7,653
local	381	54	1,046	3,270	3,077	3,700	170	1,900
cross-border	257	13	736	6,472	8,906	10,750	1	5,753
with non-financial customers	121	30	992	3,310	4,755	2,670	14	4,338
local	99	26	908	767	2,216	872	14	632
cross-border	22	4	84	2,543	2,539	1,799	...	3,706
Up to 7 days	3,290	447	7,387	20,278	22,222	28,699	555	15,680
Over 7 days and up to 1 year	2,931	220	8,329	3,359	9,231	4,296	628	3,280
Over 1 year	568	1	881	98	149	162	4	113

For footnotes, see facing page.

Table E.1 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Total reported transactions in all currencies

Daily averages, in millions of US dollars

Specified currency against all other currencies[2]								
Rouble	**Rand**	**Singapore dollar**	**New Taiwan dollar**	**Baht**	**Turkish lira**	**Currencies of other reporting countries[3]**	**Residual currencies[4]**	
18,139	**9,111**	**15,616**	**6,064**	**2,836**	**7,955**	**15,092**	**69,356**	**Spot**
5,936	4,040	6,746	2,102	1,096	4,328	5,664	20,399	with reporting dealers
4,610	1,344	1,868	1,201	445	1,750	3,667	7,151	local
1,325	2,696	4,878	901	650	2,578	1,997	13,248	cross-border
6,342	4,059	6,227	1,952	617	3,234	5,028	39,448	with other financial institutions
4,428	1,026	2,235	1,126	97	1,017	2,909	17,101	local
1,913	3,033	3,992	826	520	2,218	2,119	22,347	cross-border
5,861	1,011	2,643	2,010	1,123	392	4,400	9,510	with non-financial customers
2,103	733	758	1,463	1,051	301	4,213	4,497	local
3,759	277	1,885	548	72	91	187	5,013	cross-border
2,262	**2,856**	**4,416**	**6,820**	**1,107**	**3,032**	**9,837**	**32,787**	**Outright forwards**
699	689	1,093	3,456	80	964	4,235	6,471	with reporting dealers
361	320	283	641	20	498	1,106	2,097	local
339	370	810	2,815	59	466	3,129	4,375	cross-border
1,261	1,588	2,359	2,584	134	1,786	4,313	21,022	with other financial institutions
449	635	987	630	55	690	1,767	8,823	local
812	954	1,371	1,955	79	1,095	2,546	12,198	cross-border
301	578	965	779	894	282	1,289	5,295	with non-financial customers
167	413	613	457	870	204	1,110	2,320	local
134	165	352	323	24	78	179	2,975	cross-border
704	1,144	1,708	1,547	268	1,820	2,687	7,220	Up to 7 days
1,472	1,673	2,614	5,196	826	1,182	6,786	24,208	Over 7 days and up to 1 year
85	39	94	77	13	29	364	1,360	Over 1 year
14,240	**15,628**	**33,594**	**4,761**	**3,503**	**12,634**	**10,324**	**63,590**	**Foreign exchange swaps**
5,817	9,622	20,726	929	2,675	6,034	4,501	24,800	with reporting dealers
3,215	3,669	7,481	830	1,914	1,837	1,721	6,259	local
2,602	5,953	13,245	99	761	4,198	2,779	18,542	cross-border
7,556	5,031	11,032	3,184	636	6,310	4,461	30,045	with other financial institutions
4,224	1,131	3,841	3,112	303	2,103	1,195	6,078	local
3,332	3,900	7,191	72	333	4,207	3,266	23,968	cross-border
866	974	1,835	648	192	289	1,363	8,744	with non-financial customers
343	677	721	647	131	183	941	4,039	local
524	298	1,115	0	61	106	423	4,705	cross-border
13,047	12,112	26,598	347	1,914	9,886	7,690	50,139	Up to 7 days
1,067	3,400	6,795	4,159	1,511	2,696	2,532	10,628	Over 7 days and up to 1 year
126	117	201	254	78	52	103	359	Over 1 year

[1] Adjusted for local and cross-border inter-dealer double-counting. Due to incomplete reporting, the maturity breakdown does not always sum to totals. Due to incomplete counterparty breakdown, components do not always sum to totals. [2] Because two currencies are involved in each transaction, the sum of transactions in individual currencies comes to twice the total reported turnover. [3] Includes all participating countries' currencies other than the ones listed. [4] Calculated as the difference between the total and the sum of the listed components.

Table E.1 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Total reported transactions in all currencies

Daily averages, in millions of US dollars

	Total	Specified currency against all other currencies[2]					
		US dollar	Euro	Yen	Pound sterling	Swiss franc	Canadian dollar
Currency swaps	**42,866**	**38,313**	**17,673**	**6,597**	**2,575**	**1,681**	**2,839**
with reporting dealers	20,056	18,490	6,787	2,707	1,482	592	996
local	5,944	5,405	1,431	491	639	59	152
cross-border	14,112	13,085	5,356	2,216	843	533	844
with other financial institutions	19,255	16,771	9,498	3,320	878	904	1,309
local	7,488	6,522	4,376	1,169	388	216	259
cross-border	11,767	10,250	5,121	2,151	490	688	1,050
with non-financial customers	3,555	3,052	1,389	569	215	185	533
local	1,764	1,457	584	279	122	110	297
cross-border	1,791	1,594	805	290	93	75	236
Options sold	**136,882**	**105,529**	**57,445**	**34,497**	**12,866**	**9,197**	**4,189**
with reporting dealers	60,904	47,216	24,812	12,229	6,239	4,126	2,189
local	21,195	16,349	8,887	4,990	2,524	1,682	642
cross-border	39,708	30,867	15,924	7,239	3,715	2,444	1,548
with other financial institutions	60,448	47,221	25,850	19,399	5,280	3,575	1,621
local	33,423	27,862	12,117	14,411	2,449	1,671	713
cross-border	27,026	19,359	13,733	4,988	2,831	1,904	908
with non-financial customers	15,530	11,092	6,784	2,869	1,347	1,496	379
local	6,241	4,552	2,864	1,386	442	582	151
cross-border	9,289	6,540	3,919	1,482	905	914	227
Options bought	**130,788**	**101,003**	**54,981**	**31,397**	**13,423**	**8,373**	**4,055**
with reporting dealers	59,909	45,459	26,633	10,629	6,435	4,224	2,105
local	20,434	15,463	9,198	3,171	2,443	1,422	640
cross-border	39,475	29,996	17,434	7,458	3,991	2,802	1,465
with other financial institutions	53,027	42,385	21,329	17,678	4,909	2,709	1,419
local	27,812	23,627	8,879	13,282	1,898	1,069	587
cross-border	25,215	18,758	12,450	4,396	3,011	1,640	832
with non-financial customers	17,852	13,159	7,020	3,090	2,080	1,440	531
local	7,152	5,402	2,750	1,343	607	455	222
cross-border	10,700	7,757	4,270	1,748	1,473	985	309
Total options	**207,264**	**160,194**	**86,705**	**54,465**	**19,952**	**13,395**	**6,097**
Other products	**150**	**...**	**...**	**...**	**...**	**...**	**...**
Total foreign exchange contracts	**3,980,703**	**3,377,809**	**1,555,076**	**755,283**	**512,560**	**253,321**	**210,148**

For footnotes, see facing page.

Table E.1 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Total reported transactions in all currencies

Daily averages, in millions of US dollars

Specified currency against all other currencies[2]								
Australian dollar	**Swedish krona**	**Brazilian real**	**Renminbi**	**Czech koruna**	**Danish krone**	**Hong Kong dollar**	**Forint**	
5,649	**699**	**391**	**65**	**30**	**117**	**347**	**45**	**Currency swaps**
2,984	466	39	31	19	22	215	44	with reporting dealers
441	286	22	3	2	8	32	3	local
2,543	180	17	28	17	14	184	41	cross-border
2,406	219	155	22	10	87	56	0	with other financial institutions
714	126	142	1	1	74	11	...	local
1,691	93	13	21	9	13	45	0	cross-border
259	14	198	12	1	9	76	1	with non-financial customers
55	10	197	6	0	9	25	1	local
204	4	1	6	1	...	52	...	cross-border
10,444	**1,808**	**3,040**	**3,164**	**148**	**186**	**1,156**	**825**	**Options sold**
5,713	795	1,506	1,626	69	167	513	360	with reporting dealers
1,561	261	637	447	12	0	96	136	local
4,152	534	869	1,179	57	167	416	223	cross-border
3,755	723	1,389	1,197	47	4	303	366	with other financial institutions
1,752	243	457	668	6	...	125	147	local
2,003	479	932	529	41	4	178	218	cross-border
976	290	145	342	32	15	340	100	with non-financial customers
432	158	59	107	10	13	185	30	local
545	133	86	234	22	2	155	70	cross-border
10,663	**1,972**	**3,187**	**3,517**	**127**	**110**	**1,123**	**804**	**Options bought**
5,832	865	1,634	1,736	49	19	662	413	with reporting dealers
1,524	300	631	399	0	0	154	210	local
4,308	565	1,004	1,337	49	19	508	204	cross-border
3,151	669	1,456	1,280	28	32	180	305	with other financial institutions
1,415	193	426	673	12	23	51	100	local
1,735	476	1,030	607	16	8	129	204	cross-border
1,680	438	97	501	50	60	281	86	with non-financial customers
756	239	41	213	15	31	182	27	local
924	200	56	288	35	29	99	59	cross-border
15,334	**2,950**	**4,657**	**5,000**	**216**	**203**	**1,692**	**1,243**	**Total options**
...	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**Other products**
301,719	**87,212**	**27,224**	**34,261**	**7,634**	**22,581**	**94,015**	**17,184**	**Total foreign exchange contracts**

[1] Adjusted for local and cross-border inter-dealer double-counting. Due to incomplete reporting, the maturity breakdown does not always sum to totals. Due to incomplete counterparty breakdown, components do not always sum to totals. While data on total options are shown on a net basis, separate data on options sold and options bought are recorded on a gross basis, ie not adjusted for inter-dealer double-counting. [2] Because two currencies are involved in each transaction, the sum of transactions in individual currencies comes to twice the total reported turnover.

Table E.1 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Total reported transactions in all currencies

Daily averages, in millions of US dollars

	Specified currency against all other currencies[2]							
	Indian rupee	**Rupiah**	**Won**	**Mexican peso**	**Norwegian krone**	**New Zealand dollar**	**Philippine peso**	**Zloty**
Currency swaps	**50**	**68**	**951**	**353**	**643**	**664**	**187**	**181**
with reporting dealers	14	9	625	190	208	380	184	84
local	3	2	348	83	136	36	183	15
cross-border	11	7	277	107	72	344	1	69
with other financial institutions	19	57	264	136	389	280	3	82
local	10	53	62	30	214	62	...	6
cross-border	9	4	202	106	175	218	3	76
with non-financial customers	17	2	62	28	46	4	0	15
local	17	2	58	6	18	1	0	1
cross-border	...	...	4	22	28	3	...	14
Options sold	**2,194**	**120**	**2,521**	**1,595**	**1,208**	**1,873**	**102**	**1,371**
with reporting dealers	793	70	1,467	839	497	1,012	41	616
local	297	8	525	231	160	379	6	201
cross-border	496	62	942	608	337	634	35	415
with other financial institutions	877	38	836	613	501	587	37	570
local	470	1	341	225	252	210	7	235
cross-border	408	37	495	387	249	377	30	335
with non-financial customers	523	12	217	144	210	274	24	186
local	355	0	81	44	77	64	1	58
cross-border	168	12	136	100	133	210	23	128
Options bought	**2,429**	**107**	**2,438**	**1,531**	**1,205**	**1,979**	**1,160**	**1,337**
with reporting dealers	948	64	1,341	783	529	1,114	1,109	634
local	429	8	484	253	141	333	1,056	221
cross-border	520	56	857	530	388	780	54	413
with other financial institutions	781	24	838	609	411	520	26	543
local	332	5	467	253	144	192	7	187
cross-border	449	20	371	356	266	327	18	356
with non-financial customers	699	19	260	139	265	346	25	160
local	477	1	117	36	113	119	1	76
cross-border	222	18	143	104	152	227	24	85
Total options	**3,752**	**160**	**3,555**	**2,316**	**1,899**	**2,790**	**687**	**2,083**
Other products	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
Total foreign exchange contracts	**37,738**	**6,019**	**60,265**	**49,954**	**52,632**	**63,321**	**6,707**	**32,089**

For footnotes, see facing page.

Table E.1 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Total reported transactions in all currencies

Daily averages, in millions of US dollars

Specified currency against all other currencies[2]								
Rouble	**Rand**	**Singapore dollar**	**New Taiwan dollar**	**Baht**	**Turkish lira**	**Currencies of other reporting countries[3]**	**Residual currencies[4]**	
182	**150**	**67**	**103**	**111**	**1,908**	**1,692**	**1,400**	**Currency swaps**
65	91	44	34	62	1,238	1,369	640	with reporting dealers
29	9	1	21	59	692	1,255	43	local
36	82	42	13	3	546	114	597	cross-border
102	49	19	26	20	589	192	651	with other financial institutions
33	7	6	17	18	283	61	114	local
69	43	13	9	2	305	131	536	cross-border
15	10	4	43	29	81	131	110	with non-financial customers
12	3	4	37	29	16	119	53	local
3	7	0	5	...	65	12	56	cross-border
766	**775**	**1,750**	**914**	**50**	**2,559**	**572**	**10,901**	**Options sold**
491	523	915	485	11	1,090	199	5,199	with reporting dealers
288	234	236	150	9	431	74	936	local
204	289	679	335	2	658	124	4,263	cross-border
208	201	633	349	1	1,286	276	3,156	with other financial institutions
89	56	362	138	0	714	68	1,054	local
119	145	271	211	1	572	208	2,101	cross-border
67	50	203	79	38	183	98	2,546	with non-financial customers
11	24	57	44	37	97	86	477	local
56	26	146	36	0	87	12	2,069	cross-border
761	**782**	**1,846**	**862**	**55**	**2,260**	**602**	**7,486**	**Options bought**
466	521	922	519	9	1,033	182	2,948	with reporting dealers
239	228	285	112	7	468	74	974	local
227	293	637	407	2	565	108	1,974	cross-border
223	195	662	250	2	820	331	2,290	with other financial institutions
91	59	345	96	1	192	79	937	local
133	136	317	154	1	628	252	1,353	cross-border
72	67	262	92	43	407	89	2,248	with non-financial customers
18	40	110	55	43	330	76	413	local
54	27	151	37	0	76	13	1,835	cross-border
1,049	**1,035**	**2,678**	**1,273**	**95**	**3,757**	**984**	**14,313**	**Total options**
...	**...**	**...**	**...**	**...**	**...**	**...**	**300**	**Other products**
35,870	**28,780**	**56,371**	**19,021**	**7,652**	**29,285**	**37,929**	**181,746**	**Total foreign exchange contracts**

[1] Adjusted for local and cross-border inter-dealer double-counting. Due to incomplete reporting, the maturity breakdown does not always sum to totals. Due to incomplete counterparty breakdown, components do not always sum to totals. While data on total options are shown on a net basis, separate data on options sold and options bought are recorded on a gross basis, ie not adjusted for inter-dealer double-counting. [2] Because two currencies are involved in each transaction, the sum of transactions in individual currencies comes to twice the total reported turnover. [3] Includes all participating countries' currencies other than the ones listed. [4] Calculated as the difference between the total and the sum of the listed components.

Table E.1 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

US dollar against:

Daily averages, in millions of US dollars

	Total	Euro	Yen	Pound sterling	Swiss franc	Canadian dollar	Australian dollar	Swedish krona
Spot	**1,187,699**	**468,891**	**183,108**	**139,582**	**50,793**	**65,148**	**83,869**	**5,441**
with reporting dealers	421,171	159,180	66,429	47,249	14,637	19,816	28,888	1,975
local	145,414	46,591	17,329	16,797	5,064	5,395	9,268	697
cross-border	275,757	112,589	49,100	30,451	9,573	14,421	19,620	1,278
with other financial institutions	598,504	245,922	89,099	76,718	30,434	34,604	43,834	2,926
local	242,285	101,494	36,210	29,389	13,916	13,463	16,935	700
cross-border	356,217	144,429	52,888	47,328	16,518	21,141	26,898	2,226
with non-financial customers	168,025	63,789	27,579	15,616	5,722	10,728	11,147	540
local	67,744	16,085	13,105	4,441	1,451	5,891	5,435	233
cross-border	100,281	47,704	14,474	11,175	4,272	4,837	5,713	307
Outright forwards	**391,501**	**92,085**	**89,205**	**33,599**	**10,715**	**20,295**	**20,494**	**3,468**
with reporting dealers	96,325	23,568	7,287	7,463	2,894	3,436	5,177	1,292
local	23,950	5,397	2,142	2,170	786	897	1,323	330
cross-border	72,375	18,172	5,145	5,293	2,109	2,539	3,854	962
with other financial institutions	207,497	50,565	43,981	21,447	6,055	13,487	12,612	1,647
local	74,530	19,999	11,248	10,071	2,072	4,904	5,575	791
cross-border	132,967	30,566	32,733	11,375	3,983	8,583	7,037	856
with non-financial customers	87,680	17,951	37,937	4,689	1,765	3,372	2,705	529
local	39,901	9,730	8,853	2,970	1,084	2,173	2,001	297
cross-border	47,778	8,222	29,084	1,720	681	1,199	704	232
Up to 7 days	181,689	46,113	63,245	16,987	6,076	10,358	9,293	1,846
Over 7 days and up to 1 year	200,687	44,334	25,316	15,804	4,563	9,702	10,994	1,601
Over 1 year	9,123	1,637	644	808	76	235	206	21
Foreign exchange swaps	**1,600,101**	**475,868**	**245,705**	**175,231**	**101,240**	**89,609**	**128,846**	**35,546**
with reporting dealers	775,490	218,896	116,805	80,184	53,975	36,046	68,570	17,177
local	229,167	51,390	32,600	28,867	8,875	10,817	19,203	2,449
cross-border	546,323	167,506	84,204	51,317	45,100	25,229	49,367	14,728
with other financial institutions	685,372	211,629	109,094	80,627	37,513	45,214	52,998	13,405
local	196,326	59,711	27,084	34,027	10,283	12,109	12,513	3,519
cross-border	489,047	151,918	82,009	46,600	27,230	33,105	40,485	9,886
with non-financial customers	139,238	45,343	19,806	14,419	9,752	8,348	7,278	4,963
local	53,033	13,772	10,489	5,786	2,420	3,633	2,449	1,825
cross-border	86,205	31,571	9,317	8,633	7,332	4,716	4,829	3,138
Up to 7 days	1,208,255	346,362	180,217	135,846	77,198	68,014	105,574	25,573
Over 7 days and up to 1 year	376,210	126,990	63,746	37,945	22,806	20,731	22,965	9,710
Over 1 year	13,039	2,516	1,742	1,439	1,236	864	307	260

For footnotes, see facing page.

Table E.2

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

US dollar against:

Daily averages, in millions of US dollars

Brazilian real	Renminbi	Hong Kong dollar	Indian rupee	Won	Rand	Currencies of other reporting countries[2]	Residual currencies[3]	
8,223	**6,173**	**13,440**	**12,525**	**20,280**	**7,023**	**46,038**	**77,163**	**Spot**
2,267	4,546	6,121	6,970	12,433	3,460	18,494	28,705	with reporting dealers
1,601	2,887	1,795	5,528	9,635	1,159	12,394	9,277	local
666	1,660	4,327	1,442	2,799	2,301	6,101	19,428	cross-border
4,629	1,398	4,932	2,821	6,038	3,050	12,384	39,714	with other financial institutions
2,442	368	1,640	825	3,117	890	8,490	12,407	local
2,187	1,030	3,293	1,997	2,921	2,160	3,894	27,308	cross-border
1,327	229	2,387	2,733	1,809	514	15,160	8,744	with non-financial customers
1,220	92	1,394	2,582	1,493	286	10,084	3,952	local
107	137	992	152	316	228	5,076	4,792	cross-border
12,219	**13,433**	**2,489**	**13,037**	**17,179**	**2,424**	**8,926**	**51,934**	**Outright forwards**
2,353	5,886	816	4,673	10,704	594	2,799	17,383	with reporting dealers
684	1,230	327	1,441	1,619	273	965	4,365	local
1,669	4,656	488	3,233	9,084	321	1,834	13,018	cross-border
8,383	5,396	1,137	4,835	5,250	1,428	2,605	28,668	with other financial institutions
2,510	1,308	448	1,416	1,666	564	1,928	10,029	local
5,872	4,088	689	3,419	3,584	865	677	18,639	cross-border
1,483	2,150	537	3,528	1,225	401	3,523	5,883	with non-financial customers
936	1,444	336	3,084	819	273	3,362	2,541	local
547	707	200	445	407	128	161	3,342	cross-border
3,660	1,721	1,411	3,145	2,390	909	3,168	11,367	Up to 7 days
7,949	9,802	875	9,031	14,187	1,489	5,623	39,418	Over 7 days and up to 1 year
609	1,909	203	862	601	26	136	1,149	Over 1 year
782	**6,741**	**67,278**	**6,776**	**16,421**	**13,747**	**66,605**	**169,706**	**Foreign exchange swaps**
183	2,860	35,348	6,024	13,790	9,017	37,638	78,976	with reporting dealers
53	2,548	14,740	5,238	12,877	3,415	15,106	20,988	local
130	312	20,608	786	913	5,602	22,533	57,988	cross-border
416	3,158	29,476	635	1,722	4,159	24,554	70,772	with other financial institutions
163	3,024	3,044	379	994	828	12,225	16,423	local
253	134	26,432	256	728	3,331	12,329	54,349	cross-border
183	723	2,454	118	909	570	4,413	19,958	with non-financial customers
141	700	1,920	96	879	376	3,105	5,444	local
43	24	534	22	30	194	1,308	14,514	cross-border
274	4,074	54,422	3,288	7,283	10,529	48,902	140,700	Up to 7 days
397	2,575	11,427	2,924	8,265	3,105	17,066	25,558	Over 7 days and up to 1 year
111	92	1,429	564	873	113	637	855	Over 1 year

[1] Adjusted for local and cross-border inter-dealer double-counting. Due to incomplete reporting, the maturity breakdown does not always sum to totals. Due to incomplete counterparty breakdown, components do not always sum to totals. [2] Includes all participating countries' currencies other than the ones listed. [3] Calculated as the difference between the total and the sum of the listed components.

Table E.2 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

US dollar against:

Daily averages, in millions of US dollars

	Total	Euro	Yen	Pound sterling	Swiss franc	Canadian dollar	Australian dollar	Swedish Krona
Currency swaps	**38,313**	**13,507**	**5,646**	**1,831**	**927**	**2,683**	**5,333**	**365**
with reporting dealers	18,490	5,323	2,576	1,141	356	991	2,885	204
local	5,405	910	467	545	42	151	438	90
cross-border	13,085	4,414	2,109	595	314	839	2,447	114
with other financial institutions	16,771	7,185	2,572	573	527	1,247	2,200	156
local	6,522	3,438	677	258	122	248	704	123
cross-border	10,250	3,747	1,894	316	405	999	1,496	33
with non-financial customers	3,052	999	499	117	44	445	248	5
local	1,457	376	216	46	3	279	50	5
cross-border	1,594	623	282	71	41	166	198	...
Options sold	**105,529**	**33,397**	**27,545**	**6,682**	**3,265**	**3,001**	**7,000**	**177**
with reporting dealers	47,216	14,664	9,130	3,293	1,574	1,652	3,812	86
local	16,349	5,211	3,983	1,220	686	430	957	18
cross-border	30,867	9,454	5,147	2,073	888	1,222	2,855	68
with other financial institutions	47,221	15,230	16,315	2,694	1,188	1,074	2,560	60
local	27,862	7,567	13,298	1,206	599	505	1,233	12
cross-border	19,359	7,662	3,017	1,488	589	569	1,327	48
with non-financial customers	11,092	3,503	2,099	695	502	275	628	31
local	4,552	1,410	1,023	209	152	116	296	15
cross-border	6,540	2,093	1,076	486	350	160	332	16
Options bought	**101,003**	**32,624**	**24,865**	**6,832**	**2,207**	**2,893**	**7,121**	**192**
with reporting dealers	45,459	15,573	7,550	3,259	1,038	1,599	3,967	90
local	15,463	5,362	2,252	1,093	336	409	963	21
cross-border	29,996	10,212	5,299	2,166	702	1,190	3,004	69
with other financial institutions	42,385	13,270	15,048	2,458	783	901	2,022	51
local	23,627	5,675	12,199	903	321	365	915	8
cross-border	18,758	7,595	2,849	1,554	462	536	1,107	43
with non-financial customers	13,159	3,782	2,267	1,115	387	393	1,132	50
local	5,402	1,487	1,007	320	92	168	482	29
cross-border	7,757	2,294	1,259	795	294	225	650	21
Total options	**160,194**	**50,903**	**44,070**	**10,238**	**4,166**	**4,268**	**10,232**	**280**
Other products	...	...	...	...	...	...	...	...
Total foreign exchange contracts	3,377,809	1,101,254	567,734	360,481	167,841	182,002	248,775	45,100

For footnotes, see facing page.

Table E.2 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

US dollar against:

Daily averages, in millions of US dollars

Brazilian real	Renminbi	Hong Kong dollar	Indian rupee	Won	Rand	Currencies of other reporting countries[2]	Residual currencies[3]	
381	**58**	**313**	**45**	**918**	**134**	**1,436**	**4,735**	**Currency swaps**
39	31	195	13	615	89	852	3,180	with reporting dealers
22	3	27	3	340	9	300	2,058	local
17	28	168	10	275	80	552	1,122	cross-border
155	22	49	18	243	37	423	1,365	with other financial institutions
142	1	11	9	42	5	265	477	local
13	21	38	9	202	32	158	888	cross-border
188	6	69	14	60	8	160	190	with non-financial customers
187	3	19	14	56	2	148	53	local
1	3	50	...	4	6	12	137	cross-border
2,407	**3,089**	**1,031**	**2,004**	**2,183**	**572**	**1,349**	**11,826**	**Options sold**
1,193	1,601	437	724	1,269	423	711	6,646	with reporting dealers
546	447	85	287	512	181	126	1,661	local
647	1,154	351	437	756	242	586	4,986	cross-border
1,086	1,185	289	844	781	124	302	3,489	with other financial institutions
376	668	120	450	319	32	84	1,393	local
710	517	170	394	463	92	218	2,096	cross-border
128	303	305	436	133	25	337	1,691	with non-financial customers
59	90	152	347	79	19	273	313	local
69	213	153	90	55	6	64	1,378	cross-border
2,611	**3,442**	**884**	**2,230**	**2,156**	**571**	**2,419**	**9,954**	**Options bought**
1,336	1,706	532	874	1,208	430	1,569	4,728	with reporting dealers
526	399	147	408	462	186	1,170	1,730	local
809	1,307	385	465	747	244	399	2,999	cross-border
1,181	1,267	165	750	771	102	321	3,294	with other financial institutions
367	673	48	310	446	28	88	1,282	local
814	593	118	440	325	75	233	2,013	cross-border
94	469	187	607	177	39	529	1,931	with non-financial customers
40	195	98	466	102	29	471	414	local
54	274	89	141	75	10	58	1,517	cross-border
3,754	**4,877**	**1,431**	**3,436**	**3,101**	**717**	**2,629**	**16,092**	**Total options**
...	...	...	...	...	...	...	...	**Other products**
25,359	**31,283**	**84,951**	**35,820**	**57,900**	**24,045**	**125,634**	**319,631**	**Total foreign exchange contracts**

[1] Adjusted for local and cross-border inter-dealer double-counting. Due to incomplete reporting, the maturity breakdown does not always sum to totals. Due to incomplete counterparty breakdown, components do not always sum to totals. While data on total options are shown on a net basis, separate data on options sold and options bought are recorded on a gross basis, ie not adjusted for inter-dealer double-counting. [2] Includes all participating countries' currencies other than the ones listed. [3] Calculated as the difference between the total and the sum of the listed components.

Table E.2 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Euro against:

Daily averages, in millions of US dollars

	Total	US dollar	Yen	Pound sterling	Swiss franc
Spot	**691,210**	**468,891**	**73,103**	**50,235**	**34,799**
with reporting dealers	232,767	159,180	20,396	16,847	11,570
local	68,722	46,591	6,336	5,341	3,424
cross-border	164,045	112,589	14,060	11,506	8,146
with other financial institutions	361,401	245,922	40,290	27,121	18,407
local	147,602	101,494	17,332	11,192	8,222
cross-border	213,799	144,429	22,958	15,930	10,186
with non-financial customers	97,042	63,789	12,417	6,267	4,821
local	30,137	16,085	4,814	1,944	1,506
cross-border	66,905	47,704	7,603	4,323	3,315
Outright forwards	**149,687**	**92,085**	**13,832**	**13,878**	**6,009**
with reporting dealers	34,039	23,568	2,251	2,461	1,460
local	8,558	5,397	570	664	582
cross-border	25,481	18,172	1,682	1,798	878
with other financial institutions	83,368	50,565	7,255	8,820	3,273
local	36,704	19,999	4,906	4,731	1,252
cross-border	46,664	30,566	2,349	4,089	2,021
with non-financial customers	32,279	17,951	4,326	2,596	1,276
local	19,187	9,730	3,470	1,380	714
cross-border	13,092	8,222	856	1,216	562
Up to 7 days	69,926	46,113	5,922	6,322	2,666
Over 7 days and up to 1 year	76,244	44,334	7,732	7,326	3,279
Over 1 year	3,516	1,637	178	230	64
Foreign exchange swaps	**609,801**	**475,868**	**17,028**	**37,130**	**22,129**
with reporting dealers	273,064	218,896	4,866	14,185	9,814
local	61,008	51,390	1,120	2,971	2,452
cross-border	212,055	167,506	3,747	11,214	7,362
with other financial institutions	267,399	211,629	8,135	17,225	10,081
local	77,799	59,711	2,760	4,683	3,043
cross-border	189,601	151,918	5,374	12,542	7,038
with non-financial customers	69,338	45,343	4,027	5,720	2,234
local	27,758	13,772	3,174	2,687	1,038
cross-border	41,580	31,571	853	3,033	1,196
Up to 7 days	419,682	346,362	9,066	20,229	11,301
Over 7 days and up to 1 year	186,218	126,990	7,857	16,306	10,700
Over 1 year	3,903	2,516	106	595	128

For footnotes, see facing page.

Table E.3

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Euro against:

Daily averages, in millions of US dollars

Canadian dollar	Australian dollar	Swedish krona	Currencies of other reporting countries[2]	Residual currencies[3]	
4,917	**5,316**	**11,052**	**7,559**	**35,338**	**Spot**
1,651	1,631	4,189	2,552	14,752	with reporting dealers
493	419	908	834	4,376	local
1,157	1,211	3,281	1,718	10,376	cross-border
2,611	2,383	5,350	2,119	17,197	with other financial institutions
714	748	1,540	1,198	5,163	local
1,897	1,635	3,810	920	12,035	cross-border
655	1,303	1,513	2,888	3,389	with non-financial customers
300	871	651	2,621	1,345	local
356	432	862	267	2,044	cross-border
3,072	**2,101**	**3,253**	**2,485**	**12,972**	**Outright forwards**
389	416	589	374	2,530	with reporting dealers
151	84	151	113	847	local
239	332	437	261	1,683	cross-border
2,065	1,313	1,605	565	7,907	with other financial institutions
1,395	686	646	441	2,648	local
669	627	960	125	5,258	cross-border
618	372	1,058	1,545	2,536	with non-financial customers
409	210	808	1,454	1,014	local
210	162	251	91	1,522	cross-border
1,742	858	1,180	981	4,142	Up to 7 days
1,265	1,187	2,024	1,370	7,726	Over 7 days and up to 1 year
65	55	49	134	1,104	Over 1 year
4,908	**3,592**	**18,020**	**9,468**	**21,658**	**Foreign exchange swaps**
1,321	1,034	11,378	4,510	7,060	with reporting dealers
263	208	204	1,420	981	local
1,059	826	11,174	3,089	6,078	cross-border
3,023	1,727	3,451	2,363	9,765	with other financial institutions
1,091	527	1,536	1,659	2,789	local
1,933	1,200	1,915	704	6,976	cross-border
563	830	3,192	2,595	4,834	with non-financial customers
242	346	1,998	2,348	2,153	local
321	484	1,193	247	2,681	cross-border
3,132	1,198	12,941	4,714	10,738	Up to 7 days
1,742	2,360	4,930	4,695	10,638	Over 7 days and up to 1 year
34	33	149	59	282	Over 1 year

[1] Adjusted for local and cross-border inter-dealer double-counting. Due to incomplete reporting, the maturity breakdown does not always sum to totals. Due to incomplete counterparty breakdown, components do not always sum to totals. [2] Includes all participating countries' currencies other than the ones listed. [3] Calculated as the difference between the total and the sum of the listed components. [4] Due to incomplete reporting, the maturity breakdown does not always sum to totals.

Table E.3 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Euro against:

Daily averages, in millions of US dollars

	Total	US dollar	Yen	Pound sterling	Swiss franc
Currency swaps	**17,673**	**13,507**	**770**	**651**	**710**
with reporting dealers	6,787	5,323	95	320	222
local	1,431	910	18	89	15
cross-border	5,356	4,414	78	231	207
with other financial institutions	9,498	7,185	664	279	348
local	4,376	3,438	478	119	90
cross-border	5,121	3,747	186	160	258
with non-financial customers	1,389	999	11	53	140
local	584	376	4	39	106
cross-border	805	623	7	14	34
Options sold	**57,445**	**33,397**	**4,070**	**4,565**	**5,213**
with reporting dealers	24,812	14,664	1,606	2,159	2,190
local	8,887	5,211	551	940	840
cross-border	15,924	9,454	1,056	1,220	1,350
with other financial institutions	25,850	15,230	1,935	1,900	2,098
local	12,117	7,567	655	969	1,001
cross-border	13,733	7,662	1,280	931	1,098
with non-financial customers	6,784	3,503	529	506	925
local	2,864	1,410	310	175	414
cross-border	3,919	2,093	219	331	511
Options bought	**54,981**	**32,624**	**3,492**	**4,881**	**5,296**
with reporting dealers	26,633	15,573	1,619	2,398	2,821
local	9,198	5,362	509	1,018	904
cross-border	17,434	10,212	1,110	1,380	1,916
with other financial institutions	21,329	13,270	1,420	1,811	1,584
local	8,879	5,675	610	753	666
cross-border	12,450	7,595	810	1,058	918
with non-financial customers	7,020	3,782	453	671	891
local	2,750	1,487	226	186	301
cross-border	4,270	2,294	227	485	590
Total options	**86,705**	**50,903**	**5,950**	**7,167**	**8,004**
Other products	**...**	**...**	**...**	**...**	**...**
Total foreign exchange contracts	**1,555,076**	**1,101,254**	**110,684**	**109,061**	**71,650**

For footnotes, see facing page.

Table E.3 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Euro against:

Daily averages, in millions of US dollars

Canadian dollar	Australian dollar	Swedish krona	Currencies of other reporting countries[2]	Residual currencies[3]	
148	**215**	**314**	**433**	**925**	**Currency swaps**
5	73	255	202	292	with reporting dealers
1	2	196	166	35	local
4	71	59	36	258	cross-border
63	136	57	203	564	with other financial institutions
11	10	4	169	57	local
51	126	53	34	506	cross-border
81	6	2	29	69	with non-financial customers
11	...	2	29	18	local
70	6	1	...	51	cross-border
390	**605**	**1,430**	**577**	**7,197**	**Options sold**
135	334	636	330	2,757	with reporting dealers
42	105	221	19	959	local
93	229	415	311	1,797	cross-border
210	222	575	161	3,519	with other financial institutions
56	96	222	4	1,547	local
154	126	352	157	1,972	cross-border
44	49	220	86	921	with non-financial customers
17	24	119	86	309	local
27	25	101	0	613	cross-border
335	**567**	**1,544**	**454**	**5,789**	**Options bought**
109	306	669	142	2,995	with reporting dealers
46	72	237	23	1,028	local
64	234	432	119	1,968	cross-border
176	190	539	142	2,197	with other financial institutions
79	92	171	28	805	local
97	98	368	115	1,392	cross-border
49	71	336	170	597	with non-financial customers
20	24	180	140	185	local
30	46	156	30	412	cross-border
602	**852**	**2,321**	**795**	**10,110**	**Total options**
...	**...**	**...**	**...**	**...**	**Other products**
13,648	**12,076**	**34,960**	**20,740**	**81,004**	**Total foreign exchange contracts**

[1] Adjusted for local and cross-border inter-dealer double-counting. Due to incomplete reporting, the maturity breakdown does not always sum to totals. Due to incomplete counterparty breakdown, components do not always sum to totals. While data on total options are shown on a net basis, separate data on options sold and options bought are recorded on a gross basis, ie not adjusted for inter-dealer double-counting. [2] Includes all participating countries' currencies other than the ones listed. [3] Calculated as the difference between the total and the sum of the listed components.

Table E.3 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Yen against:

Daily averages, in millions of US dollars

	Total	US dollar	Euro	Australian dollar	New Zealand dollar	Currencies of other reporting countries[2]	Residual currencies[3]
Spot	**300,214**	**183,108**	**73,103**	**12,980**	**2,051**	**12,326**	**16,646**
with reporting dealers	97,655	66,429	20,396	3,724	310	2,930	3,865
local	27,309	17,329	6,336	1,363	134	1,093	1,053
cross-border	70,346	49,100	14,060	2,361	176	1,837	2,812
with other financial institutions	152,144	89,099	40,290	6,044	1,082	5,928	9,700
local	60,048	36,210	17,332	1,539	133	1,290	3,544
cross-border	92,096	52,888	22,958	4,505	949	4,638	6,157
with non-financial customers	50,415	27,579	12,417	3,211	659	3,468	3,081
local	24,425	13,105	4,814	2,324	577	2,867	738
cross-border	25,991	14,474	7,603	887	82	601	2,343
Outright forwards	**115,111**	**89,205**	**13,832**	**3,869**	**360**	**4,775**	**3,069**
with reporting dealers	12,039	7,287	2,251	911	89	671	830
local	3,157	2,142	570	128	15	81	220
cross-border	8,882	5,145	1,682	783	74	590	610
with other financial institutions	57,319	43,981	7,255	1,826	196	2,416	1,645
local	19,816	11,248	4,906	1,221	91	1,778	573
cross-border	37,503	32,733	2,349	606	105	638	1,072
with non-financial customers	45,752	37,937	4,326	1,132	75	1,688	594
local	15,061	8,853	3,470	751	58	1,574	355
cross-border	30,691	29,084	856	381	17	114	238
Up to 7 days	75,000	63,245	5,922	1,383	201	2,508	1,741
Over 7 days and up to 1 year	39,145	25,316	7,732	2,440	156	2,199	1,302
Over 1 year	966	644	178	47	3	69	25
Foreign exchange swaps	**278,897**	**245,705**	**17,028**	**5,061**	**1,502**	**4,524**	**5,077**
with reporting dealers	125,552	116,805	4,866	1,057	346	1,156	1,322
local	35,164	32,600	1,120	424	120	436	465
cross-border	90,388	84,204	3,747	633	226	721	857
with other financial institutions	126,072	109,094	8,135	2,924	911	2,020	2,987
local	32,917	27,084	2,760	1,019	274	1,113	667
cross-border	93,155	82,009	5,374	1,906	638	907	2,321
with non-financial customers	27,273	19,806	4,027	1,080	245	1,347	768
local	16,222	10,489	3,174	865	201	1,098	395
cross-border	11,051	9,317	853	214	44	249	373
Up to 7 days	201,122	180,217	9,066	4,005	1,322	2,295	4,217
Over 7 days and up to 1 year	75,844	63,746	7,857	1,044	180	2,217	801
Over 1 year	1,932	1,742	106	12	0	12	59

For footnotes, see facing page.

Table E.4

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Yen against:

Daily averages, in millions of US dollars

	Total	US dollar	Euro	Australian dollar	New Zealand dollar	Currencies of other reporting countries[2]	Residual currencies[3]
Currency swaps	**6,597**	**5,646**	**770**	**73**	**...**	**68**	**40**
with reporting dealers	2,707	2,576	95	8	...	6	22
local	491	467	18	0	...	2	4
cross-border	2,216	2,109	78	8	...	4	18
with other financial institutions	3,320	2,572	664	61	...	12	12
local	1,169	677	478	...	...	11	3
cross-border	2,151	1,894	186	61	...	1	8
with non-financial customers	569	499	11	3	...	50	6
local	279	216	4	3	...	49	6
cross-border	290	282	7	0	...	1	0
Options sold	**34,497**	**27,545**	**4,070**	**1,374**	**99**	**469**	**940**
with reporting dealers	12,229	9,130	1,606	683	56	256	498
local	4,990	3,983	551	157	18	138	143
cross-border	7,239	5,147	1,056	526	38	119	354
with other financial institutions	19,399	16,315	1,935	556	36	188	368
local	14,411	13,298	655	213	10	83	151
cross-border	4,988	3,017	1,280	343	26	106	216
with non-financial customers	2,869	2,099	529	134	7	24	75
local	1,386	1,023	310	21	3	14	15
cross-border	1,482	1,076	219	113	4	10	60
Options bought	**31,397**	**24,865**	**3,492**	**1,375**	**163**	**454**	**1,047**
with reporting dealers	10,629	7,550	1,619	701	116	211	431
local	3,171	2,252	509	154	17	101	138
cross-border	7,458	5,299	1,110	546	100	110	293
with other financial institutions	17,678	15,048	1,420	508	30	206	466
local	13,282	12,199	610	217	11	91	153
cross-border	4,396	2,849	810	291	19	114	312
with non-financial customers	3,090	2,267	453	166	17	37	150
local	1,343	1,007	226	38	6	22	42
cross-border	1,748	1,259	227	128	10	15	108
Total options	**54,465**	**44,070**	**5,950**	**2,057**	**176**	**689**	**1,523**
Other products	**...**	**...**	**...**	**...**	**...**	**...**	**...**
Total foreign exchange contracts	**755,283**	**567,734**	**110,684**	**24,040**	**4,089**	**22,381**	**26,356**

[1] Adjusted for local and cross-border inter-dealer double-counting. Due to incomplete reporting, the maturity breakdown does not always sum to totals. Due to incomplete counterparty breakdown, components do not always sum to totals. While data on total options are shown on a net basis, separate data on options sold and options bought are recorded on a gross basis, ie not adjusted for inter-dealer double-counting. [2] Includes all participating countries' currencies other than the ones listed. [3] Calculated as the difference between the total and the sum of the listed components.

Table E.4 (cont)

OTC foreign exchange turnover by country and currency in April 2010[1]

Daily averages, in millions of US dollars

	Total	Specified currency against all other currencies[2]				
		US dollar	Euro	Yen	Pound sterling	Swiss franc
Argentina	1,613	1,515	331	1	1	1
Australia	192,052	173,577	46,744	25,215	18,205	3,117
Austria	19,549	12,153	14,325	1,795	729	3,803
Bahrain	4,543	4,113	879	168	288	15
Belgium	32,524	27,190	19,651	1,876	6,625	1,775
Brazil	14,094	12,851	3,280	1,544	102	169
Bulgaria	866	249	802	9	47	26
Canada	61,892	58,224	8,019	2,827	2,806	716
Chile	5,544	5,488	426	32	60	1
China	19,774	16,565	2,821	2,454	1,158	87
Chinese Taipei	17,983	17,169	3,186	1,754	863	72
Colombia	2,794	2,781	86	9	11	1
Czech Republic	5,110	3,096	3,146	71	50	31
Denmark	120,463	85,757	68,132	6,639	8,851	15,968
Estonia	1,059	70	1,046	4	5	0
Finland	31,254	19,456	21,612	258	893	8,302
France	151,621	130,191	83,245	22,119	21,059	11,100
Germany	108,598	85,305	69,003	13,163	14,436	11,661
Greece	5,164	3,022	4,381	647	285	641
Hong Kong SAR	237,568	227,015	38,346	30,960	11,970	2,401
Hungary	4,196	2,949	1,877	22	32	259
India	27,358	26,474	3,401	750	1,987	93
Indonesia	3,381	3,192	236	498	74	7
Ireland	14,578	9,793	10,220	1,259	4,553	665
Israel	10,017	9,715	211	31	15	21
Italy	28,601	23,969	21,405	2,256	3,206	1,738
Japan	312,326	254,353	58,970	248,863	18,378	3,174
Korea	43,824	43,149	2,897	2,105	393	57
Latvia	2,226	1,832	1,735	60	112	32
Lithuania	1,154	158	1,090	25	26	8
Luxembourg	33,363	27,856	21,553	4,516	4,161	1,672
Malaysia	7,262	6,693	789	422	361	14
Mexico	17,019	16,796	476	18	22	6
Netherlands	18,253	12,931	14,002	1,262	3,006	669
New Zealand	8,754	7,950	683	623	669	92
Norway	22,191	17,826	6,178	913	1,832	434
Peru	1,425	1,423	184	12	64	69
Philippines	5,017	4,813	674	114	51	8
Poland	7,847	4,887	3,916	48	164	378
Portugal	3,654	2,899	2,419	240	401	444
Romania	3,169	721	2,928	14	85	147
Russia	41,658	39,786	13,700	469	1,119	203
Saudi Arabia	5,291	4,430	967	305	774	44
Singapore	265,977	238,125	62,202	41,356	27,246	7,097
Slovakia	443	154	379	18	24	8
South Africa	14,375	13,946	1,887	308	800	108
Spain	29,322	24,608	15,578	1,775	7,518	954
Sweden	44,796	31,102	22,606	1,389	2,331	1,297
Switzerland	262,582	219,073	112,868	29,610	31,458	78,375
Thailand	7,390	6,869	617	855	174	16
Turkey	16,817	15,727	5,960	247	1,189	179
United Kingdom	1,853,594	1,570,573	820,234	342,118	330,748	112,685
United States	904,357	785,223	376,392	140,417	104,610	61,597
Total	**5,056,282**	**4,315,781**	**1,978,693**	**934,464**	**636,027**	**332,439**

For footnotes, see facing page.

Table E.5

OTC foreign exchange turnover by country and currency in April 2010[1]

Daily averages, in millions of US dollars

Specified currency against all other currencies[2]					
Canadian dollar	**Australian dollar**	**Swedish krona**	**Currencies of other reporting countries[3]**	**Residual currencies[4]**	
1	0	0	1,375	0	Argentina
5,919	85,782	855	23,146	1,546	Australia
299	409	40	3,390	2,157	Austria
17	8	3	1,797	1,798	Bahrain
462	1,318	574	5,068	508	Belgium
119	119	28	9,955	20	Brazil
17	7	1	543	33	Bulgaria
42,699	2,090	557	5,735	110	Canada
24	1	1	5,055	0	Chile
136	630	14	15,683	0	China
250	1,580	18	11,069	6	Chinese Taipei
9	0	0	2,687	2	Colombia
6	6	10	3,800	4	Czech Republic
1,525	1,912	21,326	30,338	480	Denmark
0	0	5	987	0	Estonia
588	35	10,187	1,143	33	Finland
5,352	8,205	2,869	14,539	4,562	France
1,458	2,812	1,376	9,840	8,141	Germany
100	171	21	678	384	Greece
3,662	27,097	...	121,895	11,790	Hong Kong SAR
3	...	2	3,245	2	Hungary
120	180	17	21,403	292	India
3	88	0	2,553	111	Indonesia
352	671	392	662	589	Ireland
20	0	0	4,576	5,444	Israel
679	1,286	490	2,048	125	Italy
6,088	19,522	1,189	13,593	522	Japan
369	185	14	38,369	109	Korea
15	17	65	550	35	Latvia
0	2	2	998	1	Lithuania
362	1,906	1,250	3,304	146	Luxembourg
12	444	1	5,479	307	Malaysia
40	20	0	16,658	1	Mexico
314	317	218	632	3,157	Netherlands
114	1,324	4	6,047	3	New Zealand
119	1,643	1,067	14,368	2	Norway
20	0	0	1,077	...	Peru
9	52	0	4,309	2	Philippines
6	10	21	6,226	38	Poland
109	65	40	683	7	Portugal
3	1	2	2,439	0	Romania
110	199	26	27,669	35	Russia
14	43	8	2,429	1,565	Saudi Arabia
10,086	33,186	1,837	108,660	2,159	Singapore
2	1	1	297	3	Slovakia
117	150	49	11,205	179	South Africa
239	1,018	139	3,022	3,794	Spain
800	641	22,344	6,955	127	Sweden
7,714	11,450	6,651	22,287	5,677	Switzerland
6	144	3	6,096	2	Thailand
32	45	7	10,155	93	Turkey
86,266	122,645	36,958	205,536	79,425	United Kingdom
83,095	61,166	10,358	99,626	86,230	United States
259,882	**390,604**	**121,041**	**921,876**	**221,757**	**Total**

[1] Spot transactions, outright forwards, foreign exchange swaps, currency swaps, options and other products. Adjusted for local inter-dealer double-counting. Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding. [2] Because two currencies are involved in each transaction, the sum of transactions in individual currencies comes to twice the total reported turnover. [3] Includes all participating countries' currencies other than the ones listed. [4] Difference between the total and the sum of the listed components. Table E.5 (cont)

OTC foreign exchange turnover by country and currency in April 2010[1]

US dollar against:

Daily averages, in millions of US dollars

	Total	Euro	Yen	Pound sterling	Swiss franc	Canadian dollar	Australian dollar	Swedish krona
Argentina	1,515	240	0	0	1	0	0	0
Australia	173,577	37,993	18,840	14,060	1,153	4,384	75,472	538
Austria	12,153	7,347	1,006	437	1,199	253	381	22
Bahrain	4,113	582	113	199	14	17	8	1
Belgium	27,190	15,122	821	5,030	1,132	225	1,061	390
Brazil	12,851	2,774	891	64	51	74	65	21
Bulgaria	249	205	4	19	0	0	...	...
Canada	58,224	5,980	1,996	2,133	477	40,205	1,745	319
Chile	5,488	382	28	58	1	23	1	1
China	16,565	2,460	1,608	383	73	132	610	4
Chinese Taipei	17,169	2,743	1,387	620	54	210	1,407	17
Colombia	2,781	76	7	11	1	9	0	0
Czech Republic	3,096	1,173	21	16	18	6	6	5
Denmark	85,757	38,501	2,928	5,135	12,562	1,096	1,404	6,169
Estonia	70	59	1	4	...	0	0	0
Finland	19,456	9,859	188	316	8,261	350	7	15
France	130,191	63,910	18,765	11,509	7,930	4,608	6,246	2,176
Germany	85,305	48,063	8,938	8,842	5,405	962	2,108	791
Greece	3,022	2,412	110	127	103	53	70	4
Hong Kong SAR	227,015	33,103	27,078	10,049	2,401	3,239	24,641	...
Hungary	2,949	670	15	21	148	1	...	...
India	26,474	2,760	574	1,800	84	110	158	14
Indonesia	3,192	202	364	68	7	2	79	0
Ireland	9,793	6,057	588	1,668	404	213	248	226
Israel	9,715	...	...	...	...	...	...	...
Italy	23,969	17,314	955	1,570	1,024	242	1,117	371
Japan	254,353	28,699	195,835	8,630	1,726	3,424	8,163	385
Korea	43,149	2,526	1,831	343	53	339	170	13
Latvia	1,832	1,393	11	93	14	13	12	62
Lithuania	158	117	0	1	1	0	0	0
Luxembourg	27,856	16,652	3,370	2,444	1,092	160	1,262	485
Malaysia	6,693	484	244	269	12	10	354	1
Mexico	16,796	264	15	20	4	36	20	0
Netherlands	12,931	9,126	693	1,335	509	186	202	146
New Zealand	7,950	552	551	606	82	87	762	4
Norway	17,826	2,852	366	1,392	239	58	1,611	665
Peru	1,423	183	12	63	69	20	0	0
Philippines	4,813	486	87	49	6	9	45	0
Poland	4,887	1,125	20	81	181	2	3	2
Portugal	2,899	1,697	178	262	231	77	46	14
Romania	721	500	2	44	57	1	1	0
Russia	39,786	11,945	332	962	118	106	169	22
Saudi Arabia	4,430	786	246	633	26	14	20	7
Singapore	238,125	48,667	30,709	18,806	4,619	6,065	27,568	746
Slovakia	154	95	7	7	3	1	0	0
South Africa	13,946	1,572	258	677	101	99	138	47
Spain	24,608	12,194	1,053	6,160	745	145	932	82
Sweden	31,102	11,265	730	1,140	827	554	451	12,097
Switzerland	219,073	75,997	23,053	22,900	54,648	6,345	10,080	5,327
Thailand	6,869	441	579	139	10	4	107	2
Turkey	15,727	4,984	144	1,051	124	28	19	4
United Kingdom	1,570,573	595,230	250,348	232,509	71,464	74,938	101,968	24,150
United States	785,223	283,948	115,617	85,503	46,268	77,100	56,059	6,903
Total	**4,315,781**	**1,413,767**	**713,515**	**450,257**	**225,732**	**226,236**	**326,993**	**62,252**

For footnotes, see facing page.

Table E.6

OTC foreign exchange turnover by country and currency in April 2010[1]

US dollar against:

Daily averages, in millions of US dollars

Brazilian real	Renminbi	Hong Kong dollar	Indian rupee	Won	Rand	Local currency	Residual currencies[2]	
1	0	0	0	0	0	1,271	0	Argentina
146	173	2,776	130	357	392	...	17,162	Australia
1	1	49	1	...	44	...	1,413	Austria
0	...	...	0	...	1	81	3,096	Bahrain
...	39	421	4	...	159	...	2,786	Belgium
8,480	4	...	1	8	24	...	395	Brazil
...	...	...	...	...	...	17	4	Bulgaria
1,331	533	207	63	128	127	...	2,982	Canada
14	...	0	...	0	0	4,887	94	Chile
...	9,742	1,398	...	2	19	...	135	China
3	201	390	31	45	187	9,274	600	Chinese Taipei
3	...	...	...	...	...	2,661	12	Colombia
...	...	...	...	...	2	1,793	56	Czech Republic
8	12	179	11	1	74	11,028	6,650	Denmark
...	...	...	...	...	...	4	2	Estonia
1	6	0	2	1	1	...	449	Finland
48	76	854	17	103	622	...	13,327	France
...	...	...	...	...	...	...	10,197	Germany
...	...	0	...	...	6	...	138	Greece
...	10,690	69,790	4,555	7,412	...	...	34,057	Hong Kong SAR
...	...	...	...	...	...	2,049	45	Hungary
...	...	2	20,879	0	12	...	81	India
...	...	10	0	...	0	2,394	65	Indonesia
1	0	56	6	11	10	...	304	Ireland
...	...	...	...	...	...	4,274	5,441	Israel
0	...	270	1	...	183	...	922	Italy
15	111	687	89	134	1,516	...	4,937	Japan
13	12	188	8	37,391	7	...	255	Korea
...	...	...	...	...	0	15	221	Latvia
...	...	...	...	...	0	11	27	Lithuania
1,065	19	98	11	15	248	...	934	Luxembourg
0	2	23	0	...	1	4,823	469	Malaysia
99	...	...	...	...	0	16,323	14	Mexico
0	...	17	1	...	10	...	705	Netherlands
...	...	30	0	0	1	5,235	39	New Zealand
2	13	4	1	1	10	9,982	630	Norway
0	...	0	...	...	0	1,072	3	Peru
...	39	8	...	0	...	4,050	33	Philippines
...	...	...	...	...	1	3,301	171	Poland
200	...	18	...	1	10	...	165	Portugal
...	...	...	...	...	...	114	3	Romania
...	0	1	...	...	1	26,081	47	Russia
0	...	0	11	4	5	2,221	457	Saudi Arabia
305	7,447	14,226	6,728	15,072	386	29,388	27,393	Singapore
...	...	...	...	...	0	...	42	Slovakia
...	...	0	...	...	10,764	...	291	South Africa
357	128	249	1	25	33	...	2,505	Spain
2	9	35	1	4	48	...	3,940	Sweden
272	117	479	185	298	3,071	...	16,301	Switzerland
...	0	13	0	1	...	5,531	44	Thailand
0	...	0	...	...	18	9,265	89	Turkey
5,481	6,772	13,462	5,141	7,877	11,874	...	169,357	United Kingdom
10,722	3,025	4,965	3,866	2,832	2,723	...	85,692	United States
28,570	**39,170**	**110,910**	**41,742**	**71,722**	**32,592**	**157,145**	**415,179**	**Total**

[1] Spot transactions, outright forwards, foreign exchange swaps, currency swaps, options and other products. Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.
[2] Calculated as the difference between the total and the sum of the listed components.

Table E.6 (cont)

OTC foreign exchange turnover by country and currency in April 2010[1]

Euro against:

Daily averages, in millions of US dollars

	Total	US dollar	Yen	Pound sterling	Swiss franc
Argentina	331	240	...	...	...
Australia	46,744	37,993	2,213	1,365	216
Austria	14,325	7,347	468	259	2,502
Bahrain	879	582	2	7	0
Belgium	19,651	15,122	822	1,183	471
Brazil	3,280	2,774	2	14	12
Bulgaria	802	205	2	16	20
Canada	8,019	5,980	259	215	145
Chile	426	382	...	0	...
China	2,821	2,460	29	37	7
Chinese Taipei	3,186	2,743	146	143	5
Colombia	86	76	...	...	...
Czech Republic	3,146	1,173	42	19	7
Denmark	68,132	38,501	2,471	1,705	1,797
Estonia	1,046	59	3	1	0
Finland	21,612	9,859	64	564	41
France	83,245	63,910	2,376	8,758	2,855
Germany	69,003	48,063	2,882	5,594	6,256
Greece	4,381	2,412	495	110	446
Hong Kong SAR	38,346	33,103	2,032	876	...
Hungary	1,877	670	7	4	94
India	3,401	2,760	62	63	0
Indonesia	236	202	9	1	0
Ireland	10,220	6,057	533	2,620	184
Israel	211	...	...	...	...
Italy	21,405	17,314	963	1,329	594
Japan	58,970	28,699	27,211	970	604
Korea	2,897	2,526	120	1	0
Latvia	1,735	1,393	8	1	17
Lithuania	1,090	117	6	6	7
Luxembourg	21,553	16,652	668	1,601	508
Malaysia	789	484	44	36	1
Mexico	476	264	...	...	...
Netherlands	14,002	9,126	126	1,656	155
New Zealand	683	552	13	16	3
Norway	6,178	2,852	322	131	61
Peru	184	183	...	...	...
Philippines	674	486	21	0	1
Poland	3,916	1,125	15	49	135
Portugal	2,419	1,697	50	127	208
Romania	2,928	500	8	30	83
Russia	13,700	11,945	76	67	65
Saudi Arabia	967	786	4	98	9
Singapore	62,202	48,667	4,646	3,740	1,026
Slovakia	379	95	10	13	2
South Africa	1,887	1,572	9	79	2
Spain	15,578	12,194	366	1,247	181
Sweden	22,606	11,265	413	514	265
Switzerland	112,868	75,997	4,098	5,621	20,291
Thailand	617	441	23	8	...
Turkey	5,960	4,984	76	35	47
United Kingdom	820,234	595,230	55,608	75,081	35,223
United States	376,392	283,948	21,513	19,098	15,329
Total	**1,978,693**	**1,413,767**	**131,333**	**135,110**	**89,877**

For footnotes, see facing page.

Table E.7

OTC foreign exchange turnover by country and currency in April 2010[1]

Euro against:

Daily averages, in millions of US dollars

Canadian dollar	Australian dollar	Swedish krona	Local currency	Residual currencies[2]	
...	...	...	91	0	Argentina
303	3,041	190	...	1,423	Australia
38	18	18	...	3,675	Austria
...	...	...	0	288	Bahrain
117	128	132	...	1,676	Belgium
1	1	4	444	28	Brazil
7	7	1	517	27	Bulgaria
1,127	59	46	...	188	Canada
0	...	...	43	0	Chile
0	8	0	265	14	China
8	41	...	90	11	Chinese Taipei
...	...	...	10	0	Colombia
0	0	5	1,694	205	Czech Republic
145	121	13,518	8,013	1,861	Denmark
0	...	4	80	900	Estonia
226	26	10,151	...	680	Finland
457	955	576	...	3,360	France
495	438	584	...	4,689	Germany
42	50	14	...	812	Greece
...	...	...	1,274	1,061	Hong Kong SAR
2	...	2	1,030	69	Hungary
1	6	0	264	245	India
0	2	0	20	2	Indonesia
65	251	102	...	409	Ireland
...	...	...	211	...	Israel
319	109	63	...	714	Italy
381	364	174	...	568	Japan
15	0	...	234	1	Korea
2	3	2	231	77	Latvia
0	1	1	937	15	Lithuania
183	444	736	...	761	Luxembourg
...	17	0	67	140	Malaysia
...	...	...	204	7	Mexico
127	110	71	...	2,630	Netherlands
1	7	0	85	6	New Zealand
1	3	199	2,497	112	Norway
...	...	...	1	0	Peru
...	3	...	162	1	Philippines
1	0	16	2,418	156	Poland
27	11	16	...	282	Portugal
2	0	1	2,258	46	Romania
1	2	2	1,530	12	Russia
0	1	1	6	61	Saudi Arabia
974	971	351	238	1,589	Singapore
1	1	0	...	257	Slovakia
7	1	1	204	12	South Africa
85	83	42	...	1,379	Spain
65	37	8,266	...	1,782	Sweden
607	464	973	...	4,817	Switzerland
...	1	...	145	0	Thailand
3	1	0	797	18	Turkey
4,400	5,040	10,617	...	39,034	United Kingdom
5,947	1,920	3,455	...	25,182	United States
16,185	**14,748**	**50,333**	**26,059**	**101,281**	**Total**

[1] Spot transactions, outright forwards, foreign exchange swaps, currency swaps, options and other products. Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.
[2] Calculated as the difference between the total and the sum of the listed components.

Table E.7 (cont)

OTC foreign exchange turnover by country and currency in April 2010[1]

Yen against:

Daily averages, in millions of US dollars

	Total	US dollar	Euro	Australian dollar	New Zealand dollar	Local currency	Residual currencies[2]
Argentina	1	0	...	...	...	1	...
Australia	25,215	18,840	2,213	2,769	180	...	1,211
Austria	1,795	1,006	468	6	1	...	314
Bahrain	168	113	2	...	...	1	53
Belgium	1,876	821	822	25	7	...	202
Brazil	1,544	891	2	52	98	63	439
Bulgaria	9	4	2	...	...	0	3
Canada	2,827	1,996	259	62	58	...	452
Chile	32	28	...	...	...	4	0
China	2,454	1,608	29	10	...	73	735
Chinese Taipei	1,754	1,387	146	64	21	68	67
Colombia	9	7	...	...	...	0	2
Czech Republic	71	21	42	...	...	7	1
Denmark	6,639	2,928	2,471	220	16	105	900
Estonia	4	1	3	...	...	...	0
Finland	258	188	64	0	...	...	6
France	22,119	18,765	2,376	552	13	...	413
Germany	13,163	8,938	2,882	266	...	...	1,078
Greece	647	110	495	28	1	...	14
Hong Kong SAR	30,960	27,078	2,032	904	92	238	615
Hungary	22	15	7	...	...	0	0
India	750	574	62	1	0	37	77
Indonesia	498	364	9	2	0	63	60
Ireland	1,259	588	533	8	1	...	128
Israel	31	...	...	...	...	31	...
Italy	2,256	955	963	23	37	...	278
Japan	248,863	195,835	27,211	10,336	2,025	...	13,456
Korea	2,105	1,831	120	3	0	144	7
Latvia	60	11	8	1	...	...	40
Lithuania	25	0	6	0	...	0	18
Luxembourg	4,516	3,370	668	179	94	...	205
Malaysia	422	244	44	8	0	37	89
Mexico	18	15	...	...	...	2	1
Netherlands	1,262	693	126	2	...	...	441
New Zealand	623	551	13	15	40	...	4
Norway	913	366	322	...	...	198	26
Peru	12	12	...	...	...	...	...
Philippines	114	87	21	1	...	2	3
Poland	48	20	15	6	...	6	1
Portugal	240	178	50	...	...	...	12
Romania	14	2	8	...	...	1	2
Russia	469	332	76	2	...	2	57
Saudi Arabia	305	246	4	10	2	4	39
Singapore	41,356	30,709	4,646	1,671	249	285	3,796
Slovakia	18	7	10	...	...	...	2
South Africa	308	258	9	4	...	14	23
Spain	1,775	1,053	366	3	0	...	352
Sweden	1,389	730	413	12	2	...	233
Switzerland	29,610	23,053	4,098	221	35	...	2,204
Thailand	855	579	23	0	...	246	8
Turkey	247	144	76	0	...	22	5
United Kingdom	342,118	250,348	55,608	7,835	1,437	...	26,890
United States	140,417	115,617	21,513	3,061	226	...	0
Total	**934,464**	**713,515**	**131,333**	**28,361**	**4,633**	**1,657**	**54,965**

[1] Spot transactions, outright forwards, foreign exchange swaps, currency swaps, options and other products. Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.
[2] Calculated as the difference between the total and the sum of the listed components.

Table E.8

OTC foreign exchange turnover by country and currency in April 2010[1]

Local currency against:

Daily averages, in millions of US dollars

	Total	US dollar	Euro	Yen	Pound sterling
Argentina	1,369	1,271	91	1	1
Australia	85,782	75,472	3,041	2,769	1,465
Austria	14,325	7,347	...	468	259
Bahrain	162	81	0	1	79
Belgium	19,651	15,122	...	822	1,183
Brazil	9,071	8,480	444	63	8
Bulgaria	536	17	517	0	1
Canada	42,699	40,205	1,127	383	395
Chile	4,942	4,887	43	4	1
China	12,110	9,742	265	73	10
Chinese Taipei	9,507	9,274	90	68	11
Colombia	2,672	2,661	10	0	0
Czech Republic	3,527	1,793	1,694	7	13
Denmark	20,805	11,028	8,013	105	349
Estonia	85	4	80	...	0
Finland	21,612	9,859	...	64	564
France	83,245	63,910	...	2,376	8,758
Germany	69,003	48,063	...	2,882	5,594
Greece	4,381	2,412	...	495	110
Hong Kong SAR	72,604	69,790	1,274	238	324
Hungary	3,113	2,049	1,030	0	5
India	21,301	20,879	264	37	82
Indonesia	2,507	2,394	20	63	4
Ireland	10,220	6,057	...	533	2,620
Israel	4,576	4,274	211	31	15
Italy	21,405	17,314	...	963	1,329
Japan	248,863	195,835	27,211	...	7,994
Korea	37,918	37,391	234	144	49
Latvia	255	15	231	...	1
Lithuania	953	11	937	0	1
Luxembourg	21,553	16,652	...	668	1,601
Malaysia	5,043	4,823	67	37	18
Mexico	16,537	16,323	204	2	1
Netherlands	14,002	9,126	...	126	1,656
New Zealand	5,962	5,235	85	40	43
Norway	13,471	9,982	2,497	198	273
Peru	1,074	1,072	1	...	1
Philippines	4,223	4,050	162	2	1
Poland	5,880	3,301	2,418	6	31
Portugal	2,419	1,697	...	50	127
Romania	2,389	114	2,258	1	8
Russia	27,638	26,081	1,530	2	7
Saudi Arabia	2,381	2,221	6	4	1
Singapore	31,741	29,388	238	285	206
South Africa	11,056	10,764	204	14	35
Spain	15,578	12,194	...	366	1,247
Sweden	22,344	12,097	8,266	131	533
Switzerland	78,375	54,648	20,291	664	1,578
Thailand	6,012	5,531	145	246	19
Turkey	10,117	9,265	797	22	28
United Kingdom	330,748	232,509	75,081	12,228	...
United States	785,223	...	283,948	115,617	85,503
Total	**2,242,964**	**1,134,709**	**445,025**	**143,303**	**124,142**

For footnotes, see facing page.

Table E.9

OTC foreign exchange turnover by country and currency in April 2010[1]

Local currency against:

Daily averages, in millions of US dollars

Swiss franc	Canadian dollar	Australian dollar	Swedish krona	Residual currencies[2]	
1	0	0	0	5	Argentina
170	700	...	61	2,104	Australia
2,502	38	18	18	3,675	Austria
0	...	...	...	1	Bahrain
471	117	128	132	1,676	Belgium
23	13	2	3	36	Brazil
0	0	0	0	0	Bulgaria
90	...	175	190	134	Canada
0	1	0	0	5	Chile
6	3	2	9	2,000	China
3	6	17	0	38	Chinese Taipei
0	0	0	0	0	Colombia
6	0	0	0	12	Czech Republic
494	20	35	450	311	Denmark
0	...	0	0	0	Estonia
41	226	26	10,151	680	Finland
2,855	457	955	576	3,360	France
6,256	495	438	584	4,689	Germany
446	42	50	14	812	Greece
...	90	517	...	371	Hong Kong SAR
14	...	...	0	15	Hungary
7	4	8	2	16	India
0	0	4	0	22	Indonesia
184	65	251	102	409	Ireland
21	20	0	0	3	Israel
594	319	109	63	714	Italy
536	1,794	10,336	260	4,897	Japan
4	8	12	0	76	Korea
...	...	...	0	9	Latvia
0	0	0	1	3	Lithuania
508	183	444	736	761	Luxembourg
1	0	23	0	73	Malaysia
1	4	0	0	0	Mexico
155	127	110	71	2,630	Netherlands
7	15	530	0	8	New Zealand
126	59	28	189	119	Norway
...	...	...	...	0	Peru
0	0	0	...	6	Philippines
62	3	0	3	56	Poland
208	27	11	16	282	Portugal
5	0	0	0	2	Romania
12	0	0	2	4	Russia
0	0	1	0	147	Saudi Arabia
74	106	395	24	1,025	Singapore
6	7	7	1	18	South Africa
181	85	83	42	1,379	Spain
141	88	89	...	1,000	Sweden
...	375	314	86	420	Switzerland
5	2	37	1	27	Thailand
1	0	0	2	3	Turkey
2,544	1,745	2,799	645	3,197	United Kingdom
46,268	77,100	56,059	6,903	113,825	United States
65,031	**84,346**	**74,015**	**21,339**	**151,054**	**Total**

[1] Spot transactions, outright forwards, foreign exchange swaps, currency swaps, options and other products. Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.
[2] Calculated as the difference between the total and the sum of the listed components.

Table E.9 (cont)

Foreign exchange turnover by country and counterparty in April 2010[1]

Daily averages, in millions of US dollars

	Gross turnover[2]	Net turnover[3]				
		Total	With reporting local dealers	With reporting dealers abroad	With other financial institutions	With non-financial customers
Argentina	1,895	1,613	282	...	349	982
Australia	218,158	192,052	26,106	91,598	61,045	13,304
Austria	20,039	19,549	490	13,029	5,327	704
Bahrain	4,619	4,543	76	2,881	1,476	110
Belgium	32,770	32,524	247	19,824	10,832	1,621
Brazil	15,609	14,094	1,516	3,854	5,951	2,773
Bulgaria	874	866	9	288	411	158
Canada	68,546	61,892	6,654	27,090	22,765	5,383
Chile	7,229	5,544	1,684	1,428	1,430	1,001
China	27,486	19,774	7,712	2,411	5,738	3,913
Chinese Taipei	20,034	17,983	2,050	6,060	5,740	4,132
Colombia	3,822	2,794	1,028	403	721	641
Czech Republic	5,489	5,110	379	3,822	168	742
Denmark	123,231	120,463	2,767	82,165	12,189	23,342
Estonia	1,063	1,059	4	997	10	48
Finland	31,316	31,254	62	28,911	507	1,775
France	162,906	151,509	11,397	90,000	39,438	10,674
Germany	115,740	108,598	7,142	58,985	34,452	8,019
Greece	5,244	5,164	79	3,702	812	571
Hong Kong SAR	257,327	237,542	19,785	160,049	44,587	13,121
Hungary	4,763	4,196	567	2,172	1,077	379
India	38,857	27,358	11,499	5,413	2,340	8,106
Indonesia	4,632	3,381	1,251	1,197	387	546
Ireland	14,994	14,578	416	7,305	6,003	854
Israel	10,333	10,017	317	...	7,771	1,929
Italy	29,695	28,601	1,093	23,328	2,877	1,303
Japan	337,389	312,326	25,063	163,998	77,739	45,526
Korea	67,241	43,824	23,417	10,470	5,840	4,096
Latvia	2,359	2,226	133	340	804	950
Lithuania	1,183	1,154	29	903	88	134
Luxembourg	34,408	33,363	1,045	22,581	8,426	1,313
Malaysia	8,262	7,262	1,000	1,736	2,130	2,396
Mexico	18,156	17,019	1,137	12,594	2,005	1,282
Netherlands	18,626	18,253	372	9,892	6,690	1,300
New Zealand	9,460	8,754	706	2,557	4,811	680
Norway	22,450	22,191	260	13,078	5,363	3,490
Peru	1,856	1,425	431	455	200	338
Philippines	7,649	5,017	2,632	1,491	514	379
Poland	8,632	7,847	785	4,812	1,479	771
Portugal	3,831	3,654	177	1,976	1,090	411
Romania	3,518	3,169	349	2,063	375	383
Russia	49,217	41,658	7,559	10,793	15,520	7,785
Saudi Arabia	6,136	5,291	845	3,082	597	766
Singapore	278,929	265,899	13,030	161,046	72,693	19,131
Slovakia	445	443	1	297	50	95
South Africa	17,092	14,375	2,717	9,994	799	865
Spain	29,794	29,322	472	17,662	2,061	9,127
Sweden	45,640	44,796	844	16,548	17,529	9,874
Switzerland	273,640	262,582	11,058	149,097	79,536	22,890
Thailand	9,649	7,390	2,259	2,206	819	2,107
Turkey	17,677	16,817	860	13,913	918	1,127
United Kingdom	2,065,334	1,853,594	211,741	597,232	866,375	178,246
United States	963,283	904,357	58,926	283,301	451,019	111,111
Total	**5,528,525**	**5,056,067**	**472,459**	**2,151,028**	**1,899,874**	**532,706**

[1] Spot transactions, outright forwards, foreign exchange swaps, currency swaps, options and other products. Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding. [2] Not adjusted for inter-dealer double-counting (ie "gross-gross" basis). [3] Adjusted for local inter-dealer double-counting (ie "net-gross" basis).

Table E.10

Spot foreign exchange turnover by country and counterparty in April 2010[1]

Daily averages, in millions of US dollars

	Total	Reporting dealers		Other financial institutions		Non-financial customers	
		Local	Cross-border	Local	Cross-border	Local	Cross-border
Argentina	1,581	282	...	116	232	949	2
Australia	60,188	5,326	21,958	2,706	21,262	5,083	3,854
Austria	5,874	190	3,302	521	1,586	202	72
Bahrain	723	1	301	65	326	11	18
Belgium	7,909	65	5,188	77	2,355	111	113
Brazil	8,743	1,467	2,272	2,256	1,326	1,371	50
Bulgaria	595	9	83	366	3	134	1
Canada	18,281	1,185	9,786	1,359	4,258	1,382	310
Chile	2,695	990	452	618	8	623	3
China	8,604	4,460	1,522	1,406	757	458	0
Chinese Taipei	7,728	1,023	2,605	1,058	820	1,642	581
Colombia	1,760	823	54	434	11	433	5
Czech Republic	1,067	60	794	18	6	167	23
Denmark	33,032	543	12,987	146	2,850	1,277	15,230
Estonia	82	0	40	4	0	25	13
Finland	816	34	424	18	37	241	61
France	27,054	1,000	17,225	1,715	4,987	957	1,170
Germany	30,107	1,281	20,117	1,580	5,478	511	1,140
Greece	1,316	1	1,037	13	147	118	...
Hong Kong SAR	43,783	2,275	30,416	864	5,874	2,555	1,800
Hungary	763	39	367	70	150	133	4
India	13,411	5,597	3,284	583	988	2,944	15
Indonesia	2,183	793	794	24	182	364	27
Ireland	3,535	6	1,553	223	1,614	84	55
Israel	3,880	107	...	279	2,351	1,136	6
Italy	9,025	326	7,109	441	324	783	43
Japan	101,459	4,979	58,161	5,318	12,548	19,054	1,398
Korea	18,488	9,412	3,303	2,423	1,311	1,915	124
Latvia	779	38	108	14	163	25	432
Lithuania	260	3	79	73	2	92	11
Luxembourg	11,692	239	7,410	856	2,761	229	197
Malaysia	3,920	499	1,205	557	640	988	31
Mexico	5,296	446	2,846	590	260	1,143	11
Netherlands	5,081	53	4,256	352	289	84	47
New Zealand	1,533	75	530	108	639	174	7
Norway	2,296	22	1,126	159	198	756	35
Peru	1,017	349	266	85	5	312	0
Philippines	2,121	1,050	674	181	50	162	4
Poland	1,955	110	996	186	202	459	2
Portugal	1,060	107	565	7	224	150	7
Romania	1,263	171	640	71	59	314	7
Russia	22,544	4,523	4,128	4,775	2,256	2,323	4,540
Saudi Arabia	3,276	479	1,887	175	199	536	...
Singapore	90,798	2,421	50,878	2,934	28,231	1,873	4,461
Slovakia	196	0	124	2	36	31	3
South Africa	4,036	563	2,809	80	269	274	42
Spain	8,274	52	5,504	114	306	514	1,785
Sweden	11,794	433	5,988	744	3,369	816	444
Switzerland	60,905	2,048	36,869	2,750	13,190	3,185	2,862
Thailand	2,941	405	1,145	51	317	973	50
Turkey	5,488	627	4,249	153	173	285	1
United Kingdom	696,514	82,440	210,377	115,491	228,579	13,198	46,429
United States	472,580	36,471	134,400	146,041	99,745	17,781	38,142
Total	**1,832,302**	**175,900**	**684,193**	**301,247**	**453,955**	**91,339**	**125,667**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.11

Outright forward foreign exchange turnover by country and counterparty in April 2010[1]

Daily averages, in millions of US dollars

	Total	Reporting dealers		Other financial institutions		Non-financial customers	
		Local	Cross-border	Local	Cross-border	Local	Cross-border
Argentina	31	...	...	...	...	31	...
Australia	8,015	459	1,760	2,399	1,863	1,340	194
Austria	1,841	29	1,300	173	141	187	11
Bahrain	101	9	14	20	39	2	18
Belgium	1,548	5	1,130	11	240	80	81
Brazil	3,801	21	1,423	486	907	700	265
Bulgaria	55	...	30	6	2	18	0
Canada	6,287	440	1,490	1,847	1,256	1,042	212
Chile	2,120	225	865	545	147	338	...
China	3,054	415	180	83	99	2,215	63
Chinese Taipei	1,222	67	376	181	11	505	81
Colombia	975	201	313	199	70	192	...
Czech Republic	198	1	24	4	0	165	3
Denmark	11,110	353	6,593	503	2,109	1,077	475
Estonia	1	...	0	0	...	...	0
Finland	462	9	20	17	1	290	125
France	9,918	729	4,688	803	1,718	847	1,133
Germany	8,094	505	952	1,132	4,280	855	370
Greece	196	...	8	...	19	168	1
Hong Kong SAR	32,022	1,689	20,032	431	5,401	1,125	3,344
Hungary	262	...	...	39	2	214	7
India	4,895	345	160	40	254	4,091	5
Indonesia	247	17	26	53	28	123	...
Ireland	2,196	0	564	223	1,154	192	62
Israel	154	14	...	42	79	18	1
Italy	1,266	117	607	250	46	204	43
Japan	31,625	857	7,187	9,873	529	12,247	931
Korea	6,101	570	3,867	400	422	805	37
Latvia	12	...	...	0	0	11	1
Lithuania	17	...	16	0	0	1	0
Luxembourg	4,480	44	1,151	905	1,831	338	212
Malaysia	664	6	108	37	87	398	28
Mexico	954	8	647	179	45	68	9
Netherlands	8,540	138	3,103	1,196	3,660	190	254
New Zealand	685	1	307	108	54	214	1
Norway	1,819	4	339	505	126	800	45
Peru	385	81	172	102	8	22	...
Philippines	598	33	265	14	86	201	0
Poland	318	3	20	69	4	221	1
Portugal	496	3	222	3	91	57	120
Romania	95	5	50	5	2	31	2
Russia	592	4	171	143	186	73	16
Saudi Arabia	665	139	458	3	7	58	...
Singapore	36,474	1,722	22,867	1,146	7,683	1,170	1,887
Slovakia	33	0	13	0	1	16	4
South Africa	688	113	262	19	19	266	8
Spain	2,668	38	1,229	43	325	480	553
Sweden	1,944	16	97	417	226	990	198
Switzerland	11,238	998	2,462	709	1,483	2,498	3,088
Thailand	971	8	88	26	18	818	14
Turkey	2,517	131	2,037	102	12	234	1
United Kingdom	228,122	12,970	50,500	37,048	87,291	5,811	34,503
United States	116,107	5,092	27,555	36,563	31,011	10,027	5,859
Total	**558,882**	**28,634**	**167,751**	**99,098**	**155,073**	**54,062**	**54,265**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.12

Foreign exchange swap turnover by country and counterparty in April 2010[1]

Daily averages, in millions of US dollars

	Total	Reporting dealers		Other financial institutions		Non-financial customers	
		Local	Cross-border	Local	Cross-border	Local	Cross-border
Argentina	...	...	...	...	...	...	...
Australia	117,548	19,867	64,065	4,789	26,230	1,058	1,539
Austria	10,725	245	7,792	493	2,063	75	57
Bahrain	3,596	66	2,462	88	933	1	48
Belgium	22,473	165	13,088	508	7,509	501	701
Brazil	292	...	30	60	75	95	33
Bulgaria	211	...	171	16	19	5	...
Canada	33,853	4,838	13,676	3,199	10,210	1,430	499
Chile	522	462	7	25	3	25	...
China	8,024	2,837	666	3,281	90	1,128	22
Chinese Taipei	7,418	876	2,404	3,148	274	713	3
Colombia	29	4	17	1	3	4	...
Czech Republic	3,775	318	2,965	110	25	208	150
Denmark	72,356	1,327	60,450	1,008	4,927	2,644	2,000
Estonia	973	4	955	6	...	8	0
Finland	29,827	13	28,375	15	412	579	432
France	104,262	9,523	60,184	6,918	21,480	3,409	2,748
Germany	63,864	4,792	34,532	4,756	15,865	1,863	2,056
Greece	3,460	78	2,515	115	503	249	0
Hong Kong SAR	147,046	15,299	99,133	2,974	27,095	1,724	820
Hungary	3,117	528	1,771	306	502	11	...
India	7,697	5,427	1,748	376	64	80	...
Indonesia	896	439	376	51	0	27	3
Ireland	8,081	409	5,056	477	1,701	386	52
Israel	5,419	155	...	411	4,230	603	20
Italy	17,726	559	15,283	385	1,339	73	88
Japan	168,260	18,453	93,599	9,351	36,718	9,182	958
Korea	18,420	13,088	3,047	1,035	139	990	122
Latvia	1,436	95	232	57	569	12	470
Lithuania	857	26	798	1	12	15	5
Luxembourg	16,858	752	13,817	552	1,490	98	149
Malaysia	2,429	451	367	479	304	644	183
Mexico	10,434	611	8,969	261	556	38	...
Netherlands	3,241	176	1,898	281	237	167	482
New Zealand	6,353	622	1,619	393	3,483	227	9
Norway	17,524	232	11,410	864	3,288	1,397	332
Peru	16	2	14	...	...	...	...
Philippines	1,256	839	223	167	15	12	...
Poland	5,368	662	3,687	307	675	29	7
Portugal	1,974	67	1,134	12	690	72	...
Romania	1,774	172	1,355	9	227	12	...
Russia	18,416	3,032	6,440	5,172	2,961	315	496
Saudi Arabia	1,273	227	694	57	149	36	110
Singapore	121,999	8,607	78,130	6,833	21,641	2,986	3,801
Slovakia	153	1	135	0	5	12	...
South Africa	9,109	1,922	6,589	196	203	183	16
Spain	16,831	307	10,067	346	644	386	5,080
Sweden	29,312	376	9,972	3,306	8,661	4,160	2,837
Switzerland	181,979	7,816	105,827	8,354	50,917	5,432	3,632
Thailand	3,276	1,778	967	244	144	99	45
Turkey	6,831	19	6,274	150	316	65	7
United Kingdom	775,381	98,086	301,253	91,230	217,461	14,993	52,357
United States	267,099	14,514	105,441	57,839	59,696	13,298	16,311
Total	**2,361,049**	**241,165**	**1,191,677**	**221,017**	**536,752**	**71,757**	**98,680**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.13

Currency swap turnover by country and counterparty in April 2010[1]

Daily averages, in millions of US dollars

	Total	Reporting dealers		Other financial institutions		Non-financial customers	
		Local	Cross-border	Local	Cross-border	Local	Cross-border
Argentina	...	...	...	...	...	...	...
Australia	4,437	338	2,755	319	981	24	19
Austria	307	0	202	3	94	1	8
Bahrain	10	...	10	...	0	...	...
Belgium	83	3	57	0	21	...	1
Brazil	417	22	58	136	...	201	...
Bulgaria	4	...	4	...	...	...	...
Canada	1,240	76	602	23	263	267	9
Chile	204	7	103	15	70	10	...
China	1	...	0	...	0	0	...
Chinese Taipei	79	21	5	16	...	37	...
Colombia	13	0	12	...	1	...	...
Czech Republic	35	...	25	...	...	10	...
Denmark	1,327	320	708	74	194	15	15
Estonia	...	...	...	...	...	...	...
Finland	73	6	62	...	6	...	...
France	4,025	43	3,153	89	670	5	67
Germany	1,344	37	878	109	201	107	12
Greece	4	...	4	...	...	...	...
Hong Kong SAR	7,038	90	6,594	0	232	35	86
Hungary	...	...	...	...	...	...	...
India	31	2	7	4	1	17	...
Indonesia	54	1	1	49	0	2	...
Ireland	692	...	93	420	163	15	0
Israel	75	1	...	10	49	16	...
Italy	28	...	24	...	3	...	...
Japan	2,236	156	1,779	51	129	110	12
Korea	654	335	149	51	52	58	9
Latvia	...	...	...	...	...	...	...
Lithuania	19	...	10	...	...	10	...
Luxembourg	28	8	18	...	0	...	3
Malaysia	156	29	29	3	...	83	12
Mexico	153	70	37	9	34	4	...
Netherlands	1,276	4	590	137	510	31	4
New Zealand	135	8	101	20	5	1	...
Norway	408	1	184	214	1	4	4
Peru	3	...	2	...	...	2	...
Philippines	508	183	323	...	2	0	...
Poland	79	2	52	1	24	...	...
Portugal	...	...	...	...	...	...	...
Romania	4	...	4	...	...	...	...
Russia	...	...	...	...	...	...	...
Saudi Arabia	...	...	...	...	...	...	...
Singapore	687	12	556	15	91	5	7
Slovakia	...	...	...	...	...	...	...
South Africa	39	1	36	1	0	0	...
Spain	659	73	255	2	198	67	64
Sweden	92	2	6	29	50	5	...
Switzerland	23	...	11	...	11	...	...
Thailand	111	59	6	19	...	27	...
Turkey	921	82	839	...	...	...	...
United Kingdom	18,177	2,318	4,397	4,134	6,366	146	816
United States	9,092	1,633	3,484	1,537	1,345	449	644
Total	**56,978**	**5,944**	**28,224**	**7,488**	**11,767**	**1,764**	**1,791**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.14

Options turnover by country and counterparty in April 2010[1]

Daily averages, in millions of US dollars

	Total	Reporting dealers		Other financial institutions		Non-financial customers	
		Local	Cross-border	Local	Cross-border	Local	Cross-border
Argentina	...	...	...	...	...	...	...
Australia	1,864	116	1,059	158	337	126	67
Austria	802	25	433	34	220	49	41
Bahrain	113	...	95	...	6	1	12
Belgium	510	8	360	...	109	15	18
Brazil	841	6	71	11	694	28	32
Bulgaria	...	...	...	...	...	...	...
Canada	2,232	114	1,535	20	330	125	108
Chile	2	1	0	...	...	1	...
China	91	0	42	...	21	28	...
Chinese Taipei	1,536	64	672	74	158	386	183
Colombia	17	0	7	1	2	7	...
Czech Republic	35	0	14	...	4	16	1
Denmark	2,637	224	1,427	37	341	108	501
Estonia	3	...	2	...	...	2	...
Finland	76	...	30	...	...	37	9
France	6,250	102	4,751	480	579	209	129
Germany	5,189	527	2,506	501	549	411	695
Greece	189	...	138	0	15	35	...
Hong Kong SAR	7,654	432	3,874	86	1,629	1,174	459
Hungary	53	...	34	...	10	9	...
India	1,325	127	214	30	...	954	...
Indonesia	1	1	0	...	...	...	...
Ireland	75	1	39	8	20	2	6
Israel	489	41	...	81	239	114	14
Italy	557	91	304	17	74	70	1
Japan	8,747	618	3,273	1,484	1,738	1,332	303
Korea	161	13	105	0	7	37	...
Latvia	...	...	...	...	...	...	...
Lithuania	1	...	0	...	...	1	...
Luxembourg	306	2	185	4	28	6	81
Malaysia	94	14	28	16	6	27	2
Mexico	181	2	96	33	39	10	1
Netherlands	117	1	44	21	9	35	7
New Zealand	48	...	...	1	...	46	0
Norway	143	...	19	...	7	92	25
Peru	4	...	2	...	...	2	...
Philippines	534	527	6	...	...	0	...
Poland	128	8	57	2	9	52	...
Portugal	124	...	55	0	63	5	...
Romania	33	...	13	0	2	17	1
Russia	105	...	54	...	28	22	1
Saudi Arabia	77	...	43	...	7	23	4
Singapore	15,941	267	8,613	407	3,711	620	2,321
Slovakia	61	...	26	...	6	29	0
South Africa	502	118	298	8	2	76	...
Spain	891	2	607	...	84	28	170
Sweden	1,653	17	485	112	614	304	121
Switzerland	8,437	197	3,928	341	1,778	819	1,374
Thailand	90	8	0	1	0	80	0
Turkey	1,060	1	515	7	3	531	3
United Kingdom	135,399	15,926	30,704	49,538	29,236	3,476	6,518
United States	39,479	1,216	12,421	7,718	9,524	1,819	6,782
Total	**246,856**	**20,814**	**79,184**	**61,235**	**52,240**	**13,393**	**19,989**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.15

Outright forward transactions by country and maturity in April 2010[1]

Percentage share of country's total outright forward transactions

	Up to and including 7 days	Over 7 days and up to and including 1 year	Over 1 year
Argentina	8	91	1
Australia	41	58	1
Austria	77	23	1
Bahrain	17	78	5
Belgium	22	77	1
Brazil	39	45	15
Bulgaria	31	69	...
Canada	33	65	3
Chile	28	70	2
China	51	43	6
Chinese Taipei	17	82	2
Colombia	17	82	0
Czech Republic	63	34	3
Denmark	69	31	1
Estonia	49	51	...
Finland	29	70	1
France	16	79	5
Germany	65	32	3
Greece	50	49	0
Hong Kong SAR	33	62	5
Hungary	39	59	2
India	29	49	22
Indonesia	74	26	0
Ireland	22	78	0
Israel	66	32	2
Italy	21	75	3
Japan	41	58	1
Korea	12	75	13
Latvia	85	15	...
Lithuania	0	100	0
Luxembourg	15	84	0
Malaysia	64	34	2
Mexico	20	78	1
Netherlands	28	60	12
New Zealand	56	43	1
Norway	42	57	1
Peru	19	81	1
Philippines	20	75	5
Poland	40	57	2
Portugal	22	78	0
Romania	24	72	4
Russia	16	80	4
Saudi Arabia	92	8	0
Singapore	16	81	3
Slovakia	59	41	0
South Africa	41	56	3
Spain	34	60	6
Sweden	37	61	1
Switzerland	29	70	2
Thailand	25	75	1
Turkey	91	8	0
United Kingdom	60	39	1
United States	39	60	2
Total	**45**	**52**	**2**

[1] Adjusted for local inter-dealer double-counting (ie “net-gross” basis). Since data on the maturity breakdown were only collected on a gross basis, data on a net basis have been calculated by adjusting the gross data proportionally. Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.16

Foreign exchange swap transactions by country and maturity in April 2010[1]

Percentage share of country's total FX swaps transactions

	Up to and including 7 days	Over 7 days and up to and including 1 year	Over 1 year
Argentina	...	...	...
Australia	84	16	0
Austria	72	27	1
Bahrain	75	24	1
Belgium	80	20	0
Brazil	14	42	44
Bulgaria	71	29	...
Canada	71	29	1
Chile	25	73	3
China	64	36	1
Chinese Taipei	28	69	4
Colombia	40	16	43
Czech Republic	84	16	0
Denmark	80	20	0
Estonia	94	6	...
Finland	94	6	0
France	74	26	1
Germany	66	33	1
Greece	58	42	...
Hong Kong SAR	78	21	1
Hungary	65	31	4
India	47	42	10
Indonesia	77	23	0
Ireland	59	41	0
Israel	86	13	1
Italy	77	23	0
Japan	79	21	0
Korea	47	48	5
Latvia	95	5	0
Lithuania	95	5	0
Luxembourg	77	23	0
Malaysia	71	29	0
Mexico	95	5	0
Netherlands	52	48	0
New Zealand	85	15	0
Norway	62	37	0
Peru	14	86	...
Philippines	48	52	0
Poland	82	17	1
Portugal	59	41	0
Romania	79	21	0
Russia	97	3	0
Saudi Arabia	44	45	11
Singapore	76	24	1
Slovakia	82	18	...
South Africa	66	32	2
Spain	76	24	1
Sweden	54	45	1
Switzerland	69	30	1
Thailand	49	48	3
Turkey	65	35	...
United Kingdom	75	25	1
United States	71	27	1
Total	**74**	**25**	**1**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Since data on the maturity breakdown were only collected on a gross basis, data on a net basis have been calculated by adjusting the gross data proportionally. Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.17

Total foreign exchange turnover by country in April, 1995—2010[1]

Daily averages, in billions of US dollars

	Total					
	April 1995	**April 1998**	**April 2001**	**April 2004**	**April 2007**	**April 2010**
Argentina	...	2	...	1	1	2
Australia	41	48	54	107	176	192
Austria	13	12	8	15	19	20
Bahrain	3	3	3	3	3	5
Belgium	29	27	10	21	50	33
Brazil	...	5	6	4	6	14
Bulgaria	...	...	...	...	1	1
Canada	31	38	44	59	64	62
Chile	...	1	2	2	4	6
China	...	0	...	1	9	20
Chinese Taipei	...	5	5	9	16	18
Colombia	...	...	0	1	2	3
Czech Republic	...	5	2	2	5	5
Denmark	32	28	24	42	88	120
Estonia	...	...	...	0	1	1
Finland	5	4	2	2	8	31
France	62	77	50	67	127	152
Germany	79	100	91	120	101	109
Greece	3	7	5	4	5	5
Hong Kong SAR	91	80	68	106	181	238
Hungary	...	1	1	3	7	4
India	...	2	3	7	38	27
Indonesia	...	2	4	2	3	3
Ireland	5	11	9	8	11	15
Israel	...	...	1	5	8	10
Italy	24	29	18	23	38	29
Japan	168	146	153	207	250	312
Korea	...	4	10	21	35	44
Latvia	...	...	...	2	3	2
Lithuania	...	...	...	1	1	1
Luxembourg	19	23	13	15	44	33
Malaysia	...	1	1	2	3	7
Mexico	...	9	9	15	15	17
Netherlands	27	43	31	52	25	18
New Zealand	7	7	4	7	13	9
Norway	8	9	13	14	32	22
Peru	...	...	0	0	1	1
Philippines	...	1	1	1	2	5
Poland	...	3	5	7	9	8
Portugal	2	4	2	2	4	4
Romania	...	...	...	...	3	3
Russia	...	7	10	30	50	42
Saudi Arabia	...	2	2	2	4	5
Singapore	107	145	104	134	242	266
Slovakia	...	...	1	2	3	0
Slovenia	...	...	0	0	0	...
South Africa	5	9	10	10	14	14
Spain	18	20	8	14	17	29
Sweden	20	16	25	32	44	45
Switzerland	88	92	76	85	254	263
Thailand	...	3	2	3	6	7
Turkey	...	...	1	3	4	17
United Kingdom	479	685	542	835	1,483	1,854
United States	266	383	273	499	745	904
Total	**1,633**	**2,099**	**1,705**	**2,608**	**4,281**	**5,056**

[1] Spot transactions, outright forwards, foreign exchange swaps, currency swaps, options and other products. Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.18

Spot foreign exchange turnover by country in April, 1995—2010[1]

Daily averages, in billions of US dollars

	Spot					
	April 1995	**April 1998**	**April 2001**	**April 2004**[2]	**April 2007**	**April 2010**
Argentina	...	2	...	1	1	2
Australia	18	20	13	36	44	60
Austria	9	5	4	6	6	6
Bahrain	2	2	1	1	2	1
Belgium	6	7	3	6	15	8
Brazil	...	5	4	3	5	9
Bulgaria	...	...	...	...	0	1
Canada	12	11	11	18	14	18
Chile	...	1	2	2	2	3
China	...	0	...	1	8	9
Chinese Taipei	...	3	3	5	9	8
Colombia	...	...	0	1	1	2
Czech Republic	...	2	1	1	1	1
Denmark	9	6	4	9	15	33
Estonia	...	...	...	0	0	0
Finland	3	1	1	1	1	1
France	25	19	9	13	25	27
Germany	34	42	26	36	25	30
Greece	2	3	2	1	1	1
Hong Kong SAR	35	31	19	36	38	44
Hungary	...	1	0	1	2	1
India	...	1	2	3	14	13
Indonesia	...	1	3	1	2	2
Ireland	3	5	4	5	4	4
Israel	...	...	1	3	4	4
Italy	13	12	5	9	11	9
Japan	55	57	37	53	101	101
Korea	...	3	6	10	17	18
Latvia	...	...	...	1	1	1
Lithuania	...	...	...	1	1	0
Luxembourg	8	8	4	3	13	12
Malaysia	...	0	0	1	2	4
Mexico	...	6	4	11	5	5
Netherlands	11	15	5	10	3	5
New Zealand	3	2	1	1	2	2
Norway	3	3	3	3	3	2
Peru	...	...	0	0	1	1
Philippines	...	0	0	0	1	2
Poland	...	2	2	2	2	2
Portugal	1	2	1	1	2	1
Romania	...	...	...	...	1	1
Russia	...	6	9	24	34	23
Saudi Arabia	...	1	1	1	3	3
Singapore	44	60	34	43	89	91
Slovakia	...	...	0	0	0	0
Slovenia	...	...	0	0	0	...
South Africa	2	4	2	2	3	4
Spain	7	6	3	4	6	8
Sweden	9	5	6	7	8	12
Switzerland	44	34	23	23	108	61
Thailand	...	1	1	1	1	3
Turkey	...	...	0	1	1	5
United Kingdom	186	217	151	223	335	697
United States	134	148	104	217	311	473
Total	**680**	**762**	**519**	**840**	**1,305**	**1,832**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.19

Outright forward foreign exchange turnover by country in April, 1995—2010[1]

Daily averages, in billions of US dollars

	Outright forward					
	April 1995	**April 1998**	**April 2001**	**April 2004**	**April 2007**	**April 2010**
Argentina	...	0	...	...	0	0
Australia	1	2	3	6	14	8
Austria	0	1	0	1	2	2
Bahrain	0	0	1	1	1	0
Belgium	0	1	1	2	7	2
Brazil	...	...	1	0	0	4
Bulgaria	...	...	...	...	0	0
Canada	3	1	2	4	4	6
Chile	...	0	1	1	1	2
China	...	...	...	...	0	3
Chinese Taipei	...	1	0	1	2	1
Colombia	...	...	0	0	0	1
Czech Republic	...	...	0	0	1	0
Denmark	2	1	1	2	10	11
Estonia	...	...	...	0	0	0
Finland	0	0	0	0	0	0
France	2	3	1	5	7	10
Germany	4	8	12	12	23	8
Greece	1	1	0	0	0	0
Hong Kong SAR	3	4	4	5	15	32
Hungary	...	0	0	0	0	0
India	...	0	0	1	6	5
Indonesia	...	0	0	0	1	0
Ireland	0	1	1	0	1	2
Israel	...	...	...	...	...	0
Italy	2	2	1	1	3	1
Japan	17	17	20	21	26	32
Korea	...	0	1	4	5	6
Latvia	...	...	...	0	0	0
Lithuania	...	...	...	0	0	0
Luxembourg	1	1	1	2	5	4
Malaysia	...	0	0	0	0	1
Mexico	...	0	0	1	0	1
Netherlands	3	6	3	4	6	9
New Zealand	0	0	0	1	1	1
Norway	0	0	0	0	2	2
Peru	...	...	0	0	0	0
Philippines	...	0	0	0	0	1
Poland	...	0	0	0	1	0
Portugal	0	0	0	0	1	0
Romania	...	...	...	...	0	0
Russia	...	1	0	1	1	1
Saudi Arabia	...	0	0	0	0	1
Singapore	3	4	8	11	25	36
Slovakia	...	...	0	0	0	0
Slovenia	...	...	0	0	0	...
South Africa	1	2	0	0	1	1
Spain	1	1	1	1	2	3
Sweden	1	1	1	1	2	2
Switzerland	8	5	6	7	17	11
Thailand	...	0	0	0	1	1
Turkey	...	...	0	0	1	3
United Kingdom	34	48	53	103	124	228
United States	28	37	36	61	114	116
Total	**115**	**155**	**164**	**261**	**434**	**559**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.20

Foreign exchange swap turnover by country in April, 1995—2010[1]

Daily averages, in billions of US dollars

	Foreign exchange swap					
	April 1995	**April 1998**	**April 2001**	**April 2004**	**April 2007**	**April 2010**
Argentina	...	...	...	...	...	...
Australia	21	25	35	61	111	118
Austria	4	5	3	7	10	11
Bahrain	1	0	1	0	1	4
Belgium	22	18	7	11	26	22
Brazil	...	...	0	0	0	0
Bulgaria	...	...	...	...	0	0
Canada	15	25	29	32	42	34
Chile	...	...	...	0	0	1
China	...	...	...	...	1	8
Chinese Taipei	...	1	1	2	4	7
Colombia	...	...	0	0	0	0
Czech Republic	...	3	1	1	3	4
Denmark	20	20	18	30	61	72
Estonia	...	...	...	0	1	1
Finland	3	3	1	1	7	30
France	30	50	38	46	87	104
Germany	38	44	51	70	52	64
Greece	1	3	3	3	4	3
Hong Kong SAR	53	44	44	61	122	147
Hungary	...	0	0	2	4	3
India	...	1	1	2	13	8
Indonesia	...	1	0	1	1	1
Ireland	1	4	4	2	6	8
Israel	...	...	1	2	4	5
Italy	8	15	11	10	22	18
Japan	89	61	90	125	112	168
Korea	...	1	3	6	11	18
Latvia	...	...	...	1	2	1
Lithuania	...	...	...	0	0	1
Luxembourg	10	13	8	10	24	17
Malaysia	...	1	1	0	1	2
Mexico	...	2	4	3	10	10
Netherlands	12	20	21	36	15	3
New Zealand	4	5	3	5	10	6
Norway	4	6	9	11	26	18
Peru	...	...	0	0	...	0
Philippines	...	0	0	0	1	1
Poland	...	0	3	4	6	5
Portugal	1	2	1	1	1	2
Romania	...	...	...	...	1	2
Russia	...	0	...	5	15	18
Saudi Arabia	...	1	1	1	1	1
Singapore	58	75	58	72	116	122
Slovakia	...	...	0	1	3	0
Slovenia	...	...	...	0	0	...
South Africa	2	4	7	8	10	9
Spain	10	12	4	9	8	17
Sweden	11	10	17	22	33	29
Switzerland	34	42	41	49	116	182
Thailand	...	2	1	1	4	3
Turkey	...	...	0	2	2	7
United Kingdom	244	372	300	428	899	775
United States	83	166	114	183	239	267
Total	**777**	**1,052**	**934**	**1,329**	**2,250**	**2,361**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.21

Currency swap turnover by country in April, 1995—2010[1]

Daily averages, in billions of US dollars

	Currency swaps					
	April 1995	**April 1998**	**April 2001**	**April 2004**	**April 2007**	**April 2010**
Argentina	...	...	...	...	...	...
Australia	0	0	1	1	2	4
Austria	0	0	0	0	0	0
Bahrain	...	0	0	0	0	0
Belgium	0	0	0	0	0	0
Brazil	...	...	0	0	0	0
Bulgaria	...	...	...	...	0	0
Canada	0	0	0	1	2	1
Chile	...	...	...	0	0	0
China	...	...	...	...	...	0
Chinese Taipei	...	0	0	0	0	0
Colombia	...	...	0	0	0	0
Czech Republic	...	...	0	0	0	0
Denmark	1	0	0	0	1	1
Estonia	...	...	...	...	0	...
Finland	0	0	0	0	0	0
France	0	1	0	1	1	4
Germany	0	1	0	0	0	1
Greece	0	0	0	...	0	0
Hong Kong SAR	0	0	0	1	1	7
Hungary	...	0	...	...	0	...
India	...	0	0	0	0	0
Indonesia	...	0	0	0	0	0
Ireland	0	0	0	0	0	1
Israel	...	...	...	...	...	0
Italy	0	0	0	0	0	0
Japan	1	1	1	1	1	2
Korea	...	0	0	0	1	1
Latvia	...	...	...	...	...	...
Lithuania	...	...	...	...	...	0
Luxembourg	0	0	0	0	1	0
Malaysia	...	...	...	0	0	0
Mexico	...	...	0	0	0	0
Netherlands	0	0	0	0	0	1
New Zealand	0	0	0	0	0	0
Norway	0	0	0	0	0	0
Peru	...	...	...	0	...	0
Philippines	...	...	0	0	0	1
Poland	...	...	...	0	0	0
Portugal	0	0	0	...	0	...
Romania	...	...	...	...	...	0
Russia	...	...	...	...	...	...
Saudi Arabia	...	...	...	0	0	...
Singapore	1	1	0	0	1	1
Slovakia	...	...	0	...	...	...
Slovenia	...	...	...	0	...	...
South Africa	...	0	0	0	0	0
Spain	0	1	0	0	0	1
Sweden	0	0	0	0	0	0
Switzerland	0	0	0	0	0	0
Thailand	...	0	0	0	0	0
Turkey	...	...	...	0	1	1
United Kingdom	1	5	4	16	18	18
United States	0	1	1	2	6	9
Total	**5**	**13**	**9**	**26**	**40**	**57**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.22

Options turnover by country in April, 1995—2010[1]

Daily averages, in billions of US dollars

	Options					
	April 1995	**April 1998**	**April 2001**	**April 2004**	**April 2007**	**April 2010**
Argentina	...	...	...	...	...	...
Australia	1	1	2	4	5	2
Austria	0	1	0	1	1	1
Bahrain	0	0	0	0	0	0
Belgium	0	1	0	1	2	1
Brazil	...	...	0	0	0	1
Bulgaria	...	...	...	...	0	...
Canada	1	1	2	5	3	2
Chile	...	...	...	...	0	0
China	...	...	...	...	...	0
Chinese Taipei	...	0	0	1	1	2
Colombia	...	...	0	0	0	0
Czech Republic	...	0	0	0	0	0
Denmark	0	1	0	1	1	3
Estonia	...	...	...	...	0	0
Finland	0	0	0	0	0	0
France	3	4	1	2	6	6
Germany	3	5	3	3	2	5
Greece	0	0	0	0	0	0
Hong Kong SAR	1	1	1	3	6	8
Hungary	...	0	0	0	0	0
India	...	0	0	0	4	1
Indonesia	...	0	...	0	0	0
Ireland	0	0	0	0	0	0
Israel	...	...	...	0	0	0
Italy	0	0	1	3	2	1
Japan	6	9	5	8	11	9
Korea	...	0	0	0	1	0
Latvia	...	...	...	...	...	...
Lithuania	...	...	...	...	0	0
Luxembourg	0	0	0	0	1	0
Malaysia	...	0	0	0	0	0
Mexico	...	0	0	0	0	0
Netherlands	1	2	0	3	1	0
New Zealand	0	0	0	0	0	0
Norway	0	0	0	0	0	0
Peru	...	...	...	...	...	0
Philippines	...	...	...	0	0	1
Poland	...	...	...	0	0	0
Portugal	0	0	0	0	1	0
Romania	...	...	...	...	0	0
Russia	...	0	...	...	0	0
Saudi Arabia	...	0	0	0	0	0
Singapore	1	5	3	8	10	16
Slovakia	...	...	...	...	0	0
Slovenia	...	...	...	0	0	...
South Africa	0	0	0	0	0	1
Spain	0	0	0	0	1	1
Sweden	0	1	1	1	2	2
Switzerland	2	10	5	6	12	8
Thailand	...	0	0	0	0	0
Turkey	...	...	...	0	0	1
United Kingdom	14	43	33	65	106	135
United States	21	31	18	36	75	39
Total	**55**	**117**	**79**	**152**	**253**	**247**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.23

Foreign exchange turnover by execution method in April 2010[1]

Daily averages, in millions of US dollars

	Inter-dealer direct	Customer direct	Electronic Trading Systems		Multibank dealing systems	Voice broker
			Electronic Broking System	Single-bank proprietary platforms		
Spot	237,433	343,390	413,502	227,733	231,199	136,271
Outright forwards	76,530	178,371	46,365	84,614	69,329	38,432
FX swaps	403,454	369,321	302,338	145,580	152,942	452,761
FX options	46,043	109,284	12,729	12,525	4,198	29,388

[1] Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding. Adjusted for local and cross-boder inter-dealer double-counting (ie "net-net" basis). Due to incomplete allocation by execution method, components do not sum to the aggregates published in Table D.1.

Table E.24

2. Amounts outstanding at end-June 2010

Notional amounts outstanding of OTC foreign exchange by instrument, counterparty and currency at end-June 2010[1]

All currencies

In millions of US dollars

	Total	US dollar	Euro	Yen	Pound sterling
Forwards and swaps	**31,935,312**	**27,775,021**	**10,825,619**	**4,633,047**	**4,031,984**
with reporting dealers	10,178,437	9,356,050	3,210,128	1,743,162	1,034,301
with other financial institutions	15,065,960	13,290,515	4,781,705	2,056,037	2,034,589
with non-financial customers	6,690,924	5,128,459	2,833,794	833,848	963,101
Currency swaps	**18,890,095**	**16,430,215**	**7,702,510**	**3,777,790**	**2,394,091**
with reporting dealers	7,906,256	7,203,382	3,047,769	1,977,914	936,423
with other financial institutions	8,611,532	7,446,154	3,488,850	1,316,708	1,088,792
with non-financial customers	2,372,315	1,780,678	1,165,888	483,164	368,872
Options sold	**8,550,830**	**6,806,025**	**2,922,539**	**3,119,424**	**672,804**
with reporting dealers	4,826,250	3,793,261	1,596,739	1,971,487	355,646
with other financial institutions	2,393,299	1,924,467	768,618	772,861	201,611
with non-financial customers	1,331,289	1,088,298	557,187	375,076	115,548
Options bought	**8,414,627**	**6,638,007**	**2,842,115**	**3,101,505**	**637,739**
with reporting dealers	4,891,384	3,863,850	1,569,578	2,069,455	351,056
with other financial institutions	2,235,461	1,738,668	751,132	723,255	176,147
with non-financial customers	1,287,794	1,035,490	521,405	308,797	110,536
Total options	**12,106,637**	**9,615,479**	**4,181,502**	**4,200,459**	**957,194**
Other products	**1,075**	…	**…**	**…**	**…**
Total contracts	**62,933,119**	**53,820,715**	**22,709,631**	**12,611,296**	**7,383,269**

For footnotes, see facing page.

Table E.25

Notional amounts outstanding of OTC foreign exchange by instrument, counterparty and currency at end-June 2010[1]

All currencies

In millions of US dollars

Swiss franc	Canadian dollar	Swedish krona	Other currencies[2]	
2,395,214	**1,656,914**	**1,001,917**	**11,550,908**	**Forwards and swaps**
1,030,850	428,130	277,289	3,276,964	with reporting dealers
910,873	823,115	359,718	5,875,368	with other financial institutions
453,499	405,673	364,914	2,398,560	with non-financial customers
963,087	**825,386**	**451,473**	**5,235,638**	**Currency swaps**
408,002	261,087	180,591	1,797,344	with reporting dealers
427,957	364,771	208,136	2,881,696	with other financial institutions
127,129	199,525	62,745	556,629	with non-financial customers
690,313	**220,762**	**94,878**	**2,574,915**	**Options sold**
407,859	117,821	53,564	1,356,123	with reporting dealers
199,774	65,916	22,968	830,383	with other financial institutions
82,683	37,022	18,344	388,420	with non-financial customers
675,505	**214,614**	**94,338**	**2,625,431**	**Options bought**
401,545	116,427	52,377	1,358,480	with reporting dealers
181,050	62,652	21,877	816,141	with other financial institutions
92,911	35,534	20,084	450,831	with non-financial customers
961,114	**318,253**	**136,249**	**3,843,024**	**Total options**
...	**...**	**...**	**2,150**	**Other products**
4,319,415	**2,800,553**	**1,589,639**	**20,631,720**	**Total contracts**

[1] Data adjusted for inter-dealer double-counting. While data on total options are shown on a net basis, separate data on options sold and options bought are recorded on a gross basis, ie not adjusted for inter-dealer double-counting. Due to incomplete counterparty breakdown, components do not always add to totals. [2] Calculated as the difference between the total and the sum of the listed components.

Table E.25 (cont)

Gross market values of OTC foreign exchange by instrument, counterparty and currency at end-June 2010[1]

All currencies

In millions of US dollars

	Total	US dollar	Euro	Yen	Pound sterling
Positive market values					
Forwards and FX swaps	**886,143**	**694,135**	**366,976**	**143,339**	**190,548**
with reporting dealers	452,804	353,002	183,794	80,149	116,375
with other financial institutions	280,336	227,528	108,798	40,581	50,984
with non-financial customers	152,997	113,603	74,384	22,605	23,191
Currency swaps	**864,547**	**672,975**	**362,928**	**207,179**	**154,955**
with reporting dealers	461,548	382,283	180,273	132,325	75,042
with other financial institutions	286,332	213,048	123,840	47,651	55,785
with non-financial customers	116,668	77,643	58,815	27,201	24,118
Options bought	**335,921**	**254,349**	**115,237**	**161,383**	**16,869**
with reporting dealers	202,042	157,875	64,934	108,936	9,309
with other financial institutions	75,061	50,694	28,978	23,598	4,256
with non-financial customers	58,813	45,785	21,328	28,845	3,304
Total contracts	**2,086,628**	**1,621,464**	**845,153**	**511,901**	**362,369**
Negative market values					
Forwards and FX swaps	**970,183**	**655,740**	**357,968**	**133,335**	**441,190**
with reporting dealers	526,723	338,266	172,655	75,813	294,661
with other financial institutions	305,737	221,968	122,299	40,430	109,636
with non-financial customers	137,723	95,510	63,022	17,097	36,894
Currency swaps	**990,369**	**760,281**	**405,837**	**221,474**	**245,356**
with reporting dealers	482,579	382,879	178,075	115,866	134,815
with other financial institutions	357,979	273,916	151,627	74,242	75,519
with non-financial customers	149,810	103,487	76,133	31,360	35,017
Options sold	**324,478**	**241,261**	**118,773**	**140,713**	**23,164**
with reporting dealers	204,158	156,468	68,435	109,170	11,573
with other financial institutions	79,165	53,085	30,762	21,754	7,073
with non-financial customers	41,155	31,710	19,576	9,790	4,516
Total contracts	**2,285,052**	**1,657,299**	**882,592**	**495,525**	**709,717**

For footnotes, see facing page.

Table E.26

Gross market values of OTC foreign exchange by instrument, counterparty and currency at end-June 2010[1]

All currencies

In millions of US dollars

Swiss franc	Canadian dollar	Swedish krona	Other currencies[2]	
Positive market values				
73,787	**38,268**	**19,931**	**245,302**	**Forwards and FX swaps**
42,035	16,569	8,997	104,687	with reporting dealers
22,020	13,718	5,334	91,709	with other financial institutions
9,731	7,979	5,597	48,904	with non-financial customers
45,805	**35,784**	**10,518**	**238,950**	**Currency swaps**
23,469	13,216	6,234	110,254	with reporting dealers
16,603	12,783	2,947	100,007	with other financial institutions
5,733	9,780	1,332	28,714	with non-financial customers
26,589	**5,333**	**1,949**	**90,133**	**Options bought**
16,327	2,908	929	42,866	with reporting dealers
7,286	1,617	511	33,182	with other financial institutions
2,976	812	510	14,066	with non-financial customers
146,183	**79,387**	**32,400**	**574,399**	**Total contracts**
Negative market values				
65,177	**39,186**	**19,731**	**228,039**	**Forwards and FX swaps**
37,246	16,808	10,100	107,897	with reporting dealers
16,405	14,252	4,938	81,546	with other financial institutions
11,525	8,124	4,693	38,581	with non-financial customers
56,142	**35,960**	**13,027**	**242,661**	**Currency swaps**
22,670	11,827	7,148	111,878	with reporting dealers
21,070	13,137	3,683	102,764	with other financial institutions
12,401	10,994	2,192	28,036	with non-financial customers
26,033	**6,008**	**2,224**	**90,780**	**Options sold**
15,953	2,966	899	42,852	with reporting dealers
7,357	2,055	866	35,378	with other financial institutions
2,718	983	455	12,562	with non-financial customers
147,353	**81,155**	**34,986**	**561,477**	**Total contracts**

[1] Counterparty breakdown partially estimated. [2] Calculated as the difference between the total and the sum of the listed components.

Table E.26 (cont)

Notional amounts outstanding of OTC foreign exchange by instrument, counterparty and remaining maturity at end-June 2010[1]

In millions of US dollars

	Total	One year or less	Over 1 year and up to 5 years	Over 5 years
Forwards and swaps	**50,825,407**	**32,282,575**	**10,159,882**	**8,389,912**
with reporting dealers	18084693	11,714,146	4,059,140	2,305,296
with other financial institutions	23,677,492	14,051,372	4,514,795	5,102,349
with non-financial customers	9,063,239	6,494,612	1,585,296	982,247
Options sold	**8,550,830**	**6,128,066**	**1,939,216**	**483,556**
with reporting dealers	4,826,250	3,275,891	1,216,854	330,780
with other financial institutions	2,393,299	1,867,443	440,450	85,375
with non-financial customers	1,331,289	982,604	280,373	67,402
Options bought	8,414,627	**5,560,605**	**1,872,315**	**981,749**
with reporting dealers	**4,891,384**	3,325,528	1,237,236	327,636
with other financial institutions	2,235,461	1,271,612	391,104	572,726
with non-financial customers	1,287,794	961,463	242,414	81,390
Total options	12,106,637	**8,387,966**	**2,584,491**	**1,136,101**
Other products	**1,075**	**...**	**...**	**...**
Total contracts	**62,933,119**	**40,670,527**	**12,744,367**	**9,526,012**
Total contracts including gold	**63,602,498**	**...**	**...**	**...**

[1] Data adjusted for inter-dealer double-counting. While data on total options are shown on a net basis, separate data on options sold and options bought are recorded on a gross basis, ie not adjusted for inter-dealer double-counting. Due to incomplete allocation, the maturity breakdown does not always sum to totals.

Table E.27

Notional amounts outstanding of OTC foreign exchange by instrument and counterparty at end-June 2004, 2007 and 2010[1]

In millions of US dollars

	End-June 2004		End-June 2007		End-June 2010	
	Notional amounts outstanding	Gross market values	Notional amounts outstanding	Gross market values	Notional amounts outstanding	Gross market values
Forwards and FX swaps	**16,763,791**	**459,617**	**29,775,280**	**667,587**	**31,935,312**	**1,329,600**
with reporting dealers	6,834,095	191,668	10,580,077	254,317	10,178,437	452,804
with other financial institutions	6,579,777	165,060	12,280,687	256,313	15,065,960	586,073
with non-financial customers	3,349,930	102,886	6,914,531	156,973	6,690,924	290,720
Total including gold	16,920,203	...	30,486,523	...	32,320,119	...
Currency swaps	**7,938,591**	**505,366**	**14,130,193**	**666,201**	**18,890,095**	**1,372,342**
with reporting dealers	3,078,941	114,194	5,714,743	174,697	7,906,256	461,548
with other financial institutions	3,112,463	229,223	5,941,666	308,004	8,611,532	644,311
with non-financial customers	1,747,196	161,950	2,473,788	183,495	2,372,315	266,478
Options sold	**4,702,476**	**98,624**	**9,915,023**	**204,856**	**8,550,830**	**324,478**
with reporting dealers	2,565,614	50,516	6,127,064	124,230	4,826,250	204,158
with other financial institutions	1,144,366	22,220	2,282,195	49,391	2,393,299	79,165
with non-financial customers	992,505	25,895	1,505,781	31,238	1,331,289	41,155
Total including gold	4,792,802	...	10,066,243	...	8,722,762	...
Options bought	**4,646,972**	**100,603**	**9,880,162**	**197,877**	**8,414,627**	**335,921**
with reporting dealers	2,554,475	52,989	6,139,281	125,530	4,891,384	202,042
with other financial institutions	1,102,087	20,518	2,215,249	44,442	2,235,461	75,061
with non-financial customers	990,416	27,100	1,525,647	27,909	1,287,794	58,813
Total including gold	4,804,363	...	10,144,470	...	8,590,477	...
Total options	**6,789,401**	**148,712**	**13,662,018**	**278,507**	**12,106,637**	**456,243**
Other products	**7,229**	**...**	**36,724**	**...**	**1,075**	**...**
Total contracts	**31,499,012**	**1,113,695**	**57,604,215**	**1,612,295**	**62,933,119**	**3,158,185**
Total contracts including gold	**31,857,932**	**1,159,925**	**58,655,148**	**1,668,515**	**63,602,238**	**3,212,349**

[1] Data adjusted for inter-dealer double-counting. While data on total options are shown on a net basis, separate data on options sold and options bought are recorded on a gross basis, ie not adjusted for inter-dealer double-counting. The counterparty breakdown for the gross market values was estimated.

Table E.28

BANK FOR INTERNATIONAL SETTLEMENTS

Triennial Central Bank Survey

Foreign exchange and derivatives market activity in 2010

November 2010

ANNEX TABLES

E - Global foreign exchange markets

1. Turnover in April 2010

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Total reported transactions in all currencies

Daily averages, in millions of US dollars

	Total	Specified currency against all other currencies[2]					
		US dollar	Euro	Yen	Pound sterling	Swiss franc	Canadian dollar
Spot	**1,490,205**	**1,187,699**	**691,210**	**300,214**	**212,976**	**92,090**	**77,831**
with reporting dealers	517,996	421,171	232,767	97,655	70,395	28,203	23,825
local	175,900	145,414	68,722	27,309	23,949	8,915	6,413
cross-border	342,096	275,757	164,045	70,346	46,446	19,288	17,413
with other financial institutions	755,203	598,504	361,401	152,144	115,907	52,433	41,628
local	301,247	242,285	147,602	60,048	43,739	22,773	14,878
cross-border	453,955	356,217	213,799	92,096	72,168	29,661	26,751
with non-financial customers	217,006	168,025	97,042	50,415	26,674	11,454	12,378
local	91,339	67,744	30,137	24,425	9,389	3,354	6,836
cross-border	125,667	100,281	66,905	25,991	17,285	8,100	5,542
Outright forwards	**475,007**	**391,501**	**149,687**	**115,111**	**54,844**	**19,076**	**26,332**
with reporting dealers	112,510	96,325	34,039	12,039	11,275	5,203	4,545
local	28,634	23,950	8,558	3,157	3,127	1,627	1,345
cross-border	83,875	72,375	25,481	8,882	8,148	3,576	3,199
with other financial institutions	254,172	207,497	83,368	57,319	34,405	10,315	17,277
local	99,098	74,530	36,704	19,816	17,457	3,773	7,156
cross-border	155,073	132,967	46,664	37,503	16,947	6,542	10,122
with non-financial customers	108,326	87,680	32,279	45,752	9,164	3,558	4,510
local	54,062	39,901	19,187	15,061	5,864	2,210	2,963
cross-border	54,265	47,778	13,092	30,691	3,300	1,348	1,547
Up to 7 days	218,778	181,689	69,926	75,000	27,281	10,058	13,847
Over 7 days and up to 1 year	244,894	200,687	76,244	39,145	26,406	8,847	12,138
Over 1 year	11,335	9,123	3,516	966	1,157	172	347
Foreign exchange swaps	**1,765,210**	**1,600,101**	**609,801**	**278,897**	**222,214**	**127,078**	**97,049**
with reporting dealers	837,004	775,490	273,064	125,552	96,787	65,017	38,061
local	241,165	229,167	61,008	35,164	32,611	11,919	11,289
cross-border	595,838	546,323	212,055	90,388	64,176	53,098	26,772
with other financial institutions	757,769	685,372	267,399	126,072	102,805	49,334	49,426
local	221,017	196,326	77,799	32,917	41,028	14,306	13,930
cross-border	536,752	489,047	189,601	93,155	61,777	35,029	35,496
with non-financial customers	170,437	139,238	69,338	27,273	22,621	12,726	9,562
local	71,757	53,033	27,758	16,222	10,018	3,852	4,313
cross-border	98,680	86,205	41,580	11,051	12,604	8,875	5,250
Up to 7 days	1,303,954	1,208,255	419,682	201,122	161,342	90,265	72,330
Over 7 days and up to 1 year	444,209	376,210	186,218	75,844	58,828	35,430	23,815
Over 1 year	14,522	13,039	3,903	1,932	2,043	1,382	904

For footnotes, see facing page.

Table E.1

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Total reported transactions in all currencies

Daily averages, in millions of US dollars

Specified currency against all other currencies[2]								
Australian dollar	**Swedish krona**	**Brazilian real**	**Renminbi**	**Czech koruna**	**Danish krone**	**Hong Kong dollar**	**Forint**	
111,107	**18,787**	**8,518**	**8,123**	**1,330**	**4,785**	**18,713**	**4,144**	**Spot**
37,564	6,799	2,275	6,415	657	1,989	8,862	1,780	with reporting dealers
12,028	1,751	1,602	4,723	95	301	3,759	665	local
25,536	5,049	673	1,692	563	1,688	5,103	1,115	cross-border
56,135	9,641	4,672	1,419	413	1,627	6,448	2,008	with other financial institutions
19,953	2,456	2,446	385	117	293	1,951	730	local
36,182	7,185	2,226	1,034	296	1,334	4,497	1,278	cross-border
17,408	2,347	1,571	289	260	1,169	3,402	356	with non-financial customers
9,994	1,096	1,460	144	198	858	2,271	189	local
7,414	1,251	111	145	62	311	1,132	167	cross-border
28,836	**8,578**	**12,866**	**14,248**	**612**	**2,794**	**3,725**	**1,816**	**Outright forwards**
6,951	2,544	2,538	6,052	103	777	1,090	360	with reporting dealers
1,702	643	703	1,235	16	297	428	135	local
5,249	1,901	1,835	4,817	87	480	661	224	cross-border
17,197	4,123	8,585	5,467	213	865	1,505	1,052	with other financial institutions
8,274	1,788	2,574	1,332	107	599	673	394	local
8,923	2,335	6,011	4,135	106	266	831	658	cross-border
4,688	1,911	1,743	2,729	296	1,152	1,131	404	with non-financial customers
3,295	1,379	1,063	1,959	189	1,049	859	254	local
1,393	532	681	769	107	103	272	150	cross-border
12,607	4,420	3,875	1,849	174	1,521	1,887	549	Up to 7 days
15,912	4,080	8,343	10,377	421	1,215	1,564	1,249	Over 7 days and up to 1 year
316	78	649	2,022	17	58	274	18	Over 1 year
140,794	**56,198**	**791**	**6,825**	**5,446**	**14,681**	**69,538**	**9,937**	**Foreign exchange swaps**
71,439	28,866	187	2,879	3,474	8,103	36,484	3,418	with reporting dealers
20,111	2,717	53	2,566	543	1,207	14,982	1,209	local
51,328	26,149	134	313	2,931	6,896	21,502	2,209	cross-border
59,520	18,096	419	3,163	1,303	3,217	30,227	4,442	with other financial institutions
14,844	5,814	166	3,028	483	1,441	3,247	1,120	local
44,676	12,282	253	134	820	1,776	26,980	3,322	cross-border
9,835	9,236	184	784	669	3,361	2,827	2,076	with non-financial customers
4,049	4,701	142	748	367	2,749	2,138	212	local
5,786	4,534	43	36	302	613	690	1,865	cross-border
112,494	39,596	278	4,130	4,370	9,843	55,821	8,088	Up to 7 days
27,942	16,180	404	2,603	1,070	4,814	12,285	1,713	Over 7 days and up to 1 year
357	418	110	93	6	24	1,432	136	Over 1 year

[1] Adjusted for local and cross-border inter-dealer double-counting. Due to incomplete reporting, the maturity breakdown does not always sum to totals. Due to incomplete counterparty breakdown, components do not always sum to totals. [2] Because two currencies are involved in each transaction, the sum of transactions in individual currencies comes to twice the total reported turnover.

Table E.1 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Total reported transactions in all currencies

Daily averages, in millions of US dollars

	Specified currency against all other currencies[2]							
	Indian rupee	**Rupiah**	**Won**	**Mexican peso**	**Norwegian krone**	**New Zealand dollar**	**Philippine peso**	**Zloty**
Spot	**13,527**	**2,464**	**21,144**	**18,158**	**12,335**	**21,643**	**2,249**	**7,193**
with reporting dealers	7,081	1,436	12,821	6,925	4,475	7,798	1,679	3,108
local	5,544	803	9,769	2,125	1,156	2,636	1,123	960
cross-border	1,537	633	3,052	4,800	3,319	5,162	556	2,148
with other financial institutions	2,947	621	6,229	8,366	6,105	11,299	375	3,176
local	878	176	3,183	2,812	1,285	3,416	201	950
cross-border	2,070	445	3,046	5,555	4,820	7,883	174	2,226
with non-financial customers	3,498	407	2,094	2,867	1,755	2,546	195	909
local	2,881	350	1,714	1,599	830	1,330	159	604
cross-border	618	56	380	1,268	925	1,216	36	305
Outright forwards	**13,620**	**2,659**	**18,018**	**5,392**	**6,153**	**5,076**	**2,396**	**3,559**
with reporting dealers	4,811	1,368	11,002	1,425	1,619	1,324	1,248	693
local	1,466	337	1,667	434	366	380	170	201
cross-border	3,345	1,031	9,335	992	1,253	944	1,079	492
with other financial institutions	5,059	1,070	5,639	3,014	3,301	2,976	891	2,159
local	1,513	322	1,865	1,140	1,649	1,354	217	923
cross-border	3,546	749	3,774	1,874	1,652	1,621	674	1,236
with non-financial customers	3,750	221	1,377	952	1,233	776	257	707
local	3,259	175	942	318	941	457	213	430
cross-border	491	45	435	634	292	319	44	277
Up to 7 days	3,263	552	2,590	2,117	3,102	2,621	370	1,160
Over 7 days and up to 1 year	9,458	2,071	14,808	3,164	2,986	2,398	1,983	2,334
Over 1 year	899	37	620	111	64	57	43	65
Foreign exchange swaps	**6,789**	**667**	**16,597**	**23,735**	**31,602**	**33,148**	**1,188**	**19,074**
with reporting dealers	6,030	569	13,823	10,683	14,863	16,028	1,004	7,083
local	5,243	417	12,908	2,302	2,269	4,894	841	1,986
cross-border	787	152	915	8,382	12,594	11,134	163	5,097
with other financial institutions	637	68	1,781	9,742	11,984	14,450	171	7,653
local	381	54	1,046	3,270	3,077	3,700	170	1,900
cross-border	257	13	736	6,472	8,906	10,750	1	5,753
with non-financial customers	121	30	992	3,310	4,755	2,670	14	4,338
local	99	26	908	767	2,216	872	14	632
cross-border	22	4	84	2,543	2,539	1,799	...	3,706
Up to 7 days	3,290	447	7,387	20,278	22,222	28,699	555	15,680
Over 7 days and up to 1 year	2,931	220	8,329	3,359	9,231	4,296	628	3,280
Over 1 year	568	1	881	98	149	162	4	113

For footnotes, see facing page.

Table E.1 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Total reported transactions in all currencies

Daily averages, in millions of US dollars

Specified currency against all other currencies[2]								
Rouble	**Rand**	**Singapore dollar**	**New Taiwan dollar**	**Baht**	**Turkish lira**	**Currencies of other reporting countries[3]**	**Residual currencies[4]**	
**#### #### **	**9,111**	**15,616**	**6,064**	**### #**	**7,955**	**15,092**	**69,356**	**Spot**
5,936	4,040	6,746	2,102	###	4,328	5,664	20,399	with reporting dealers
4,610	1,344	1,868	1,201	445	1,750	3,667	7,151	local
1,325	2,696	4,878	901	650	2,578	1,997	13,248	cross-border
6,342	4,059	6,227	1,952	617	3,234	5,028	39,448	with other financial institutions
4,428	1,026	2,235	1,126	97	1,017	2,909	17,101	local
1,913	3,033	3,992	826	520	2,218	2,119	22,347	cross-border
5,861	1,011	2,643	2,010	###	392	4,400	9,510	with non-financial customers
2,103	733	758	1,463	###	301	4,213	4,497	local
3,759	277	1,885	548	72	91	187	5,013	cross-border
2,262	**2,856**	**4,416**	**6,820**	**#### ###**	**3,032**	**9,837**	**32,787**	**Outright forwards**
699	689	1,093	3,456	80	964	4,235	6,471	with reporting dealers
361	320	283	641	20	498	1,106	2,097	local
339	370	810	2,815	59	466	3,129	4,375	cross-border
1,261	1,588	2,359	2,584	134	1,786	4,313	21,022	with other financial institutions
449	635	987	630	55	690	1,767	8,823	local
812	954	1,371	1,955	79	1,095	2,546	12,198	cross-border
301	578	965	779	894	282	1,289	5,295	with non-financial customers
167	413	613	457	870	204	1,110	2,320	local
134	165	352	323	24	78	179	2,975	cross-border
704	1,144	1,708	1,547	268	1,820	2,687	7,220	Up to 7 days
1,472	1,673	2,614	5,196	826	1,182	6,786	24,208	Over 7 days and up to 1 year
85	39	94	77	13	29	364	1,360	Over 1 year
#### ####	**15,628**	**33,594**	**4,761**	**#### ###**	**12,634**	**10,324**	**63,590**	**Foreign exchange swaps**
5,817	9,622	20,726	929	###	6,034	4,501	24,800	with reporting dealers
3,215	3,669	7,481	830	###	1,837	1,721	6,259	local
2,602	5,953	13,245	99	761	4,198	2,779	18,542	cross-border
7,556	5,031	11,032	3,184	636	6,310	4,461	30,045	with other financial institutions
4,224	1,131	3,841	3,112	303	2,103	1,195	6,078	local
3,332	3,900	7,191	72	333	4,207	3,266	23,968	cross-border
866	974	1,835	648	192	289	1,363	8,744	with non-financial customers
343	677	721	647	131	183	941	4,039	local
524	298	1,115	0	61	106	423	4,705	cross-border
#### ####	12,112	26,598	347	### #	9,886	7,690	50,139	Up to 7 days
1,067	3,400	6,795	4,159	###	2,696	2,532	10,628	Over 7 days and up to 1 year
126	117	201	254	78	52	103	359	Over 1 year

[1] Adjusted for local and cross-border inter-dealer double-counting. Due to incomplete reporting, the maturity breakdown does not always sum to totals. Due to incomplete counterparty breakdown, components do not always sum to totals. [2] Because two currencies are involved in each transaction, the sum of transactions in individual currencies comes to twice the total reported turnover. [3] Includes all participating countries' currencies other than the ones listed. [4] Calculated as the difference between the total and the sum of the listed components.

Table E.1 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Total reported transactions in all currencies

Daily averages, in millions of US dollars

	Total	Specified currency against all other currencies[2]					
		US dollar	Euro	Yen	Pound sterling	Swiss franc	Canadian dollar
Currency swaps	**42,866**	**38,313**	**17,673**	**6,597**	**2,575**	**1,681**	**2,839**
with reporting dealers	20,056	18,490	6,787	2,707	1,482	592	996
local	5,944	5,405	1,431	491	639	59	152
cross-border	14,112	13,085	5,356	2,216	843	533	844
with other financial institutions	19,255	16,771	9,498	3,320	878	904	1,309
local	7,488	6,522	4,376	1,169	388	216	259
cross-border	11,767	10,250	5,121	2,151	490	688	1,050
with non-financial customers	3,555	3,052	1,389	569	215	185	533
local	1,764	1,457	584	279	122	110	297
cross-border	1,791	1,594	805	290	93	75	236
Options sold	**136,882**	**105,529**	**57,445**	**34,497**	**12,866**	**9,197**	**4,189**
with reporting dealers	60,904	47,216	24,812	12,229	6,239	4,126	2,189
local	21,195	16,349	8,887	4,990	2,524	1,682	642
cross-border	39,708	30,867	15,924	7,239	3,715	2,444	1,548
with other financial institutions	60,448	47,221	25,850	19,399	5,280	3,575	1,621
local	33,423	27,862	12,117	14,411	2,449	1,671	713
cross-border	27,026	19,359	13,733	4,988	2,831	1,904	908
with non-financial customers	15,530	11,092	6,784	2,869	1,347	1,496	379
local	6,241	4,552	2,864	1,386	442	582	151
cross-border	9,289	6,540	3,919	1,482	905	914	227
Options bought	**130,788**	**101,003**	**54,981**	**31,397**	**13,423**	**8,373**	**4,055**
with reporting dealers	59,909	45,459	26,633	10,629	6,435	4,224	2,105
local	20,434	15,463	9,198	3,171	2,443	1,422	640
cross-border	39,475	29,996	17,434	7,458	3,991	2,802	1,465
with other financial institutions	53,027	42,385	21,329	17,678	4,909	2,709	1,419
local	27,812	23,627	8,879	13,282	1,898	1,069	587
cross-border	25,215	18,758	12,450	4,396	3,011	1,640	832
with non-financial customers	17,852	13,159	7,020	3,090	2,080	1,440	531
local	7,152	5,402	2,750	1,343	607	455	222
cross-border	10,700	7,757	4,270	1,748	1,473	985	309
Total options	**207,264**	**160,194**	**86,705**	**54,465**	**19,952**	**13,395**	**6,097**
Other products	**150**	**...**	**...**	**...**	**...**	**...**	**...**
Total foreign exchange contra	**3,980,703**	**3,377,809**	**1,555,076**	**755,283**	**512,560**	**253,321**	**210,148**

For footnotes, see facing page.

Table E.1 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Total reported transactions in all currencies

Daily averages, in millions of US dollars

Specified currency against all other currencies[2]								
Australian dollar	**Swedish krona**	**Brazilian real**	**Renminbi**	**Czech koruna**	**Danish krone**	**Hong Kong dollar**	**Forint**	
5,649	**699**	**391**	**65**	**30**	**117**	**347**	**45**	**Currency swaps**
2,984	466	39	31	19	22	215	44	with reporting dealers
441	286	22	3	2	8	32	3	local
2,543	180	17	28	17	14	184	41	cross-border
2,406	219	155	22	10	87	56	0	with other financial institutions
714	126	142	1	1	74	11	...	local
1,691	93	13	21	9	13	45	0	cross-border
259	14	198	12	1	9	76	1	with non-financial customers
55	10	197	6	0	9	25	1	local
204	4	1	6	1	...	52	...	cross-border
10,444	**1,808**	**3,040**	**3,164**	**148**	**186**	**1,156**	**825**	**Options sold**
5,713	795	1,506	1,626	69	167	513	360	with reporting dealers
1,561	261	637	447	12	0	96	136	local
4,152	534	869	1,179	57	167	416	223	cross-border
3,755	723	1,389	1,197	47	4	303	366	with other financial institutions
1,752	243	457	668	6	...	125	147	local
2,003	479	932	529	41	4	178	218	cross-border
976	290	145	342	32	15	340	100	with non-financial customers
432	158	59	107	10	13	185	30	local
545	133	86	234	22	2	155	70	cross-border
10,663	**1,972**	**3,187**	**3,517**	**127**	**110**	**1,123**	**804**	**Options bought**
5,832	865	1,634	1,736	49	19	662	413	with reporting dealers
1,524	300	631	399	0	0	154	210	local
4,308	565	1,004	1,337	49	19	508	204	cross-border
3,151	669	1,456	1,280	28	32	180	305	with other financial institutions
1,415	193	426	673	12	23	51	100	local
1,735	476	1,030	607	16	8	129	204	cross-border
1,680	438	97	501	50	60	281	86	with non-financial customers
756	239	41	213	15	31	182	27	local
924	200	56	288	35	29	99	59	cross-border
15,334	**2,950**	**4,657**	**5,000**	**216**	**203**	**1,692**	**1,243**	**Total options**
...	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**Other products**
301,719	**87,212**	**27,224**	**34,261**	**7,634**	**22,581**	**94,015**	**17,184**	**Total foreign exchange contracts**

[1] Adjusted for local and cross-border inter-dealer double-counting. Due to incomplete reporting, the maturity breakdown does not always sum to totals. Due to incomplete counterparty breakdown, components do not always sum to totals. While data on total options are shown on a net basis, separate data on options sold and options bought are recorded on a gross basis, ie not adjusted for inter-dealer double-counting. [2] Because two currencies are involved in each transaction, the sum of transactions in individual currencies comes to twice the total reported turnover.

Table E.1 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Total reported transactions in all currencies

Daily averages, in millions of US dollars

	Specified currency against all other currencies[2]							
	Indian rupee	**Rupiah**	**Won**	**Mexican peso**	**Norwegian krone**	**New Zealand dollar**	**Philippine peso**	**Zloty**
Currency swaps	**50**	**68**	**951**	**353**	**643**	**664**	**187**	**181**
with reporting dealers	14	9	625	190	208	380	184	84
local	3	2	348	83	136	36	183	15
cross-border	11	7	277	107	72	344	1	69
with other financial institutions	19	57	264	136	389	280	3	82
local	10	53	62	30	214	62	...	6
cross-border	9	4	202	106	175	218	3	76
with non-financial customers	17	2	62	28	46	4	0	15
local	17	2	58	6	18	1	0	1
cross-border	...	...	4	22	28	3	...	14
Options sold	**2,194**	**120**	**2,521**	**1,595**	**1,208**	**1,873**	**102**	**1,371**
with reporting dealers	793	70	1,467	839	497	1,012	41	616
local	297	8	525	231	160	379	6	201
cross-border	496	62	942	608	337	634	35	415
with other financial institutions	877	38	836	613	501	587	37	570
local	470	1	341	225	252	210	7	235
cross-border	408	37	495	387	249	377	30	335
with non-financial customers	523	12	217	144	210	274	24	186
local	355	0	81	44	77	64	1	58
cross-border	168	12	136	100	133	210	23	128
Options bought	**2,429**	**107**	**2,438**	**1,531**	**1,205**	**1,979**	**1,160**	**1,337**
with reporting dealers	948	64	1,341	783	529	1,114	1,109	634
local	429	8	484	253	141	333	1,056	221
cross-border	520	56	857	530	388	780	54	413
with other financial institutions	781	24	838	609	411	520	26	543
local	332	5	467	253	144	192	7	187
cross-border	449	20	371	356	266	327	18	356
with non-financial customers	699	19	260	139	265	346	25	160
local	477	1	117	36	113	119	1	76
cross-border	222	18	143	104	152	227	24	85
Total options	**3,752**	**160**	**3,555**	**2,316**	**1,899**	**2,790**	**687**	**2,083**
Other products	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
Total foreign exchange contra	**37,738**	**6,019**	**60,265**	**49,954**	**52,632**	**63,321**	**6,707**	**32,089**

For footnotes, see facing page.

Table E.1 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Total reported transactions in all currencies

Daily averages, in millions of US dollars

Specified currency against all other currencies[2]								
Rouble	**Rand**	**Singapore dollar**	**New Taiwan dollar**	**Baht**	**Turkish lira**	**Currencies of other reporting countries[3]**	**Residual currencies[4]**	
182	**150**	**67**	**103**	**111**	**1,908**	**1,692**	**1,400**	**Currency swaps**
65	91	44	34	62	1,238	1,369	640	with reporting dealers
29	9	1	21	59	692	1,255	43	local
36	82	42	13	3	546	114	597	cross-border
102	49	19	26	20	589	192	651	with other financial institutions
33	7	6	17	18	283	61	114	local
69	43	13	9	2	305	131	536	cross-border
15	10	4	43	29	81	131	110	with non-financial customers
12	3	4	37	29	16	119	53	local
3	7	0	5	...	65	12	56	cross-border
766	**775**	**1,750**	**914**	**50**	**2,559**	**572**	**10,901**	**Options sold**
491	523	915	485	11	1,090	199	5,199	with reporting dealers
288	234	236	150	9	431	74	936	local
204	289	679	335	2	658	124	4,263	cross-border
208	201	633	349	1	1,286	276	3,156	with other financial institutions
89	56	362	138	0	714	68	1,054	local
119	145	271	211	1	572	208	2,101	cross-border
67	50	203	79	38	183	98	2,546	with non-financial customers
11	24	57	44	37	97	86	477	local
56	26	146	36	0	87	12	2,069	cross-border
761	**782**	**1,846**	**862**	**55**	**2,260**	**602**	**7,486**	**Options bought**
466	521	922	519	9	1,033	182	2,948	with reporting dealers
239	228	285	112	7	468	74	974	local
227	293	637	407	2	565	108	1,974	cross-border
223	195	662	250	2	820	331	2,290	with other financial institutions
91	59	345	96	1	192	79	937	local
133	136	317	154	1	628	252	1,353	cross-border
72	67	262	92	43	407	89	2,248	with non-financial customers
18	40	110	55	43	330	76	413	local
54	27	151	37	0	76	13	1,835	cross-border
1,049	**1,035**	**2,678**	**1,273**	**95**	**3,757**	**984**	**14,313**	**Total options**
...	**...**	**...**	**...**	**...**	**...**	**...**	**300**	**Other products**
35,870	**28,780**	**56,371**	**19,021**	**7,652**	**29,285**	**37,929**	**181,746**	**Total foreign exchange contracts**

[1] Adjusted for local and cross-border inter-dealer double-counting. Due to incomplete reporting, the maturity breakdown does not always sum to totals. Due to incomplete counterparty breakdown, components do not always sum to totals. While data on total options are shown on a net basis, separate data on options sold and options bought are recorded on a gross basis, ie not adjusted for inter-dealer double-counting. [2] Because two currencies are involved in each transaction, the sum of transactions in individual currencies comes to twice the total reported turnover. [3] Includes all participating countries' currencies other than the ones listed. [4] Calculated as the difference between the total and the sum of the listed components.

Table E.1 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

US dollar against:

Daily averages, in millions of US dollars

	Total	Euro	Yen	Pound sterling	Swiss franc	Canadian dollar	Australian dollar	Swedish krona
Spot	**1,187,699**	**468,891**	**183,108**	**139,582**	**50,793**	**65,148**	**83,869**	**5,441**
with reporting dealers	421,171	159,180	66,429	47,249	14,637	19,816	28,888	1,975
local	145,414	46,591	17,329	16,797	5,064	5,395	9,268	697
cross-border	275,757	112,589	49,100	30,451	9,573	14,421	19,620	1,278
with other financial institutions	598,504	245,922	89,099	76,718	30,434	34,604	43,834	2,926
local	242,285	101,494	36,210	29,389	13,916	13,463	16,935	700
cross-border	356,217	144,429	52,888	47,328	16,518	21,141	26,898	2,226
with non-financial customers	168,025	63,789	27,579	15,616	5,722	10,728	11,147	540
local	67,744	16,085	13,105	4,441	1,451	5,891	5,435	233
cross-border	100,281	47,704	14,474	11,175	4,272	4,837	5,713	307
Outright forwards	**391,501**	**92,085**	**89,205**	**33,599**	**10,715**	**20,295**	**20,494**	**3,468**
with reporting dealers	96,325	23,568	7,287	7,463	2,894	3,436	5,177	1,292
local	23,950	5,397	2,142	2,170	786	897	1,323	330
cross-border	72,375	18,172	5,145	5,293	2,109	2,539	3,854	962
with other financial institutions	207,497	50,565	43,981	21,447	6,055	13,487	12,612	1,647
local	74,530	19,999	11,248	10,071	2,072	4,904	5,575	791
cross-border	132,967	30,566	32,733	11,375	3,983	8,583	7,037	856
with non-financial customers	87,680	17,951	37,937	4,689	1,765	3,372	2,705	529
local	39,901	9,730	8,853	2,970	1,084	2,173	2,001	297
cross-border	47,778	8,222	29,084	1,720	681	1,199	704	232
Up to 7 days	181,689	46,113	63,245	16,987	6,076	10,358	9,293	1,846
Over 7 days and up to 1 year	200,687	44,334	25,316	15,804	4,563	9,702	10,994	1,601
Over 1 year	9,123	1,637	644	808	76	235	206	21
Foreign exchange swaps	**1,600,101**	**475,868**	**245,705**	**175,231**	**101,240**	**89,609**	**128,846**	**35,546**
with reporting dealers	775,490	218,896	116,805	80,184	53,975	36,046	68,570	17,177
local	229,167	51,390	32,600	28,867	8,875	10,817	19,203	2,449
cross-border	546,323	167,506	84,204	51,317	45,100	25,229	49,367	14,728
with other financial institutions	685,372	211,629	109,094	80,627	37,513	45,214	52,998	13,405
local	196,326	59,711	27,084	34,027	10,283	12,109	12,513	3,519
cross-border	489,047	151,918	82,009	46,600	27,230	33,105	40,485	9,886
with non-financial customers	139,238	45,343	19,806	14,419	9,752	8,348	7,278	4,963
local	53,033	13,772	10,489	5,786	2,420	3,633	2,449	1,825
cross-border	86,205	31,571	9,317	8,633	7,332	4,716	4,829	3,138
Up to 7 days	1,208,255	346,362	180,217	135,846	77,198	68,014	105,574	25,573
Over 7 days and up to 1 year	376,210	126,990	63,746	37,945	22,806	20,731	22,965	9,710
Over 1 year	13,039	2,516	1,742	1,439	1,236	864	307	260

For footnotes, see facing page.

Table E.2

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

US dollar against:

Daily averages, in millions of US dollars

Brazilian real	Renminbi	Hong Kong dollar	Indian rupee	Won	Rand	Currencies of other reporting countries[2]	Residual currencies[3]	
8,223	**6,173**	**13,440**	**12,525**	**20,280**	**7,023**	**46,038**	**77,163**	**Spot**
2,267	4,546	6,121	6,970	12,433	3,460	18,494	28,705	with reporting dealers
1,601	2,887	1,795	5,528	9,635	1,159	12,394	9,277	local
666	1,660	4,327	1,442	2,799	2,301	6,101	19,428	cross-border
4,629	1,398	4,932	2,821	6,038	3,050	12,384	39,714	with other financial institutions
2,442	368	1,640	825	3,117	890	8,490	12,407	local
2,187	1,030	3,293	1,997	2,921	2,160	3,894	27,308	cross-border
1,327	229	2,387	2,733	1,809	514	15,160	8,744	with non-financial customers
1,220	92	1,394	2,582	1,493	286	10,084	3,952	local
107	137	992	152	316	228	5,076	4,792	cross-border
12,219	**13,433**	**2,489**	**13,037**	**17,179**	**2,424**	**8,926**	**51,934**	**Outright forwards**
2,353	5,886	816	4,673	10,704	594	2,799	17,383	with reporting dealers
684	1,230	327	1,441	1,619	273	965	4,365	local
1,669	4,656	488	3,233	9,084	321	1,834	13,018	cross-border
8,383	5,396	1,137	4,835	5,250	1,428	2,605	28,668	with other financial institutions
2,510	1,308	448	1,416	1,666	564	1,928	10,029	local
5,872	4,088	689	3,419	3,584	865	677	18,639	cross-border
1,483	2,150	537	3,528	1,225	401	3,523	5,883	with non-financial customers
936	1,444	336	3,084	819	273	3,362	2,541	local
547	707	200	445	407	128	161	3,342	cross-border
3,660	1,721	1,411	3,145	2,390	909	3,168	11,367	Up to 7 days
7,949	9,802	875	9,031	14,187	1,489	5,623	39,418	Over 7 days and up to 1 year
609	1,909	203	862	601	26	136	1,149	Over 1 year
782	**6,741**	**67,278**	**6,776**	**16,421**	**13,747**	**66,605**	**169,706**	**Foreign exchange swaps**
183	2,860	35,348	6,024	13,790	9,017	37,638	78,976	with reporting dealers
53	2,548	14,740	5,238	12,877	3,415	15,106	20,988	local
130	312	20,608	786	913	5,602	22,533	57,988	cross-border
416	3,158	29,476	635	1,722	4,159	24,554	70,772	with other financial institutions
163	3,024	3,044	379	994	828	12,225	16,423	local
253	134	26,432	256	728	3,331	12,329	54,349	cross-border
183	723	2,454	118	909	570	4,413	19,958	with non-financial customers
141	700	1,920	96	879	376	3,105	5,444	local
43	24	534	22	30	194	1,308	14,514	cross-border
274	4,074	54,422	3,288	7,283	10,529	48,902	140,700	Up to 7 days
397	2,575	11,427	2,924	8,265	3,105	17,066	25,558	Over 7 days and up to 1 year
111	92	1,429	564	873	113	637	855	Over 1 year

[1] Adjusted for local and cross-border inter-dealer double-counting. Due to incomplete reporting, the maturity breakdown does not always sum to totals. Due to incomplete counterparty breakdown, components do not always sum to totals. [2] Includes all participating countries' currencies other than the ones listed. [3] Calculated as the difference between the total and the sum of the listed components.

Table E.2 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

US dollar against:

Daily averages, in millions of US dollars

	Total	Euro	Yen	Pound sterling	Swiss franc	Canadian dollar	Australian dollar	Swedish Krona
Currency swaps	**38,313**	**13,507**	**5,646**	**1,831**	**927**	**2,683**	**5,333**	**365**
with reporting dealers	18,490	5,323	2,576	1,141	356	991	2,885	204
local	5,405	910	467	545	42	151	438	90
cross-border	13,085	4,414	2,109	595	314	839	2,447	114
with other financial institutions	16,771	7,185	2,572	573	527	1,247	2,200	156
local	6,522	3,438	677	258	122	248	704	123
cross-border	10,250	3,747	1,894	316	405	999	1,496	33
with non-financial customers	3,052	999	499	117	44	445	248	5
local	1,457	376	216	46	3	279	50	5
cross-border	1,594	623	282	71	41	166	198	...
Options sold	**105,529**	**33,397**	**27,545**	**6,682**	**3,265**	**3,001**	**7,000**	**177**
with reporting dealers	47,216	14,664	9,130	3,293	1,574	1,652	3,812	86
local	16,349	5,211	3,983	1,220	686	430	957	18
cross-border	30,867	9,454	5,147	2,073	888	1,222	2,855	68
with other financial institutions	47,221	15,230	16,315	2,694	1,188	1,074	2,560	60
local	27,862	7,567	13,298	1,206	599	505	1,233	12
cross-border	19,359	7,662	3,017	1,488	589	569	1,327	48
with non-financial customers	11,092	3,503	2,099	695	502	275	628	31
local	4,552	1,410	1,023	209	152	116	296	15
cross-border	6,540	2,093	1,076	486	350	160	332	16
Options bought	**101,003**	**32,624**	**24,865**	**6,832**	**2,207**	**2,893**	**7,121**	**192**
with reporting dealers	45,459	15,573	7,550	3,259	1,038	1,599	3,967	90
local	15,463	5,362	2,252	1,093	336	409	963	21
cross-border	29,996	10,212	5,299	2,166	702	1,190	3,004	69
with other financial institutions	42,385	13,270	15,048	2,458	783	901	2,022	51
local	23,627	5,675	12,199	903	321	365	915	8
cross-border	18,758	7,595	2,849	1,554	462	536	1,107	43
with non-financial customers	13,159	3,782	2,267	1,115	387	393	1,132	50
local	5,402	1,487	1,007	320	92	168	482	29
cross-border	7,757	2,294	1,259	795	294	225	650	21
Total options	**160,194**	**50,903**	**44,070**	**10,238**	**4,166**	**4,268**	**10,232**	**280**
Other products	...	...	...	...	...	...	...	...
Total foreign exchange contracts	3,377,809	###########	567,734	360,481	167,841	182,002	248,775	########

For footnotes, see facing page.

Table E.2 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

US dollar against:

Daily averages, in millions of US dollars

Brazilian real	Renminbi	Hong Kong dollar	Indian rupee	Won	Rand	Currencies of other reporting countries[2]	Residual currencies[3]	
381	**58**	**313**	**45**	**918**	**134**	**1,436**	**4,735**	**Currency swaps**
39	31	195	13	615	89	852	3,180	with reporting dealers
22	3	27	3	340	9	300	2,058	local
17	28	168	10	275	80	552	1,122	cross-border
155	22	49	18	243	37	423	1,365	with other financial institutions
142	1	11	9	42	5	265	477	local
13	21	38	9	202	32	158	888	cross-border
188	6	69	14	60	8	160	190	with non-financial customers
187	3	19	14	56	2	148	53	local
1	3	50	...	4	6	12	137	cross-border
2,407	**3,089**	**1,031**	**2,004**	**2,183**	**572**	**1,349**	**11,826**	**Options sold**
1,193	1,601	437	724	1,269	423	711	6,646	with reporting dealers
546	447	85	287	512	181	126	1,661	local
647	1,154	351	437	756	242	586	4,986	cross-border
1,086	1,185	289	844	781	124	302	3,489	with other financial institutions
376	668	120	450	319	32	84	1,393	local
710	517	170	394	463	92	218	2,096	cross-border
128	303	305	436	133	25	337	1,691	with non-financial customers
59	90	152	347	79	19	273	313	local
69	213	153	90	55	6	64	1,378	cross-border
2,611	**3,442**	**884**	**2,230**	**2,156**	**571**	**2,419**	**9,954**	**Options bought**
1,336	1,706	532	874	1,208	430	1,569	4,728	with reporting dealers
526	399	147	408	462	186	1,170	1,730	local
809	1,307	385	465	747	244	399	2,999	cross-border
1,181	1,267	165	750	771	102	321	3,294	with other financial institutions
367	673	48	310	446	28	88	1,282	local
814	593	118	440	325	75	233	2,013	cross-border
94	469	187	607	177	39	529	1,931	with non-financial customers
40	195	98	466	102	29	471	414	local
54	274	89	141	75	10	58	1,517	cross-border
3,754	**4,877**	**1,431**	**3,436**	**3,101**	**717**	**2,629**	**16,092**	**Total options**
...	...	...	...	...	...	...	...	**Other products**
25,359	**31,283**	**84,951**	**35,820**	**57,900**	**24,045**	**125,634**	**319,631**	**Total foreign exchange contracts**

[1] Adjusted for local and cross-border inter-dealer double-counting. Due to incomplete reporting, the maturity breakdown does not always sum to totals. Due to incomplete counterparty breakdown, components do not always sum to totals. While data on total options are shown on a net basis, separate data on options sold and options bought are recorded on a gross basis, ie not adjusted for inter-dealer double-counting. [2] Includes all participating countries' currencies other than the ones listed. [3] Calculated as the difference between the total and the sum of the listed components.

Table E.2 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Euro against:

Daily averages, in millions of US dollars

	Total	US dollar	Yen	Pound sterling	Swiss franc
Spot	**691,210**	**468,891**	**73,103**	**50,235**	**34,799**
with reporting dealers	232,767	159,180	20,396	16,847	11,570
local	68,722	46,591	6,336	5,341	3,424
cross-border	164,045	112,589	14,060	11,506	8,146
with other financial institutions	361,401	245,922	40,290	27,121	18,407
local	147,602	101,494	17,332	11,192	8,222
cross-border	213,799	144,429	22,958	15,930	10,186
with non-financial customers	97,042	63,789	12,417	6,267	4,821
local	30,137	16,085	4,814	1,944	1,506
cross-border	66,905	47,704	7,603	4,323	3,315
Outright forwards	**149,687**	**92,085**	**13,832**	**13,878**	**6,009**
with reporting dealers	34,039	23,568	2,251	2,461	1,460
local	8,558	5,397	570	664	582
cross-border	25,481	18,172	1,682	1,798	878
with other financial institutions	83,368	50,565	7,255	8,820	3,273
local	36,704	19,999	4,906	4,731	1,252
cross-border	46,664	30,566	2,349	4,089	2,021
with non-financial customers	32,279	17,951	4,326	2,596	1,276
local	19,187	9,730	3,470	1,380	714
cross-border	13,092	8,222	856	1,216	562
Up to 7 days	69,926	46,113	5,922	6,322	2,666
Over 7 days and up to 1 year	76,244	44,334	7,732	7,326	3,279
Over 1 year	3,516	1,637	178	230	64
Foreign exchange swaps	**609,801**	**475,868**	**17,028**	**37,130**	**22,129**
with reporting dealers	273,064	218,896	4,866	14,185	9,814
local	61,008	51,390	1,120	2,971	2,452
cross-border	212,055	167,506	3,747	11,214	7,362
with other financial institutions	267,399	211,629	8,135	17,225	10,081
local	77,799	59,711	2,760	4,683	3,043
cross-border	189,601	151,918	5,374	12,542	7,038
with non-financial customers	69,338	45,343	4,027	5,720	2,234
local	27,758	13,772	3,174	2,687	1,038
cross-border	41,580	31,571	853	3,033	1,196
Up to 7 days	419,682	346,362	9,066	20,229	11,301
Over 7 days and up to 1 year	186,218	126,990	7,857	16,306	10,700
Over 1 year	3,903	2,516	106	595	128

For footnotes, see facing page.

Table E.3

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Euro against:

Daily averages, in millions of US dollars

Canadian dollar	Australian dollar	Swedish krona	Currencies of other reporting countries[2]	Residual currencies[3]	
4,917	**5,316**	**11,052**	**7,559**	**35,338**	**Spot**
1,651	1,631	4,189	2,552	14,752	with reporting dealers
493	419	908	834	4,376	local
1,157	1,211	3,281	1,718	10,376	cross-border
2,611	2,383	5,350	2,119	17,197	with other financial institutions
714	748	1,540	1,198	5,163	local
1,897	1,635	3,810	920	12,035	cross-border
655	1,303	1,513	2,888	3,389	with non-financial customers
300	871	651	2,621	1,345	local
356	432	862	267	2,044	cross-border
3,072	**2,101**	**3,253**	**2,485**	**12,972**	**Outright forwards**
389	416	589	374	2,530	with reporting dealers
151	84	151	113	847	local
239	332	437	261	1,683	cross-border
2,065	1,313	1,605	565	7,907	with other financial institutions
1,395	686	646	441	2,648	local
669	627	960	125	5,258	cross-border
618	372	1,058	1,545	2,536	with non-financial customers
409	210	808	1,454	1,014	local
210	162	251	91	1,522	cross-border
1,742	858	1,180	981	4,142	Up to 7 days
1,265	1,187	2,024	1,370	7,726	Over 7 days and up to 1 year
65	55	49	134	1,104	Over 1 year
4,908	**3,592**	**18,020**	**9,468**	**21,658**	**Foreign exchange swaps**
1,321	1,034	11,378	4,510	7,060	with reporting dealers
263	208	204	1,420	981	local
1,059	826	11,174	3,089	6,078	cross-border
3,023	1,727	3,451	2,363	9,765	with other financial institutions
1,091	527	1,536	1,659	2,789	local
1,933	1,200	1,915	704	6,976	cross-border
563	830	3,192	2,595	4,834	with non-financial customers
242	346	1,998	2,348	2,153	local
321	484	1,193	247	2,681	cross-border
3,132	1,198	12,941	4,714	10,738	Up to 7 days
1,742	2,360	4,930	4,695	10,638	Over 7 days and up to 1 year
34	33	149	59	282	Over 1 year

[1] Adjusted for local and cross-border inter-dealer double-counting. Due to incomplete reporting, the maturity breakdown does not always sum to totals. Due to incomplete counterparty breakdown, components do not always sum to totals. [2] Includes all participating countries' currencies other than the ones listed. [3] Calculated as the difference between the total and the sum of the listed components. [4] Due to incomplete reporting, the maturity breakdown does not always sum to totals.

Table E.3 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Euro against:

Daily averages, in millions of US dollars

	Total	US dollar	Yen	Pound sterling	Swiss franc
Currency swaps	**17,673**	**13,507**	**770**	**651**	**710**
with reporting dealers	6,787	5,323	95	320	222
local	1,431	910	18	89	15
cross-border	5,356	4,414	78	231	207
with other financial institutions	9,498	7,185	664	279	348
local	4,376	3,438	478	119	90
cross-border	5,121	3,747	186	160	258
with non-financial customers	1,389	999	11	53	140
local	584	376	4	39	106
cross-border	805	623	7	14	34
Options sold	**57,445**	**33,397**	**4,070**	**4,565**	**5,213**
with reporting dealers	24,812	14,664	1,606	2,159	2,190
local	8,887	5,211	551	940	840
cross-border	15,924	9,454	1,056	1,220	1,350
with other financial institutions	25,850	15,230	1,935	1,900	2,098
local	12,117	7,567	655	969	1,001
cross-border	13,733	7,662	1,280	931	1,098
with non-financial customers	6,784	3,503	529	506	925
local	2,864	1,410	310	175	414
cross-border	3,919	2,093	219	331	511
Options bought	**54,981**	**32,624**	**3,492**	**4,881**	**5,296**
with reporting dealers	26,633	15,573	1,619	2,398	2,821
local	9,198	5,362	509	1,018	904
cross-border	17,434	10,212	1,110	1,380	1,916
with other financial institutions	21,329	13,270	1,420	1,811	1,584
local	8,879	5,675	610	753	666
cross-border	12,450	7,595	810	1,058	918
with non-financial customers	7,020	3,782	453	671	891
local	2,750	1,487	226	186	301
cross-border	4,270	2,294	227	485	590
Total options	**86,705**	**50,903**	**5,950**	**7,167**	**8,004**
Other products	**...**	**...**	**...**	**...**	**...**
Total foreign exchange contracts	**1,555,076**	**1,101,254**	**110,684**	**109,061**	**71,650**

For footnotes, see facing page.

Table E.3 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Euro against:

Daily averages, in millions of US dollars

Canadian dollar	Australian dollar	Swedish krona	Currencies of other reporting countries[2]	Residual currencies[3]	
148	**215**	**314**	**433**	**925**	**Currency swaps**
5	73	255	202	292	with reporting dealers
1	2	196	166	35	local
4	71	59	36	258	cross-border
63	136	57	203	564	with other financial institutions
11	10	4	169	57	local
51	126	53	34	506	cross-border
81	6	2	29	69	with non-financial customers
11	...	2	29	18	local
70	6	1	...	51	cross-border
390	**605**	**1,430**	**577**	**7,197**	**Options sold**
135	334	636	330	2,757	with reporting dealers
42	105	221	19	959	local
93	229	415	311	1,797	cross-border
210	222	575	161	3,519	with other financial institutions
56	96	222	4	1,547	local
154	126	352	157	1,972	cross-border
44	49	220	86	921	with non-financial customers
17	24	119	86	309	local
27	25	101	0	613	cross-border
335	**567**	**1,544**	**454**	**5,789**	**Options bought**
109	306	669	142	2,995	with reporting dealers
46	72	237	23	1,028	local
64	234	432	119	1,968	cross-border
176	190	539	142	2,197	with other financial institutions
79	92	171	28	805	local
97	98	368	115	1,392	cross-border
49	71	336	170	597	with non-financial customers
20	24	180	140	185	local
30	46	156	30	412	cross-border
602	**852**	**2,321**	**795**	**10,110**	**Total options**
...	**...**	**...**	**...**	**...**	**Other products**
13,648	**12,076**	**34,960**	**20,740**	**81,004**	**Total foreign exchange contracts**

[1] Adjusted for local and cross-border inter-dealer double-counting. Due to incomplete reporting, the maturity breakdown does not always sum to totals. Due to incomplete counterparty breakdown, components do not always sum to totals. While data on total options are shown on a net basis, separate data on options sold and options bought are recorded on a gross basis, ie not adjusted for inter-dealer double-counting. [2] Includes all participating countries' currencies other than the ones listed. [3] Calculated as the difference between the total and the sum of the listed components.

Table E.3 (cont)

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Yen against:

Daily averages, in millions of US dollars

	Total	US dollar	Euro	Australian dollar	New Zealand dollar	Currencies of other reporting countries[2]	Residual currencies[3]
Spot	**300,214**	**183,108**	**73,103**	**12,980**	**2,051**	**12,326**	**16,646**
with reporting dealers	97,655	66,429	20,396	3,724	310	2,930	3,865
local	27,309	17,329	6,336	1,363	134	1,093	1,053
cross-border	70,346	49,100	14,060	2,361	176	1,837	2,812
with other financial institutions	152,144	89,099	40,290	6,044	1,082	5,928	9,700
local	60,048	36,210	17,332	1,539	133	1,290	3,544
cross-border	92,096	52,888	22,958	4,505	949	4,638	6,157
with non-financial customers	50,415	27,579	12,417	3,211	659	3,468	3,081
local	24,425	13,105	4,814	2,324	577	2,867	738
cross-border	25,991	14,474	7,603	887	82	601	2,343
Outright forwards	**115,111**	**89,205**	**13,832**	**3,869**	**360**	**4,775**	**3,069**
with reporting dealers	12,039	7,287	2,251	911	89	671	830
local	3,157	2,142	570	128	15	81	220
cross-border	8,882	5,145	1,682	783	74	590	610
with other financial institutions	57,319	43,981	7,255	1,826	196	2,416	1,645
local	19,816	11,248	4,906	1,221	91	1,778	573
cross-border	37,503	32,733	2,349	606	105	638	1,072
with non-financial customers	45,752	37,937	4,326	1,132	75	1,688	594
local	15,061	8,853	3,470	751	58	1,574	355
cross-border	30,691	29,084	856	381	17	114	238
Up to 7 days	75,000	63,245	5,922	1,383	201	2,508	1,741
Over 7 days and up to 1 year	39,145	25,316	7,732	2,440	156	2,199	1,302
Over 1 year	966	644	178	47	3	69	25
Foreign exchange swaps	**278,897**	**245,705**	**17,028**	**5,061**	**1,502**	**4,524**	**5,077**
with reporting dealers	125,552	116,805	4,866	1,057	346	1,156	1,322
local	35,164	32,600	1,120	424	120	436	465
cross-border	90,388	84,204	3,747	633	226	721	857
with other financial institutions	126,072	109,094	8,135	2,924	911	2,020	2,987
local	32,917	27,084	2,760	1,019	274	1,113	667
cross-border	93,155	82,009	5,374	1,906	638	907	2,321
with non-financial customers	27,273	19,806	4,027	1,080	245	1,347	768
local	16,222	10,489	3,174	865	201	1,098	395
cross-border	11,051	9,317	853	214	44	249	373
Up to 7 days	201,122	180,217	9,066	4,005	1,322	2,295	4,217
Over 7 days and up to 1 year	75,844	63,746	7,857	1,044	180	2,217	801
Over 1 year	1,932	1,742	106	12	0	12	59

For footnotes, see facing page.

Table E.4

OTC foreign exchange turnover by instrument, counterparty and currency in April 2010[1]

Yen against:

Daily averages, in millions of US dollars

	Total	US dollar	Euro	Australian dollar	New Zealand dollar	Currencies of other reporting countries[2]	Residual currencies[3]
Currency swaps	**6,597**	**5,646**	**770**	**73**	**...**	**68**	**40**
with reporting dealers	2,707	2,576	95	8	...	6	22
local	491	467	18	0	...	2	4
cross-border	2,216	2,109	78	8	...	4	18
with other financial institutions	3,320	2,572	664	61	...	12	12
local	1,169	677	478	...	...	11	3
cross-border	2,151	1,894	186	61	...	1	8
with non-financial customers	569	499	11	3	...	50	6
local	279	216	4	3	...	49	6
cross-border	290	282	7	0	...	1	0
Options sold	**34,497**	**27,545**	**4,070**	**1,374**	**99**	**469**	**940**
with reporting dealers	12,229	9,130	1,606	683	56	256	498
local	4,990	3,983	551	157	18	138	143
cross-border	7,239	5,147	1,056	526	38	119	354
with other financial institutions	19,399	16,315	1,935	556	36	188	368
local	14,411	13,298	655	213	10	83	151
cross-border	4,988	3,017	1,280	343	26	106	216
with non-financial customers	2,869	2,099	529	134	7	24	75
local	1,386	1,023	310	21	3	14	15
cross-border	1,482	1,076	219	113	4	10	60
Options bought	**31,397**	**24,865**	**3,492**	**1,375**	**163**	**454**	**1,047**
with reporting dealers	10,629	7,550	1,619	701	116	211	431
local	3,171	2,252	509	154	17	101	138
cross-border	7,458	5,299	1,110	546	100	110	293
with other financial institutions	17,678	15,048	1,420	508	30	206	466
local	13,282	12,199	610	217	11	91	153
cross-border	4,396	2,849	810	291	19	114	312
with non-financial customers	3,090	2,267	453	166	17	37	150
local	1,343	1,007	226	38	6	22	42
cross-border	1,748	1,259	227	128	10	15	108
Total options	**54,465**	**44,070**	**5,950**	**2,057**	**176**	**689**	**1,523**
Other products	**...**	**...**	**...**	**...**	**...**	**...**	**...**
Total foreign exchange contracts	**755,283**	**567,734**	**110,684**	**24,040**	**4,089**	**22,381**	**26,356**

[1] Adjusted for local and cross-border inter-dealer double-counting. Due to incomplete reporting, the maturity breakdown does not always sum to totals. Due to incomplete counterparty breakdown, components do not always sum to totals. While data on total options are shown on a net basis, separate data on options sold and options bought are recorded on a gross basis, ie not adjusted for inter-dealer double-counting. [2] Includes all participating countries' currencies other than the ones listed. [3] Calculated as the difference between the total and the sum of the listed components.

Table E.4 (cont)

OTC foreign exchange turnover by country and currency in April 2010[1]

Daily averages, in millions of US dollars

	Total	Specified currency against all other currencies[2]				
		US dollar	Euro	Yen	Pound sterling	Swiss franc
Argentina	1,613	1,515	331	1	1	1
Australia	192,052	173,577	46,744	25,215	18,205	3,117
Austria	19,549	12,153	14,325	1,795	729	3,803
Bahrain	4,543	4,113	879	168	288	15
Belgium	32,524	27,190	19,651	1,876	6,625	1,775
Brazil	14,094	12,851	3,280	1,544	102	169
Bulgaria	866	249	802	9	47	26
Canada	61,892	58,224	8,019	2,827	2,806	716
Chile	5,544	5,488	426	32	60	1
China	19,774	16,565	2,821	2,454	1,158	87
Chinese Taipei	17,983	17,169	3,186	1,754	863	72
Colombia	2,794	2,781	86	9	11	1
Czech Republic	5,110	3,096	3,146	71	50	31
Denmark	120,463	85,757	68,132	6,639	8,851	15,968
Estonia	1,059	70	1,046	4	5	0
Finland	31,254	19,456	21,612	258	893	8,302
France	151,621	130,191	83,245	22,119	21,059	11,100
Germany	108,598	85,305	69,003	13,163	14,436	11,661
Greece	5,164	3,022	4,381	647	285	641
Hong Kong SAR	237,568	227,015	38,346	30,960	11,970	2,401
Hungary	4,196	2,949	1,877	22	32	259
India	27,358	26,474	3,401	750	1,987	93
Indonesia	3,381	3,192	236	498	74	7
Ireland	14,578	9,793	10,220	1,259	4,553	665
Israel	10,017	9,715	211	31	15	21
Italy	28,601	23,969	21,405	2,256	3,206	1,738
Japan	312,326	254,353	58,970	248,863	18,378	3,174
Korea	43,824	43,149	2,897	2,105	393	57
Latvia	2,226	1,832	1,735	60	112	32
Lithuania	1,154	158	1,090	25	26	8
Luxembourg	33,363	27,856	21,553	4,516	4,161	1,672
Malaysia	7,262	6,693	789	422	361	14
Mexico	17,019	16,796	476	18	22	6
Netherlands	18,253	12,931	14,002	1,262	3,006	669
New Zealand	8,754	7,950	683	623	669	92
Norway	22,191	17,826	6,178	913	1,832	434
Peru	1,425	1,423	184	12	64	69
Philippines	5,017	4,813	674	114	51	8
Poland	7,847	4,887	3,916	48	164	378
Portugal	3,654	2,899	2,419	240	401	444
Romania	3,169	721	2,928	14	85	147
Russia	41,658	39,786	13,700	469	1,119	203
Saudi Arabia	5,291	4,430	967	305	774	44
Singapore	265,977	238,125	62,202	41,356	27,246	7,097
Slovakia	443	154	379	18	24	8
South Africa	14,375	13,946	1,887	308	800	108
Spain	29,322	24,608	15,578	1,775	7,518	954
Sweden	44,796	31,102	22,606	1,389	2,331	1,297
Switzerland	262,582	219,073	112,868	29,610	31,458	78,375
Thailand	7,390	6,869	617	855	174	16
Turkey	16,817	15,727	5,960	247	1,189	179
United Kingdom	1,853,594	1,570,573	820,234	342,118	330,748	112,685
United States	904,357	785,223	376,392	140,417	104,610	61,597
Total	**5,056,282**	**4,315,781**	**1,978,693**	**934,464**	**636,027**	**332,439**

For footnotes, see facing page.

Table E.5

OTC foreign exchange turnover by country and currency in April 2010[1]

Daily averages, in millions of US dollars

Specified currency against all other currencies[2]					
Canadian dollar	**Australian dollar**	**Swedish krona**	**Currencies of other reporting countries[3]**	**Residual currencies[4]**	
1	0	0	1,375	0	Argentina
5,919	85,782	855	23,146	1,546	Australia
299	409	40	3,390	2,157	Austria
17	8	3	1,797	1,798	Bahrain
462	1,318	574	5,068	508	Belgium
119	119	28	9,955	20	Brazil
17	7	1	543	33	Bulgaria
42,699	2,090	557	5,735	110	Canada
24	1	1	5,055	0	Chile
136	630	14	15,683	0	China
250	1,580	18	11,069	6	Chinese Taipei
9	0	0	2,687	2	Colombia
6	6	10	3,800	4	Czech Republic
1,525	1,912	21,326	30,338	480	Denmark
0	0	5	987	0	Estonia
588	35	10,187	1,143	33	Finland
5,352	8,205	2,869	14,539	4,562	France
1,458	2,812	1,376	9,840	8,141	Germany
100	171	21	678	384	Greece
3,662	27,097	...	121,895	11,790	Hong Kong SAR
3	...	2	3,245	2	Hungary
120	180	17	21,403	292	India
3	88	0	2,553	111	Indonesia
352	671	392	662	589	Ireland
20	0	0	4,576	5,444	Israel
679	1,286	490	2,048	125	Italy
6,088	19,522	1,189	13,593	522	Japan
369	185	14	38,369	109	Korea
15	17	65	550	35	Latvia
0	2	2	998	1	Lithuania
362	1,906	1,250	3,304	146	Luxembourg
12	444	1	5,479	307	Malaysia
40	20	0	16,658	1	Mexico
314	317	218	632	3,157	Netherlands
114	1,324	4	6,047	3	New Zealand
119	1,643	1,067	14,368	2	Norway
20	0	0	1,077	...	Peru
9	52	0	4,309	2	Philippines
6	10	21	6,226	38	Poland
109	65	40	683	7	Portugal
3	1	2	2,439	0	Romania
110	199	26	27,669	35	Russia
14	43	8	2,429	1,565	Saudi Arabia
10,086	33,186	1,837	108,660	2,159	Singapore
2	1	1	297	3	Slovakia
117	150	49	11,205	179	South Africa
239	1,018	139	3,022	3,794	Spain
800	641	22,344	6,955	127	Sweden
7,714	11,450	6,651	22,287	5,677	Switzerland
6	144	3	6,096	2	Thailand
32	45	7	10,155	93	Turkey
86,266	122,645	36,958	205,536	79,425	United Kingdom
83,095	61,166	10,358	99,626	86,230	United States
259,882	**390,604**	**121,041**	**921,876**	**221,757**	**Total**

[1] Spot transactions, outright forwards, foreign exchange swaps, currency swaps, options and other products. Adjusted for local inter-dealer double-counting. Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding. [2] Because two currencies are involved in each transaction, the sum of transactions in individual currencies comes to twice the total reported turnover. [3] Includes all participating countries' currencies other than the ones listed. [4] Difference between the total and the sum of the listed components. Table E.5 (cont)

OTC foreign exchange turnover by country and currency in April 2010[1]

US dollar against:

Daily averages, in millions of US dollars

	Total	Euro	Yen	Pound sterling	Swiss franc	Canadian dollar	Australian dollar	Swedish krona
Argentina	1,515	240	0	0	1	0	0	0
Australia	173,577	37,993	18,840	14,060	1,153	4,384	75,472	538
Austria	12,153	7,347	1,006	437	1,199	253	381	22
Bahrain	4,113	582	113	199	14	17	8	1
Belgium	27,190	15,122	821	5,030	1,132	225	1,061	390
Brazil	12,851	2,774	891	64	51	74	65	21
Bulgaria	249	205	4	19	0	0	...	...
Canada	58,224	5,980	1,996	2,133	477	40,205	1,745	319
Chile	5,488	382	28	58	1	23	1	1
China	16,565	2,460	1,608	383	73	132	610	4
Chinese Taipei	17,169	2,743	1,387	620	54	210	1,407	17
Colombia	2,781	76	7	11	1	9	0	0
Czech Republic	3,096	1,173	21	16	18	6	6	5
Denmark	85,757	38,501	2,928	5,135	12,562	1,096	1,404	6,169
Estonia	70	59	1	4	...	0	0	0
Finland	19,456	9,859	188	316	8,261	350	7	15
France	130,191	63,910	18,765	11,509	7,930	4,608	6,246	2,176
Germany	85,305	48,063	8,938	8,842	5,405	962	2,108	791
Greece	3,022	2,412	110	127	103	53	70	4
Hong Kong SAR	227,015	33,103	27,078	10,049	2,401	3,239	24,641	...
Hungary	2,949	670	15	21	148	1	...	...
India	26,474	2,760	574	1,800	84	110	158	14
Indonesia	3,192	202	364	68	7	2	79	0
Ireland	9,793	6,057	588	1,668	404	213	248	226
Israel	9,715	...	...	...	...	...	...	...
Italy	23,969	17,314	955	1,570	1,024	242	1,117	371
Japan	254,353	28,699	195,835	8,630	1,726	3,424	8,163	385
Korea	43,149	2,526	1,831	343	53	339	170	13
Latvia	1,832	1,393	11	93	14	13	12	62
Lithuania	158	117	0	1	1	0	0	0
Luxembourg	27,856	16,652	3,370	2,444	1,092	160	1,262	485
Malaysia	6,693	484	244	269	12	10	354	1
Mexico	16,796	264	15	20	4	36	20	0
Netherlands	12,931	9,126	693	1,335	509	186	202	146
New Zealand	7,950	552	551	606	82	87	762	4
Norway	17,826	2,852	366	1,392	239	58	1,611	665
Peru	1,423	183	12	63	69	20	0	0
Philippines	4,813	486	87	49	6	9	45	0
Poland	4,887	1,125	20	81	181	2	3	2
Portugal	2,899	1,697	178	262	231	77	46	14
Romania	721	500	2	44	57	1	1	0
Russia	39,786	11,945	332	962	118	106	169	22
Saudi Arabia	4,430	786	246	633	26	14	20	7
Singapore	238,125	48,667	30,709	18,806	4,619	6,065	27,568	746
Slovakia	154	95	7	7	3	1	0	0
South Africa	13,946	1,572	258	677	101	99	138	47
Spain	24,608	12,194	1,053	6,160	745	145	932	82
Sweden	31,102	11,265	730	1,140	827	554	451	12,097
Switzerland	219,073	75,997	23,053	22,900	54,648	6,345	10,080	5,327
Thailand	6,869	441	579	139	10	4	107	2
Turkey	15,727	4,984	144	1,051	124	28	19	4
United Kingdom	1,570,573	595,230	250,348	232,509	71,464	74,938	101,968	24,150
United States	785,223	283,948	115,617	85,503	46,268	77,100	56,059	6,903
Total	**4,315,781**	**1,413,767**	**713,515**	**450,257**	**225,732**	**226,236**	**326,993**	**62,252**

For footnotes, see facing page.

Table E.6

OTC foreign exchange turnover by country and currency in April 2010[1]

US dollar against:

Daily averages, in millions of US dollars

Brazilian real	Renminbi	Hong Kong dollar	Indian rupee	Won	Rand	Local currency	Residual currencies[2]	
1	0	0	0	0	0	1,271	0	Argentina
146	173	2,776	130	357	392	...	17,162	Australia
1	1	49	1	...	44	...	1,413	Austria
0	...	...	0	...	1	81	3,096	Bahrain
...	39	421	4	...	159	...	2,786	Belgium
8,480	4	...	1	8	24	...	395	Brazil
...	...	...	...	...	...	17	4	Bulgaria
1,331	533	207	63	128	127	...	2,982	Canada
14	...	0	...	0	0	4,887	94	Chile
...	9,742	1,398	...	2	19	...	135	China
3	201	390	31	45	187	9,274	600	Chinese Taipei
3	...	...	...	...	...	2,661	12	Colombia
...	...	...	...	...	2	1,793	56	Czech Republic
8	12	179	11	1	74	11,028	6,650	Denmark
...	...	...	...	...	...	4	2	Estonia
1	6	0	2	1	1	...	449	Finland
48	76	854	17	103	622	...	13,327	France
...	...	...	...	...	...	...	10,197	Germany
...	...	0	...	...	6	...	138	Greece
...	10,690	69,790	4,555	7,412	...	...	34,057	Hong Kong SAR
...	...	...	...	...	...	2,049	45	Hungary
...	...	2	20,879	0	12	...	81	India
...	...	10	0	...	0	2,394	65	Indonesia
1	0	56	6	11	10	...	304	Ireland
...	...	...	...	...	...	4,274	5,441	Israel
0	...	270	1	...	183	...	922	Italy
15	111	687	89	134	1,516	...	4,937	Japan
13	12	188	8	37,391	7	...	255	Korea
...	...	...	...	...	0	15	221	Latvia
...	...	...	...	...	0	11	27	Lithuania
1,065	19	98	11	15	248	...	934	Luxembourg
0	2	23	0	...	1	4,823	469	Malaysia
99	...	...	...	...	0	16,323	14	Mexico
0	...	17	1	...	10	...	705	Netherlands
...	...	30	0	0	1	5,235	39	New Zealand
2	13	4	1	1	10	9,982	630	Norway
0	...	0	...	...	0	1,072	3	Peru
...	39	8	...	0	...	4,050	33	Philippines
...	...	...	...	...	1	3,301	171	Poland
200	...	18	...	1	10	...	165	Portugal
...	...	...	...	...	...	114	3	Romania
...	0	1	...	...	1	26,081	47	Russia
0	...	0	11	4	5	2,221	457	Saudi Arabia
305	7,447	14,226	6,728	15,072	386	29,388	27,393	Singapore
...	...	...	...	...	0	...	42	Slovakia
...	...	0	...	...	10,764	...	291	South Africa
357	128	249	1	25	33	...	2,505	Spain
2	9	35	1	4	48	...	3,940	Sweden
272	117	479	185	298	3,071	...	16,301	Switzerland
...	0	13	0	1	...	5,531	44	Thailand
0	...	0	...	...	18	9,265	89	Turkey
5,481	6,772	13,462	5,141	7,877	11,874	...	169,357	United Kingdom
10,722	3,025	4,965	3,866	2,832	2,723	...	85,692	United States
28,570	**39,170**	**110,910**	**41,742**	**71,722**	**32,592**	**157,145**	**415,179**	**Total**

[1] Spot transactions, outright forwards, foreign exchange swaps, currency swaps, options and other products. Adjusted for local inter-dealer double counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding. [2] Calculated as the difference between the total and the sum of the listed components

Table E.6 (cont)

OTC foreign exchange turnover by country and currency in April 2010[1]

Euro against:

Daily averages, in millions of US dollars

	Total	US dollar	Yen	Pound sterling	Swiss franc
Argentina	331	240	...	...	...
Australia	46,744	37,993	2,213	1,365	216
Austria	14,325	7,347	468	259	2,502
Bahrain	879	582	2	7	0
Belgium	19,651	15,122	822	1,183	471
Brazil	3,280	2,774	2	14	12
Bulgaria	802	205	2	16	20
Canada	8,019	5,980	259	215	145
Chile	426	382	...	0	...
China	2,821	2,460	29	37	7
Chinese Taipei	3,186	2,743	146	143	5
Colombia	86	76	...	...	...
Czech Republic	3,146	1,173	42	19	7
Denmark	68,132	38,501	2,471	1,705	1,797
Estonia	1,046	59	3	1	0
Finland	21,612	9,859	64	564	41
France	83,245	63,910	2,376	8,758	2,855
Germany	69,003	48,063	2,882	5,594	6,256
Greece	4,381	2,412	495	110	446
Hong Kong SAR	38,346	33,103	2,032	876	...
Hungary	1,877	670	7	4	94
India	3,401	2,760	62	63	0
Indonesia	236	202	9	1	0
Ireland	10,220	6,057	533	2,620	184
Israel	211	...	...	...	...
Italy	21,405	17,314	963	1,329	594
Japan	58,970	28,699	27,211	970	604
Korea	2,897	2,526	120	1	0
Latvia	1,735	1,393	8	1	17
Lithuania	1,090	117	6	6	7
Luxembourg	21,553	16,652	668	1,601	508
Malaysia	789	484	44	36	1
Mexico	476	264	...	...	...
Netherlands	14,002	9,126	126	1,656	155
New Zealand	683	552	13	16	3
Norway	6,178	2,852	322	131	61
Peru	184	183	...	...	...
Philippines	674	486	21	0	1
Poland	3,916	1,125	15	49	135
Portugal	2,419	1,697	50	127	208
Romania	2,928	500	8	30	83
Russia	13,700	11,945	76	67	65
Saudi Arabia	967	786	4	98	9
Singapore	62,202	48,667	4,646	3,740	1,026
Slovakia	379	95	10	13	2
South Africa	1,887	1,572	9	79	2
Spain	15,578	12,194	366	1,247	181
Sweden	22,606	11,265	413	514	265
Switzerland	112,868	75,997	4,098	5,621	20,291
Thailand	617	441	23	8	...
Turkey	5,960	4,984	76	35	47
United Kingdom	820,234	595,230	55,608	75,081	35,223
United States	376,392	283,948	21,513	19,098	15,329
Total	**1,978,693**	**1,413,767**	**131,333**	**135,110**	**89,877**

For footnotes, see facing page.

Table E.7

OTC foreign exchange turnover by country and currency in April 2010[1]

Euro against:

Daily averages, in millions of US dollars

Canadian dollar	Australian dollar	Swedish krona	Local currency	Residual currencies[2]	
...	...	...	91	0	Argentina
303	3,041	190	...	1,423	Australia
38	18	18	...	3,675	Austria
...	...	...	0	288	Bahrain
117	128	132	...	1,676	Belgium
1	1	4	444	28	Brazil
7	7	1	517	27	Bulgaria
1,127	59	46	...	188	Canada
0	...	...	43	0	Chile
0	8	0	265	14	China
8	41	...	90	11	Chinese Taipei
...	...	...	10	0	Colombia
0	0	5	1,694	205	Czech Republic
145	121	13,518	8,013	1,861	Denmark
0	...	4	80	900	Estonia
226	26	10,151	...	680	Finland
457	955	576	...	3,360	France
495	438	584	...	4,689	Germany
42	50	14	...	812	Greece
...	...	...	1,274	1,061	Hong Kong SAR
2	...	2	1,030	69	Hungary
1	6	0	264	245	India
0	2	0	20	2	Indonesia
65	251	102	...	409	Ireland
...	...	...	211	...	Israel
319	109	63	...	714	Italy
381	364	174	...	568	Japan
15	0	...	234	1	Korea
2	3	2	231	77	Latvia
0	1	1	937	15	Lithuania
183	444	736	...	761	Luxembourg
...	17	0	67	140	Malaysia
...	...	...	204	7	Mexico
127	110	71	...	2,630	Netherlands
1	7	0	85	6	New Zealand
1	3	199	2,497	112	Norway
...	...	...	1	0	Peru
...	3	...	162	1	Philippines
1	0	16	2,418	156	Poland
27	11	16	...	282	Portugal
2	0	1	2,258	46	Romania
1	2	2	1,530	12	Russia
0	1	1	6	61	Saudi Arabia
974	971	351	238	1,589	Singapore
1	1	0	...	257	Slovakia
7	1	1	204	12	South Africa
85	83	42	...	1,379	Spain
65	37	8,266	...	1,782	Sweden
607	464	973	...	4,817	Switzerland
...	1	...	145	0	Thailand
3	1	0	797	18	Turkey
4,400	5,040	10,617	...	39,034	United Kingdom
5,947	1,920	3,455	...	25,182	United States
16,185	**14,748**	**50,333**	**26,059**	**101,281**	**Total**

[1] Spot transactions, outright forwards, foreign exchange swaps, currency swaps, options and other products. Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.
[2] Calculated as the difference between the total and the sum of the listed components.

Table E.7 (cont)

OTC foreign exchange turnover by country and currency in April 2010[1]

Yen against:

Daily averages, in millions of US dollars

	Total	US dollar	Euro	Australian dollar	New Zealand dollar	Local currency	Residual currencies[2]
Argentina	1	0	...	...	...	1	...
Australia	25,215	18,840	2,213	2,769	180	...	1,211
Austria	1,795	1,006	468	6	1	...	314
Bahrain	168	113	2	...	...	1	53
Belgium	1,876	821	822	25	7	...	202
Brazil	1,544	891	2	52	98	63	439
Bulgaria	9	4	2	...	...	0	3
Canada	2,827	1,996	259	62	58	...	452
Chile	32	28	...	...	...	4	0
China	2,454	1,608	29	10	...	73	735
Chinese Taipei	1,754	1,387	146	64	21	68	67
Colombia	9	7	...	...	...	0	2
Czech Republic	71	21	42	...	...	7	1
Denmark	6,639	2,928	2,471	220	16	105	900
Estonia	4	1	3	...	...	...	0
Finland	258	188	64	0	...	...	6
France	22,119	18,765	2,376	552	13	...	413
Germany	13,163	8,938	2,882	266	...	...	1,078
Greece	647	110	495	28	1	...	14
Hong Kong SAR	30,960	27,078	2,032	904	92	238	615
Hungary	22	15	7	...	...	0	0
India	750	574	62	1	0	37	77
Indonesia	498	364	9	2	0	63	60
Ireland	1,259	588	533	8	1	...	128
Israel	31	...	...	...	...	31	...
Italy	2,256	955	963	23	37	...	278
Japan	248,863	195,835	27,211	10,336	2,025	...	13,456
Korea	2,105	1,831	120	3	0	144	7
Latvia	60	11	8	1	...	...	40
Lithuania	25	0	6	0	...	0	18
Luxembourg	4,516	3,370	668	179	94	...	205
Malaysia	422	244	44	8	0	37	89
Mexico	18	15	...	...	...	2	1
Netherlands	1,262	693	126	2	...	...	441
New Zealand	623	551	13	15	40	...	4
Norway	913	366	322	...	...	198	26
Peru	12	12	...	...	...	...	...
Philippines	114	87	21	1	...	2	3
Poland	48	20	15	6	...	6	1
Portugal	240	178	50	...	...	...	12
Romania	14	2	8	...	...	1	2
Russia	469	332	76	2	...	2	57
Saudi Arabia	305	246	4	10	2	4	39
Singapore	41,356	30,709	4,646	1,671	249	285	3,796
Slovakia	18	7	10	...	...	...	2
South Africa	308	258	9	4	...	14	23
Spain	1,775	1,053	366	3	0	...	352
Sweden	1,389	730	413	12	2	...	233
Switzerland	29,610	23,053	4,098	221	35	...	2,204
Thailand	855	579	23	0	...	246	8
Turkey	247	144	76	0	...	22	5
United Kingdom	342,118	250,348	55,608	7,835	1,437	...	26,890
United States	140,417	115,617	21,513	3,061	226	...	0
Total	**934,464**	**713,515**	**131,333**	**28,361**	**4,633**	**1,657**	**54,965**

[1] Spot transactions, outright forwards, foreign exchange swaps, currency swaps, options and other products. Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding. [2] Calculated as the difference between the total and the sum of the listed components.

Table E.8

OTC foreign exchange turnover by country and currency in April 2010[1]

Local currency against:

Daily averages, in millions of US dollars

	Total	US dollar	Euro	Yen	Pound sterling
Argentina	1,369	1,271	91	1	1
Australia	85,782	75,472	3,041	2,769	1,465
Austria	14,325	7,347	...	468	259
Bahrain	162	81	0	1	79
Belgium	19,651	15,122	...	822	1,183
Brazil	9,071	8,480	444	63	8
Bulgaria	536	17	517	0	1
Canada	42,699	40,205	1,127	383	395
Chile	4,942	4,887	43	4	1
China	12,110	9,742	265	73	10
Chinese Taipei	9,507	9,274	90	68	11
Colombia	2,672	2,661	10	0	0
Czech Republic	3,527	1,793	1,694	7	13
Denmark	20,805	11,028	8,013	105	349
Estonia	85	4	80	...	0
Finland	21,612	9,859	...	64	564
France	83,245	63,910	...	2,376	8,758
Germany	69,003	48,063	...	2,882	5,594
Greece	4,381	2,412	...	495	110
Hong Kong SAR	72,604	69,790	1,274	238	324
Hungary	3,113	2,049	1,030	0	5
India	21,301	20,879	264	37	82
Indonesia	2,507	2,394	20	63	4
Ireland	10,220	6,057	...	533	2,620
Israel	4,576	4,274	211	31	15
Italy	21,405	17,314	...	963	1,329
Japan	248,863	195,835	27,211	...	7,994
Korea	37,918	37,391	234	144	49
Latvia	255	15	231	...	1
Lithuania	953	11	937	0	1
Luxembourg	21,553	16,652	...	668	1,601
Malaysia	5,043	4,823	67	37	18
Mexico	16,537	16,323	204	2	1
Netherlands	14,002	9,126	...	126	1,656
New Zealand	5,962	5,235	85	40	43
Norway	13,471	9,982	2,497	198	273
Peru	1,074	1,072	1	...	1
Philippines	4,223	4,050	162	2	1
Poland	5,880	3,301	2,418	6	31
Portugal	2,419	1,697	...	50	127
Romania	2,389	114	2,258	1	8
Russia	27,638	26,081	1,530	2	7
Saudi Arabia	2,381	2,221	6	4	1
Singapore	31,741	29,388	238	285	206
South Africa	11,056	10,764	204	14	35
Spain	15,578	12,194	...	366	1,247
Sweden	22,344	12,097	8,266	131	533
Switzerland	78,375	54,648	20,291	664	1,578
Thailand	6,012	5,531	145	246	19
Turkey	10,117	9,265	797	22	28
United Kingdom	330,748	232,509	75,081	12,228	...
United States	785,223	...	283,948	115,617	85,503
Total	**2,242,964**	**1,134,709**	**445,025**	**143,303**	**124,142**

For footnotes, see facing page.

Table E.9

OTC foreign exchange turnover by country and currency in April 2010[1]

Local currency against:

Daily averages, in millions of US dollars

Swiss franc	Canadian dollar	Australian dollar	Swedish krona	Residual currencies[2]	
1	0	0	0	5	Argentina
170	700	...	61	2,104	Australia
2,502	38	18	18	3,675	Austria
0	...	...	...	1	Bahrain
471	117	128	132	1,676	Belgium
23	13	2	3	36	Brazil
0	0	0	0	0	Bulgaria
90	...	175	190	134	Canada
0	1	0	0	5	Chile
6	3	2	9	2,000	China
3	6	17	0	38	Chinese Taipei
0	0	0	0	0	Colombia
6	0	0	0	12	Czech Republic
494	20	35	450	311	Denmark
0	...	0	0	0	Estonia
41	226	26	10,151	680	Finland
2,855	457	955	576	3,360	France
6,256	495	438	584	4,689	Germany
446	42	50	14	812	Greece
...	90	517	...	371	Hong Kong SAR
14	...	...	0	15	Hungary
7	4	8	2	16	India
0	0	4	0	22	Indonesia
184	65	251	102	409	Ireland
21	20	0	0	3	Israel
594	319	109	63	714	Italy
536	1,794	10,336	260	4,897	Japan
4	8	12	0	76	Korea
...	...	...	0	9	Latvia
0	0	0	1	3	Lithuania
508	183	444	736	761	Luxembourg
1	0	23	0	73	Malaysia
1	4	0	0	0	Mexico
155	127	110	71	2,630	Netherlands
7	15	530	0	8	New Zealand
126	59	28	189	119	Norway
...	...	...	...	0	Peru
0	0	0	...	6	Philippines
62	3	0	3	56	Poland
208	27	11	16	282	Portugal
5	0	0	0	2	Romania
12	0	0	2	4	Russia
0	0	1	0	147	Saudi Arabia
74	106	395	24	1,025	Singapore
6	7	7	1	18	South Africa
181	85	83	42	1,379	Spain
141	88	89	...	1,000	Sweden
...	375	314	86	420	Switzerland
5	2	37	1	27	Thailand
1	0	0	2	3	Turkey
2,544	1,745	2,799	645	3,197	United Kingdom
46,268	77,100	56,059	6,903	113,825	United States
65,031	**84,346**	**74,015**	**21,339**	**151,054**	**Total**

[1] Spot transactions, outright forwards, foreign exchange swaps, currency swaps, options and other products. Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.
[2] Calculated as the difference between the total and the sum of the listed components.

Table E.9 (cont)

Foreign exchange turnover by country and counterparty in April 2010[1]

Daily averages, in millions of US dollars

	Gross turnover[2]	Net turnover[3]				
		Total	With reporting local dealers	With reporting dealers abroad	With other financial institutions	With non-financial customers
Argentina	1,895	1,613	282	...	349	982
Australia	218,158	192,052	26,106	91,598	61,045	13,304
Austria	20,039	19,549	490	13,029	5,327	704
Bahrain	4,619	4,543	76	2,881	1,476	110
Belgium	32,770	32,524	247	19,824	10,832	1,621
Brazil	15,609	14,094	1,516	3,854	5,951	2,773
Bulgaria	874	866	9	288	411	158
Canada	68,546	61,892	6,654	27,090	22,765	5,383
Chile	7,229	5,544	1,684	1,428	1,430	1,001
China	27,486	19,774	7,712	2,411	5,738	3,913
Chinese Taipei	20,034	17,983	2,050	6,060	5,740	4,132
Colombia	3,822	2,794	1,028	403	721	641
Czech Republic	5,489	5,110	379	3,822	168	742
Denmark	123,231	120,463	2,767	82,165	12,189	23,342
Estonia	1,063	1,059	4	997	10	48
Finland	31,316	31,254	62	28,911	507	1,775
France	162,906	151,509	11,397	90,000	39,438	10,674
Germany	115,740	108,598	7,142	58,985	34,452	8,019
Greece	5,244	5,164	79	3,702	812	571
Hong Kong SAR	257,327	237,542	19,785	160,049	44,587	13,121
Hungary	4,763	4,196	567	2,172	1,077	379
India	38,857	27,358	11,499	5,413	2,340	8,106
Indonesia	4,632	3,381	1,251	1,197	387	546
Ireland	14,994	14,578	416	7,305	6,003	854
Israel	10,333	10,017	317	...	7,771	1,929
Italy	29,695	28,601	1,093	23,328	2,877	1,303
Japan	337,389	312,326	25,063	163,998	77,739	45,526
Korea	67,241	43,824	23,417	10,470	5,840	4,096
Latvia	2,359	2,226	133	340	804	950
Lithuania	1,183	1,154	29	903	88	134
Luxembourg	34,408	33,363	1,045	22,581	8,426	1,313
Malaysia	8,262	7,262	1,000	1,736	2,130	2,396
Mexico	18,156	17,019	1,137	12,594	2,005	1,282
Netherlands	18,626	18,253	372	9,892	6,690	1,300
New Zealand	9,460	8,754	706	2,557	4,811	680
Norway	22,450	22,191	260	13,078	5,363	3,490
Peru	1,856	1,425	431	455	200	338
Philippines	7,649	5,017	2,632	1,491	514	379
Poland	8,632	7,847	785	4,812	1,479	771
Portugal	3,831	3,654	177	1,976	1,090	411
Romania	3,518	3,169	349	2,063	375	383
Russia	49,217	41,658	7,559	10,793	15,520	7,785
Saudi Arabia	6,136	5,291	845	3,082	597	766
Singapore	278,929	265,899	13,030	161,046	72,693	19,131
Slovakia	445	443	1	297	50	95
South Africa	17,092	14,375	2,717	9,994	799	865
Spain	29,794	29,322	472	17,662	2,061	9,127
Sweden	45,640	44,796	844	16,548	17,529	9,874
Switzerland	273,640	262,582	11,058	149,097	79,536	22,890
Thailand	9,649	7,390	2,259	2,206	819	2,107
Turkey	17,677	16,817	860	13,913	918	1,127
United Kingdom	2,065,334	1,853,594	211,741	597,232	866,375	178,246
United States	963,283	904,357	58,926	283,301	451,019	111,111
Total	**5,528,525**	**5,056,067**	**472,459**	**2,151,028**	**1,899,874**	**532,706**

[1] Spot transactions, outright forwards, foreign exchange swaps, currency swaps, options and other products. Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding. [2] Not adjusted for inter-dealer double-counting (ie "gross-gross" basis). [3] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Table E.10

Spot foreign exchange turnover by country and counterparty in April 2010[1]

Daily averages, in millions of US dollars

	Total	Reporting dealers		Other financial institutions		Non-financial customers	
		Local	Cross-border	Local	Cross-border	Local	Cross-border
Argentina	1,581	282	...	116	232	949	2
Australia	60,188	5,326	21,958	2,706	21,262	5,083	3,854
Austria	5,874	190	3,302	521	1,586	202	72
Bahrain	723	1	301	65	326	11	18
Belgium	7,909	65	5,188	77	2,355	111	113
Brazil	8,743	1,467	2,272	2,256	1,326	1,371	50
Bulgaria	595	9	83	366	3	134	1
Canada	18,281	1,185	9,786	1,359	4,258	1,382	310
Chile	2,695	990	452	618	8	623	3
China	8,604	4,460	1,522	1,406	757	458	0
Chinese Taipei	7,728	1,023	2,605	1,058	820	1,642	581
Colombia	1,760	823	54	434	11	433	5
Czech Republic	1,067	60	794	18	6	167	23
Denmark	33,032	543	12,987	146	2,850	1,277	15,230
Estonia	82	0	40	4	0	25	13
Finland	816	34	424	18	37	241	61
France	27,054	1,000	17,225	1,715	4,987	957	1,170
Germany	30,107	1,281	20,117	1,580	5,478	511	1,140
Greece	1,316	1	1,037	13	147	118	...
Hong Kong SAR	43,783	2,275	30,416	864	5,874	2,555	1,800
Hungary	763	39	367	70	150	133	4
India	13,411	5,597	3,284	583	988	2,944	15
Indonesia	2,183	793	794	24	182	364	27
Ireland	3,535	6	1,553	223	1,614	84	55
Israel	3,880	107	...	279	2,351	1,136	6
Italy	9,025	326	7,109	441	324	783	43
Japan	101,459	4,979	58,161	5,318	12,548	19,054	1,398
Korea	18,488	9,412	3,303	2,423	1,311	1,915	124
Latvia	779	38	108	14	163	25	432
Lithuania	260	3	79	73	2	92	11
Luxembourg	11,692	239	7,410	856	2,761	229	197
Malaysia	3,920	499	1,205	557	640	988	31
Mexico	5,296	446	2,846	590	260	1,143	11
Netherlands	5,081	53	4,256	352	289	84	47
New Zealand	1,533	75	530	108	639	174	7
Norway	2,296	22	1,126	159	198	756	35
Peru	1,017	349	266	85	5	312	0
Philippines	2,121	1,050	674	181	50	162	4
Poland	1,955	110	996	186	202	459	2
Portugal	1,060	107	565	7	224	150	7
Romania	1,263	171	640	71	59	314	7
Russia	22,544	4,523	4,128	4,775	2,256	2,323	4,540
Saudi Arabia	3,276	479	1,887	175	199	536	...
Singapore	90,798	2,421	50,878	2,934	28,231	1,873	4,461
Slovakia	196	0	124	2	36	31	3
South Africa	4,036	563	2,809	80	269	274	42
Spain	8,274	52	5,504	114	306	514	1,785
Sweden	11,794	433	5,988	744	3,369	816	444
Switzerland	60,905	2,048	36,869	2,750	13,190	3,185	2,862
Thailand	2,941	405	1,145	51	317	973	50
Turkey	5,488	627	4,249	153	173	285	1
United Kingdom	696,514	82,440	210,377	115,491	228,579	13,198	46,429
United States	472,580	36,471	134,400	146,041	99,745	17,781	38,142
Total	**1,832,302**	**175,900**	**684,193**	**301,247**	**453,955**	**91,339**	**125,667**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.11

Outright forward foreign exchange turnover by country and counterparty in April 2010[1]

Daily averages, in millions of US dollars

	Total	Reporting dealers		Other financial institutions		Non-financial customers	
		Local	Cross-border	Local	Cross-border	Local	Cross-border
Argentina	31	...	...	...	...	31	...
Australia	8,015	459	1,760	2,399	1,863	1,340	194
Austria	1,841	29	1,300	173	141	187	11
Bahrain	101	9	14	20	39	2	18
Belgium	1,548	5	1,130	11	240	80	81
Brazil	3,801	21	1,423	486	907	700	265
Bulgaria	55	...	30	6	2	18	0
Canada	6,287	440	1,490	1,847	1,256	1,042	212
Chile	2,120	225	865	545	147	338	...
China	3,054	415	180	83	99	2,215	63
Chinese Taipei	1,222	67	376	181	11	505	81
Colombia	975	201	313	199	70	192	...
Czech Republic	198	1	24	4	0	165	3
Denmark	11,110	353	6,593	503	2,109	1,077	475
Estonia	1	...	0	0	...	...	0
Finland	462	9	20	17	1	290	125
France	9,918	729	4,688	803	1,718	847	1,133
Germany	8,094	505	952	1,132	4,280	855	370
Greece	196	...	8	...	19	168	1
Hong Kong SAR	32,022	1,689	20,032	431	5,401	1,125	3,344
Hungary	262	...	...	39	2	214	7
India	4,895	345	160	40	254	4,091	5
Indonesia	247	17	26	53	28	123	...
Ireland	2,196	0	564	223	1,154	192	62
Israel	154	14	...	42	79	18	1
Italy	1,266	117	607	250	46	204	43
Japan	31,625	857	7,187	9,873	529	12,247	931
Korea	6,101	570	3,867	400	422	805	37
Latvia	12	...	...	0	0	11	1
Lithuania	17	...	16	0	0	1	0
Luxembourg	4,480	44	1,151	905	1,831	338	212
Malaysia	664	6	108	37	87	398	28
Mexico	954	8	647	179	45	68	9
Netherlands	8,540	138	3,103	1,196	3,660	190	254
New Zealand	685	1	307	108	54	214	1
Norway	1,819	4	339	505	126	800	45
Peru	385	81	172	102	8	22	...
Philippines	598	33	265	14	86	201	0
Poland	318	3	20	69	4	221	1
Portugal	496	3	222	3	91	57	120
Romania	95	5	50	5	2	31	2
Russia	592	4	171	143	186	73	16
Saudi Arabia	665	139	458	3	7	58	...
Singapore	36,474	1,722	22,867	1,146	7,683	1,170	1,887
Slovakia	33	0	13	0	1	16	4
South Africa	688	113	262	19	19	266	8
Spain	2,668	38	1,229	43	325	480	553
Sweden	1,944	16	97	417	226	990	198
Switzerland	11,238	998	2,462	709	1,483	2,498	3,088
Thailand	971	8	88	26	18	818	14
Turkey	2,517	131	2,037	102	12	234	1
United Kingdom	228,122	12,970	50,500	37,048	87,291	5,811	34,503
United States	116,107	5,092	27,555	36,563	31,011	10,027	5,859
Total	**558,882**	**28,634**	**167,751**	**99,098**	**155,073**	**54,062**	**54,265**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.12

Foreign exchange swap turnover by country and counterparty in April 2010[1]

Daily averages, in millions of US dollars

	Total	Reporting dealers		Other financial institutions		Non-financial customers	
		Local	Cross-border	Local	Cross-border	Local	Cross-border
Argentina	...	...	...	...	...	...	...
Australia	117,548	19,867	64,065	4,789	26,230	1,058	1,539
Austria	10,725	245	7,792	493	2,063	75	57
Bahrain	3,596	66	2,462	88	933	1	48
Belgium	22,473	165	13,088	508	7,509	501	701
Brazil	292	...	30	60	75	95	33
Bulgaria	211	...	171	16	19	5	...
Canada	33,853	4,838	13,676	3,199	10,210	1,430	499
Chile	522	462	7	25	3	25	...
China	8,024	2,837	666	3,281	90	1,128	22
Chinese Taipei	7,418	876	2,404	3,148	274	713	3
Colombia	29	4	17	1	3	4	...
Czech Republic	3,775	318	2,965	110	25	208	150
Denmark	72,356	1,327	60,450	1,008	4,927	2,644	2,000
Estonia	973	4	955	6	...	8	0
Finland	29,827	13	28,375	15	412	579	432
France	104,262	9,523	60,184	6,918	21,480	3,409	2,748
Germany	63,864	4,792	34,532	4,756	15,865	1,863	2,056
Greece	3,460	78	2,515	115	503	249	0
Hong Kong SAR	147,046	15,299	99,133	2,974	27,095	1,724	820
Hungary	3,117	528	1,771	306	502	11	...
India	7,697	5,427	1,748	376	64	80	...
Indonesia	896	439	376	51	0	27	3
Ireland	8,081	409	5,056	477	1,701	386	52
Israel	5,419	155	...	411	4,230	603	20
Italy	17,726	559	15,283	385	1,339	73	88
Japan	168,260	18,453	93,599	9,351	36,718	9,182	958
Korea	18,420	13,088	3,047	1,035	139	990	122
Latvia	1,436	95	232	57	569	12	470
Lithuania	857	26	798	1	12	15	5
Luxembourg	16,858	752	13,817	552	1,490	98	149
Malaysia	2,429	451	367	479	304	644	183
Mexico	10,434	611	8,969	261	556	38	...
Netherlands	3,241	176	1,898	281	237	167	482
New Zealand	6,353	622	1,619	393	3,483	227	9
Norway	17,524	232	11,410	864	3,288	1,397	332
Peru	16	2	14	...	...	...	...
Philippines	1,256	839	223	167	15	12	...
Poland	5,368	662	3,687	307	675	29	7
Portugal	1,974	67	1,134	12	690	72	...
Romania	1,774	172	1,355	9	227	12	...
Russia	18,416	3,032	6,440	5,172	2,961	315	496
Saudi Arabia	1,273	227	694	57	149	36	110
Singapore	121,999	8,607	78,130	6,833	21,641	2,986	3,801
Slovakia	153	1	135	0	5	12	...
South Africa	9,109	1,922	6,589	196	203	183	16
Spain	16,831	307	10,067	346	644	386	5,080
Sweden	29,312	376	9,972	3,306	8,661	4,160	2,837
Switzerland	181,979	7,816	105,827	8,354	50,917	5,432	3,632
Thailand	3,276	1,778	967	244	144	99	45
Turkey	6,831	19	6,274	150	316	65	7
United Kingdom	775,381	98,086	301,253	91,230	217,461	14,993	52,357
United States	267,099	14,514	105,441	57,839	59,696	13,298	16,311
Total	**2,361,049**	**241,165**	**1,191,677**	**221,017**	**536,752**	**71,757**	**98,680**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.13

Currency swap turnover by country and counterparty in April 2010[1]

Daily averages, in millions of US dollars

	Total	Reporting dealers		Other financial institutions		Non-financial customers	
		Local	Cross-border	Local	Cross-border	Local	Cross-border
Argentina	...	...	...	...	...	...	...
Australia	4,437	338	2,755	319	981	24	19
Austria	307	0	202	3	94	1	8
Bahrain	10	...	10	...	0	...	...
Belgium	83	3	57	0	21	...	1
Brazil	417	22	58	136	...	201	...
Bulgaria	4	...	4	...	...	...	...
Canada	1,240	76	602	23	263	267	9
Chile	204	7	103	15	70	10	...
China	1	...	0	...	0	0	...
Chinese Taipei	79	21	5	16	...	37	...
Colombia	13	0	12	...	1	...	...
Czech Republic	35	...	25	...	...	10	...
Denmark	1,327	320	708	74	194	15	15
Estonia	...	...	...	...	...	...	...
Finland	73	6	62	...	6	...	...
France	4,025	43	3,153	89	670	5	67
Germany	1,344	37	878	109	201	107	12
Greece	4	...	4	...	...	...	...
Hong Kong SAR	7,038	90	6,594	0	232	35	86
Hungary	...	...	...	...	...	...	...
India	31	2	7	4	1	17	...
Indonesia	54	1	1	49	0	2	...
Ireland	692	...	93	420	163	15	0
Israel	75	1	...	10	49	16	...
Italy	28	...	24	...	3	...	...
Japan	2,236	156	1,779	51	129	110	12
Korea	654	335	149	51	52	58	9
Latvia	...	...	...	...	...	...	...
Lithuania	19	...	10	...	...	10	...
Luxembourg	28	8	18	...	0	...	3
Malaysia	156	29	29	3	...	83	12
Mexico	153	70	37	9	34	4	...
Netherlands	1,276	4	590	137	510	31	4
New Zealand	135	8	101	20	5	1	...
Norway	408	1	184	214	1	4	4
Peru	3	...	2	...	...	2	...
Philippines	508	183	323	...	2	0	...
Poland	79	2	52	1	24	...	...
Portugal	...	...	...	...	...	...	...
Romania	4	...	4	...	...	...	...
Russia	...	...	...	...	...	...	...
Saudi Arabia	...	...	...	...	...	...	...
Singapore	687	12	556	15	91	5	7
Slovakia	...	...	...	...	...	...	...
South Africa	39	1	36	1	0	0	...
Spain	659	73	255	2	198	67	64
Sweden	92	2	6	29	50	5	...
Switzerland	23	...	11	...	11	...	...
Thailand	111	59	6	19	...	27	...
Turkey	921	82	839	...	...	...	...
United Kingdom	18,177	2,318	4,397	4,134	6,366	146	816
United States	9,092	1,633	3,484	1,537	1,345	449	644
Total	**56,978**	**5,944**	**28,224**	**7,488**	**11,767**	**1,764**	**1,791**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.14

Options turnover by country and counterparty in April 2010[1]

Daily averages, in millions of US dollars

	Total	Reporting dealers		Other financial institutions		Non-financial customers	
		Local	Cross-border	Local	Cross-border	Local	Cross-border
Argentina	...	...	...	...	...	...	...
Australia	1,864	116	1,059	158	337	126	67
Austria	802	25	433	34	220	49	41
Bahrain	113	...	95	...	6	1	12
Belgium	510	8	360	...	109	15	18
Brazil	841	6	71	11	694	28	32
Bulgaria	...	...	...	...	...	...	...
Canada	2,232	114	1,535	20	330	125	108
Chile	2	1	0	...	...	1	...
China	91	0	42	...	21	28	...
Chinese Taipei	1,536	64	672	74	158	386	183
Colombia	17	0	7	1	2	7	...
Czech Republic	35	0	14	...	4	16	1
Denmark	2,637	224	1,427	37	341	108	501
Estonia	3	...	2	...	...	2	...
Finland	76	...	30	...	...	37	9
France	6,250	102	4,751	480	579	209	129
Germany	5,189	527	2,506	501	549	411	695
Greece	189	...	138	0	15	35	...
Hong Kong SAR	7,654	432	3,874	86	1,629	1,174	459
Hungary	53	...	34	...	10	9	...
India	1,325	127	214	30	...	954	...
Indonesia	1	1	0	...	...	...	...
Ireland	75	1	39	8	20	2	6
Israel	489	41	...	81	239	114	14
Italy	557	91	304	17	74	70	1
Japan	8,747	618	3,273	1,484	1,738	1,332	303
Korea	161	13	105	0	7	37	...
Latvia	...	...	...	...	...	...	...
Lithuania	1	...	0	...	...	1	...
Luxembourg	306	2	185	4	28	6	81
Malaysia	94	14	28	16	6	27	2
Mexico	181	2	96	33	39	10	1
Netherlands	117	1	44	21	9	35	7
New Zealand	48	...	...	1	...	46	0
Norway	143	...	19	...	7	92	25
Peru	4	...	2	...	...	2	...
Philippines	534	527	6	...	...	0	...
Poland	128	8	57	2	9	52	...
Portugal	124	...	55	0	63	5	...
Romania	33	...	13	0	2	17	1
Russia	105	...	54	...	28	22	1
Saudi Arabia	77	...	43	...	7	23	4
Singapore	15,941	267	8,613	407	3,711	620	2,321
Slovakia	61	...	26	...	6	29	0
South Africa	502	118	298	8	2	76	...
Spain	891	2	607	...	84	28	170
Sweden	1,653	17	485	112	614	304	121
Switzerland	8,437	197	3,928	341	1,778	819	1,374
Thailand	90	8	0	1	0	80	0
Turkey	1,060	1	515	7	3	531	3
United Kingdom	135,399	15,926	30,704	49,538	29,236	3,476	6,518
United States	39,479	1,216	12,421	7,718	9,524	1,819	6,782
Total	**246,856**	**20,814**	**79,184**	**61,235**	**52,240**	**13,393**	**19,989**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.15

Outright forward transactions by country and maturity in April 2010[1]

Percentage share of country's total outright forward transactions

	Up to and including 7 days	Over 7 days and up to and including 1 year	Over 1 year
Argentina	8	91	1
Australia	41	58	1
Austria	77	23	1
Bahrain	17	78	5
Belgium	22	77	1
Brazil	39	45	15
Bulgaria	31	69	...
Canada	33	65	3
Chile	28	70	2
China	51	43	6
Chinese Taipei	17	82	2
Colombia	17	82	0
Czech Republic	63	34	3
Denmark	69	31	1
Estonia	49	51	...
Finland	29	70	1
France	16	79	5
Germany	65	32	3
Greece	50	49	0
Hong Kong SAR	33	62	5
Hungary	39	59	2
India	29	49	22
Indonesia	74	26	0
Ireland	22	78	0
Israel	66	32	2
Italy	21	75	3
Japan	41	58	1
Korea	12	75	13
Latvia	85	15	...
Lithuania	0	100	0
Luxembourg	15	84	0
Malaysia	64	34	2
Mexico	20	78	1
Netherlands	28	60	12
New Zealand	56	43	1
Norway	42	57	1
Peru	19	81	1
Philippines	20	75	5
Poland	40	57	2
Portugal	22	78	0
Romania	24	72	4
Russia	16	80	4
Saudi Arabia	92	8	0
Singapore	16	81	3
Slovakia	59	41	0
South Africa	41	56	3
Spain	34	60	6
Sweden	37	61	1
Switzerland	29	70	2
Thailand	25	75	1
Turkey	91	8	0
United Kingdom	60	39	1
United States	39	60	2
Total	**45**	**52**	**2**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Since data on the maturity breakdown were only collected on a gross basis, data on a net basis have been calculated by adjusting the gross data proportionally. Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.16

Foreign exchange swap transactions by country and maturity in April 2010[1]

Percentage share of country's total FX swaps transactions

	Up to and including 7 days	Over 7 days and up to and including 1 year	Over 1 year
Argentina	...	...	...
Australia	84	16	0
Austria	72	27	1
Bahrain	75	24	1
Belgium	80	20	0
Brazil	14	42	44
Bulgaria	71	29	...
Canada	71	29	1
Chile	25	73	3
China	64	36	1
Chinese Taipei	28	69	4
Colombia	40	16	43
Czech Republic	84	16	0
Denmark	80	20	0
Estonia	94	6	...
Finland	94	6	0
France	74	26	1
Germany	66	33	1
Greece	58	42	...
Hong Kong SAR	78	21	1
Hungary	65	31	4
India	47	42	10
Indonesia	77	23	0
Ireland	59	41	0
Israel	86	13	1
Italy	77	23	0
Japan	79	21	0
Korea	47	48	5
Latvia	95	5	0
Lithuania	95	5	0
Luxembourg	77	23	0
Malaysia	71	29	0
Mexico	95	5	0
Netherlands	52	48	0
New Zealand	85	15	0
Norway	62	37	0
Peru	14	86	...
Philippines	48	52	0
Poland	82	17	1
Portugal	59	41	0
Romania	79	21	0
Russia	97	3	0
Saudi Arabia	44	45	11
Singapore	76	24	1
Slovakia	82	18	...
South Africa	66	32	2
Spain	76	24	1
Sweden	54	45	1
Switzerland	69	30	1
Thailand	49	48	3
Turkey	65	35	...
United Kingdom	75	25	1
United States	71	27	1
Total	**74**	**25**	**1**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Since data on the maturity breakdown were only collected on a gross basis, data on a net basis have been calculated by adjusting the gross data proportionally. Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.17

Total foreign exchange turnover by country in April, 1995—2010[1]

Daily averages, in billions of US dollars

	Total					
	April 1995	**April 1998**	**April 2001**	**April 2004**	**April 2007**	**April 2010**
Argentina	...	2	...	1	1	2
Australia	41	48	54	107	176	192
Austria	13	12	8	15	19	20
Bahrain	3	3	3	3	3	5
Belgium	29	27	10	21	50	33
Brazil	...	5	6	4	6	14
Bulgaria	...	...	...	...	1	1
Canada	31	38	44	59	64	62
Chile	...	1	2	2	4	6
China	...	0	...	1	9	20
Chinese Taipei	...	5	5	9	16	18
Colombia	...	...	0	1	2	3
Czech Republic	...	5	2	2	5	5
Denmark	32	28	24	42	88	120
Estonia	...	...	...	0	1	1
Finland	5	4	2	2	8	31
France	62	77	50	67	127	152
Germany	79	100	91	120	101	109
Greece	3	7	5	4	5	5
Hong Kong SAR	91	80	68	106	181	238
Hungary	...	1	1	3	7	4
India	...	2	3	7	38	27
Indonesia	...	2	4	2	3	3
Ireland	5	11	9	8	11	15
Israel	...	...	1	5	8	10
Italy	24	29	18	23	38	29
Japan	168	146	153	207	250	312
Korea	...	4	10	21	35	44
Latvia	...	...	...	2	3	2
Lithuania	...	...	...	1	1	1
Luxembourg	19	23	13	15	44	33
Malaysia	...	1	1	2	3	7
Mexico	...	9	9	15	15	17
Netherlands	27	43	31	52	25	18
New Zealand	7	7	4	7	13	9
Norway	8	9	13	14	32	22
Peru	...	...	0	0	1	1
Philippines	...	1	1	1	2	5
Poland	...	3	5	7	9	8
Portugal	2	4	2	2	4	4
Romania	...	...	...	...	3	3
Russia	...	7	10	30	50	42
Saudi Arabia	...	2	2	2	4	5
Singapore	107	145	104	134	242	266
Slovakia	...	...	1	2	3	0
Slovenia	...	...	0	0	0	...
South Africa	5	9	10	10	14	14
Spain	18	20	8	14	17	29
Sweden	20	16	25	32	44	45
Switzerland	88	92	76	85	254	263
Thailand	...	3	2	3	6	7
Turkey	...	...	1	3	4	17
United Kingdom	479	685	542	835	1,483	1,854
United States	266	383	273	499	745	904
Total	**1,633**	**2,099**	**1,705**	**2,608**	**4,281**	**5,056**

[1] Spot transactions, outright forwards, foreign exchange swaps, currency swaps, options and other products. Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.18

Spot foreign exchange turnover by country in April, 1995—2010[1]

Daily averages, in billions of US dollars

	Spot					
	April 1995	**April 1998**	**April 2001**	**April 2004**[2]	**April 2007**	**April 2010**
Argentina	...	2	...	1	1	2
Australia	18	20	13	36	44	60
Austria	9	5	4	6	6	6
Bahrain	2	2	1	1	2	1
Belgium	6	7	3	6	15	8
Brazil	...	5	4	3	5	9
Bulgaria	...	...	...	...	0	1
Canada	12	11	11	18	14	18
Chile	...	1	2	2	2	3
China	...	0	...	1	8	9
Chinese Taipei	...	3	3	5	9	8
Colombia	...	...	0	1	1	2
Czech Republic	...	2	1	1	1	1
Denmark	9	6	4	9	15	33
Estonia	...	...	...	0	0	0
Finland	3	1	1	1	1	1
France	25	19	9	13	25	27
Germany	34	42	26	36	25	30
Greece	2	3	2	1	1	1
Hong Kong SAR	35	31	19	36	38	44
Hungary	...	1	0	1	2	1
India	...	1	2	3	14	13
Indonesia	...	1	3	1	2	2
Ireland	3	5	4	5	4	4
Israel	...	...	1	3	4	4
Italy	13	12	5	9	11	9
Japan	55	57	37	53	101	101
Korea	...	3	6	10	17	18
Latvia	...	...	...	1	1	1
Lithuania	...	...	...	1	1	0
Luxembourg	8	8	4	3	13	12
Malaysia	...	0	0	1	2	4
Mexico	...	6	4	11	5	5
Netherlands	11	15	5	10	3	5
New Zealand	3	2	1	1	2	2
Norway	3	3	3	3	3	2
Peru	...	...	0	0	1	1
Philippines	...	0	0	0	1	2
Poland	...	2	2	2	2	2
Portugal	1	2	1	1	2	1
Romania	...	...	...	...	1	1
Russia	...	6	9	24	34	23
Saudi Arabia	...	1	1	1	3	3
Singapore	44	60	34	43	89	91
Slovakia	...	...	0	0	0	0
Slovenia	...	...	0	0	0	...
South Africa	2	4	2	2	3	4
Spain	7	6	3	4	6	8
Sweden	9	5	6	7	8	12
Switzerland	44	34	23	23	108	61
Thailand	...	1	1	1	1	3
Turkey	...	...	0	1	1	5
United Kingdom	186	217	151	223	335	697
United States	134	148	104	217	311	473
Total	**680**	**762**	**519**	**840**	**1,305**	**1,832**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.19

Outright forward foreign exchange turnover by country in April, 1995—2010[1]

Daily averages, in billions of US dollars

	Outright forward					
	April 1995	**April 1998**	**April 2001**	**April 2004**	**April 2007**	**April 2010**
Argentina	...	0	...	...	0	0
Australia	1	2	3	6	14	8
Austria	0	1	0	1	2	2
Bahrain	0	0	1	1	1	0
Belgium	0	1	1	2	7	2
Brazil	...	...	1	0	0	4
Bulgaria	...	...	...	...	0	0
Canada	3	1	2	4	4	6
Chile	...	0	1	1	1	2
China	...	...	...	...	0	3
Chinese Taipei	...	1	0	1	2	1
Colombia	...	...	0	0	0	1
Czech Republic	...	...	0	0	1	0
Denmark	2	1	1	2	10	11
Estonia	...	...	...	0	0	0
Finland	0	0	0	0	0	0
France	2	3	1	5	7	10
Germany	4	8	12	12	23	8
Greece	1	1	0	0	0	0
Hong Kong SAR	3	4	4	5	15	32
Hungary	...	0	0	0	0	0
India	...	0	0	1	6	5
Indonesia	...	0	0	0	1	0
Ireland	0	1	1	0	1	2
Israel	...	...	...	...	...	0
Italy	2	2	1	1	3	1
Japan	17	17	20	21	26	32
Korea	...	0	1	4	5	6
Latvia	...	...	...	0	0	0
Lithuania	...	...	...	0	0	0
Luxembourg	1	1	1	2	5	4
Malaysia	...	0	0	0	0	1
Mexico	...	0	0	1	0	1
Netherlands	3	6	3	4	6	9
New Zealand	0	0	0	1	1	1
Norway	0	0	0	0	2	2
Peru	...	...	0	0	0	0
Philippines	...	0	0	0	0	1
Poland	...	0	0	0	1	0
Portugal	0	0	0	0	1	0
Romania	...	...	...	...	0	0
Russia	...	1	0	1	1	1
Saudi Arabia	...	0	0	0	0	1
Singapore	3	4	8	11	25	36
Slovakia	...	...	0	0	0	0
Slovenia	...	...	0	0	0	...
South Africa	1	2	0	0	1	1
Spain	1	1	1	1	2	3
Sweden	1	1	1	1	2	2
Switzerland	8	5	6	7	17	11
Thailand	...	0	0	0	1	1
Turkey	...	...	0	0	1	3
United Kingdom	34	48	53	103	124	228
United States	28	37	36	61	114	116
Total	**115**	**155**	**164**	**261**	**434**	**559**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.20

Foreign exchange swap turnover by country in April, 1995—2010[1]

Daily averages, in billions of US dollars

	Foreign exchange swap					
	April 1995	**April 1998**	**April 2001**	**April 2004**	**April 2007**	**April 2010**
Argentina	...	...	...	...	...	...
Australia	21	25	35	61	111	118
Austria	4	5	3	7	10	11
Bahrain	1	0	1	0	1	4
Belgium	22	18	7	11	26	22
Brazil	...	...	0	0	0	0
Bulgaria	...	...	...	...	0	0
Canada	15	25	29	32	42	34
Chile	...	...	...	0	0	1
China	...	...	...	...	1	8
Chinese Taipei	...	1	1	2	4	7
Colombia	...	...	0	0	0	0
Czech Republic	...	3	1	1	3	4
Denmark	20	20	18	30	61	72
Estonia	...	...	...	0	1	1
Finland	3	3	1	1	7	30
France	30	50	38	46	87	104
Germany	38	44	51	70	52	64
Greece	1	3	3	3	4	3
Hong Kong SAR	53	44	44	61	122	147
Hungary	...	0	0	2	4	3
India	...	1	1	2	13	8
Indonesia	...	1	0	1	1	1
Ireland	1	4	4	2	6	8
Israel	...	...	1	2	4	5
Italy	8	15	11	10	22	18
Japan	89	61	90	125	112	168
Korea	...	1	3	6	11	18
Latvia	...	...	...	1	2	1
Lithuania	...	...	...	0	0	1
Luxembourg	10	13	8	10	24	17
Malaysia	...	1	1	0	1	2
Mexico	...	2	4	3	10	10
Netherlands	12	20	21	36	15	3
New Zealand	4	5	3	5	10	6
Norway	4	6	9	11	26	18
Peru	...	...	0	0	...	0
Philippines	...	0	0	0	1	1
Poland	...	0	3	4	6	5
Portugal	1	2	1	1	1	2
Romania	...	...	...	...	1	2
Russia	...	0	...	5	15	18
Saudi Arabia	...	1	1	1	1	1
Singapore	58	75	58	72	116	122
Slovakia	...	...	0	1	3	0
Slovenia	...	...	...	0	0	...
South Africa	2	4	7	8	10	9
Spain	10	12	4	9	8	17
Sweden	11	10	17	22	33	29
Switzerland	34	42	41	49	116	182
Thailand	...	2	1	1	4	3
Turkey	...	...	0	2	2	7
United Kingdom	244	372	300	428	899	775
United States	83	166	114	183	239	267
Total	**777**	**1,052**	**934**	**1,329**	**2,250**	**2,361**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.21

Currency swap turnover by country in April, 1995—2010[1]

Daily averages, in billions of US dollars

	Currency swaps					
	April 1995	**April 1998**	**April 2001**	**April 2004**	**April 2007**	**April 2010**
Argentina	...	...	...	...	...	...
Australia	0	0	1	1	2	4
Austria	0	0	0	0	0	0
Bahrain	...	0	0	0	0	0
Belgium	0	0	0	0	0	0
Brazil	...	...	0	0	0	0
Bulgaria	...	...	...	...	0	0
Canada	0	0	0	1	2	1
Chile	...	...	...	0	0	0
China	...	...	...	...	...	0
Chinese Taipei	...	0	0	0	0	0
Colombia	...	...	0	0	0	0
Czech Republic	...	...	0	0	0	0
Denmark	1	0	0	0	1	1
Estonia	...	...	...	...	0	...
Finland	0	0	0	0	0	0
France	0	1	0	1	1	4
Germany	0	1	0	0	0	1
Greece	0	0	0	...	0	0
Hong Kong SAR	0	0	0	1	1	7
Hungary	...	0	...	...	0	...
India	...	0	0	0	0	0
Indonesia	...	0	0	0	0	0
Ireland	0	0	0	0	0	1
Israel	...	...	...	...	...	0
Italy	0	0	0	0	0	0
Japan	1	1	1	1	1	2
Korea	...	0	0	0	1	1
Latvia	...	...	...	...	...	...
Lithuania	...	...	...	...	...	0
Luxembourg	0	0	0	0	1	0
Malaysia	...	...	...	0	0	0
Mexico	...	...	0	0	0	0
Netherlands	0	0	0	0	0	1
New Zealand	0	0	0	0	0	0
Norway	0	0	0	0	0	0
Peru	...	...	...	0	...	0
Philippines	...	...	0	0	0	1
Poland	...	...	...	0	0	0
Portugal	0	0	0	...	0	...
Romania	...	...	...	...	...	0
Russia	...	...	...	...	...	...
Saudi Arabia	...	...	...	0	0	...
Singapore	1	1	0	0	1	1
Slovakia	...	...	0	...	...	...
Slovenia	...	...	...	0	...	...
South Africa	...	0	0	0	0	0
Spain	0	1	0	0	0	1
Sweden	0	0	0	0	0	0
Switzerland	0	0	0	0	0	0
Thailand	...	0	0	0	0	0
Turkey	...	...	...	0	1	1
United Kingdom	1	5	4	16	18	18
United States	0	1	1	2	6	9
Total	**5**	**13**	**9**	**26**	**40**	**57**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.22

Options turnover by country in April, 1995—2010[1]

Daily averages, in billions of US dollars

	Options					
	April 1995	**April 1998**	**April 2001**	**April 2004**	**April 2007**	**April 2010**
Argentina	...	...	...	...	...	...
Australia	1	1	2	4	5	2
Austria	0	1	0	1	1	1
Bahrain	0	0	0	0	0	0
Belgium	0	1	0	1	2	1
Brazil	...	...	0	0	0	1
Bulgaria	...	...	...	...	0	...
Canada	1	1	2	5	3	2
Chile	...	...	...	...	0	0
China	...	...	...	...	...	0
Chinese Taipei	...	0	0	1	1	2
Colombia	...	...	0	0	0	0
Czech Republic	...	0	0	0	0	0
Denmark	0	1	0	1	1	3
Estonia	...	...	...	...	0	0
Finland	0	0	0	0	0	0
France	3	4	1	2	6	6
Germany	3	5	3	3	2	5
Greece	0	0	0	0	0	0
Hong Kong SAR	1	1	1	3	6	8
Hungary	...	0	0	0	0	0
India	...	0	0	0	4	1
Indonesia	...	0	...	0	0	0
Ireland	0	0	0	0	0	0
Israel	...	...	...	0	0	0
Italy	0	0	1	3	2	1
Japan	6	9	5	8	11	9
Korea	...	0	0	0	1	0
Latvia	...	...	...	...	...	...
Lithuania	...	...	...	...	0	0
Luxembourg	0	0	0	0	1	0
Malaysia	...	0	0	0	0	0
Mexico	...	0	0	0	0	0
Netherlands	1	2	0	3	1	0
New Zealand	0	0	0	0	0	0
Norway	0	0	0	0	0	0
Peru	...	...	...	...	...	0
Philippines	...	...	...	0	0	1
Poland	...	...	...	0	0	0
Portugal	0	0	0	0	1	0
Romania	...	...	...	...	0	0
Russia	...	0	...	...	0	0
Saudi Arabia	...	0	0	0	0	0
Singapore	1	5	3	8	10	16
Slovakia	...	...	...	...	0	0
Slovenia	...	...	...	0	0	...
South Africa	0	0	0	0	0	1
Spain	0	0	0	0	1	1
Sweden	0	1	1	1	2	2
Switzerland	2	10	5	6	12	8
Thailand	...	0	0	0	0	0
Turkey	...	...	...	0	0	1
United Kingdom	14	43	33	65	106	135
United States	21	31	18	36	75	39
Total	**55**	**117**	**79**	**152**	**253**	**247**

[1] Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding.

Table E.23

Foreign exchange turnover by execution method in April 2010[1]

Daily averages, in millions of US dollars

	Inter-dealer direct	Customer direct	Electronic Trading Systems		Multibank dealing systems	Voice broker
			Electronic Broking System	Single-bank proprietary platforms		
Spot	237,433	343,390	413,502	227,733	231,199	136,271
Outright forwards	76,530	178,371	46,365	84,614	69,329	38,432
FX swaps	403,454	369,321	302,338	145,580	152,942	452,761
FX options	46,043	109,284	12,729	12,525	4,198	29,388

[1] Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding. Adjusted for local and cross-boder inter-dealer double-counting (ie "net-net" basis). Due to incomplete allocation by execution method, components do not sum to the aggregates published in Table D.1.

Table E.24

2. Amounts outstanding at end-June 2010

Notional amounts outstanding of OTC foreign exchange by instrument, counterparty and currency at end-June 2010[1]

All currencies

In millions of US dollars

	Total	US dollar	Euro	Yen	Pound sterling
Forwards and swaps	**31,935,312**	**27,775,021**	**10,825,619**	**4,633,047**	**4,031,984**
with reporting dealers	10,178,437	9,356,050	3,210,128	1,743,162	1,034,301
with other financial institutions	15,065,960	13,290,515	4,781,705	2,056,037	2,034,589
with non-financial customers	6,690,924	5,128,459	2,833,794	833,848	963,101
Currency swaps	**18,890,095**	**16,430,215**	**7,702,510**	**3,777,790**	**2,394,091**
with reporting dealers	7,906,256	7,203,382	3,047,769	1,977,914	936,423
with other financial institutions	8,611,532	7,446,154	3,488,850	1,316,708	1,088,792
with non-financial customers	2,372,315	1,780,678	1,165,888	483,164	368,872
Options sold	**8,550,830**	**6,806,025**	**2,922,539**	**3,119,424**	**672,804**
with reporting dealers	4,826,250	3,793,261	1,596,739	1,971,487	355,646
with other financial institutions	2,393,299	1,924,467	768,618	772,861	201,611
with non-financial customers	1,331,289	1,088,298	557,187	375,076	115,548
Options bought	**8,414,627**	**6,638,007**	**2,842,115**	**3,101,505**	**637,739**
with reporting dealers	4,891,384	3,863,850	1,569,578	2,069,455	351,056
with other financial institutions	2,235,461	1,738,668	751,132	723,255	176,147
with non-financial customers	1,287,794	1,035,490	521,405	308,797	110,536
Total options	**12,106,637**	**9,615,479**	**4,181,502**	**4,200,459**	**957,194**
Other products	**1,075**	...	**...**	**...**	**...**
Total contracts	**62,933,119**	**53,820,715**	**22,709,631**	**12,611,296**	**7,383,269**

For footnotes, see facing page.

Table E.25

Notional amounts outstanding of OTC foreign exchange by instrument, counterparty and currency at end-June 2010[1]

All currencies

In millions of US dollars

Swiss franc	Canadian dollar	Swedish krona	Other currencies[2]	
2,395,214	**1,656,914**	**1,001,917**	**11,550,908**	**Forwards and swaps**
1,030,850	428,130	277,289	3,276,964	with reporting dealers
910,873	823,115	359,718	5,875,368	with other financial institutions
453,499	405,673	364,914	2,398,560	with non-financial customers
963,087	**825,386**	**451,473**	**5,235,638**	**Currency swaps**
408,002	261,087	180,591	1,797,344	with reporting dealers
427,957	364,771	208,136	2,881,696	with other financial institutions
127,129	199,525	62,745	556,629	with non-financial customers
690,313	**220,762**	**94,878**	**2,574,915**	**Options sold**
407,859	117,821	53,564	1,356,123	with reporting dealers
199,774	65,916	22,968	830,383	with other financial institutions
82,683	37,022	18,344	388,420	with non-financial customers
675,505	**214,614**	**94,338**	**2,625,431**	**Options bought**
401,545	116,427	52,377	1,358,480	with reporting dealers
181,050	62,652	21,877	816,141	with other financial institutions
92,911	35,534	20,084	450,831	with non-financial customers
961,114	**318,253**	**136,249**	**3,843,024**	**Total options**
...	**...**	**...**	**2,150**	**Other products**
4,319,415	**2,800,553**	**1,589,639**	**20,631,720**	**Total contracts**

[1] Data adjusted for inter-dealer double-counting. While data on total options are shown on a net basis, separate data on options sold and options bought are recorded on a gross basis, ie not adjusted for inter-dealer double-counting. Due to incomplete counterparty breakdown, components do not always add to totals. [2] Calculated as the difference between the total and the sum of the listed components.

Table E.25 (cont)

Gross market values of OTC foreign exchange by instrument, counterparty and currency at end-June 2010[1]

All currencies

In millions of US dollars

	Total	US dollar	Euro	Yen	Pound sterling
Positive market values					
Forwards and FX swaps	**886,143**	**694,135**	**366,976**	**143,339**	**190,548**
with reporting dealers	452,804	353,002	183,794	80,149	116,375
with other financial institutions	280,336	227,528	108,798	40,581	50,984
with non-financial customers	152,997	113,603	74,384	22,605	23,191
Currency swaps	**864,547**	**672,975**	**362,928**	**207,179**	**154,955**
with reporting dealers	461,548	382,283	180,273	132,325	75,042
with other financial institutions	286,332	213,048	123,840	47,651	55,785
with non-financial customers	116,668	77,643	58,815	27,201	24,118
Options bought	**335,921**	**254,349**	**115,237**	**161,383**	**16,869**
with reporting dealers	202,042	157,875	64,934	108,936	9,309
with other financial institutions	75,061	50,694	28,978	23,598	4,256
with non-financial customers	58,813	45,785	21,328	28,845	3,304
Total contracts	**2,086,628**	**1,621,464**	**845,153**	**511,901**	**362,369**
Negative market values					
Forwards and FX swaps	**970,183**	**655,740**	**357,968**	**133,335**	**441,190**
with reporting dealers	526,723	338,266	172,655	75,813	294,661
with other financial institutions	305,737	221,968	122,299	40,430	109,636
with non-financial customers	137,723	95,510	63,022	17,097	36,894
Currency swaps	**990,369**	**760,281**	**405,837**	**221,474**	**245,356**
with reporting dealers	482,579	382,879	178,075	115,866	134,815
with other financial institutions	357,979	273,916	151,627	74,242	75,519
with non-financial customers	149,810	103,487	76,133	31,360	35,017
Options sold	**324,478**	**241,261**	**118,773**	**140,713**	**23,164**
with reporting dealers	204,158	156,468	68,435	109,170	11,573
with other financial institutions	79,165	53,085	30,762	21,754	7,073
with non-financial customers	41,155	31,710	19,576	9,790	4,516
Total contracts	**2,285,052**	**1,657,299**	**882,592**	**495,525**	**709,717**

For footnotes, see facing page.

Table E.26

Gross market values of OTC foreign exchange by instrument, counterparty and currency at end-June 2010[1]

All currencies

In millions of US dollars

Swiss franc	Canadian dollar	Swedish krona	Other currencies[2]	
Positive market values				
73,787	**38,268**	**19,931**	**245,302**	**Forwards and FX swaps**
42,035	16,569	8,997	104,687	with reporting dealers
22,020	13,718	5,334	91,709	with other financial institutions
9,731	7,979	5,597	48,904	with non-financial customers
45,805	**35,784**	**10,518**	**238,950**	**Currency swaps**
23,469	13,216	6,234	110,254	with reporting dealers
16,603	12,783	2,947	100,007	with other financial institutions
5,733	9,780	1,332	28,714	with non-financial customers
26,589	**5,333**	**1,949**	**90,133**	**Options bought**
16,327	2,908	929	42,866	with reporting dealers
7,286	1,617	511	33,182	with other financial institutions
2,976	812	510	14,066	with non-financial customers
146,183	**79,387**	**32,400**	**574,399**	**Total contracts**
Negative market values				
65,177	**39,186**	**19,731**	**228,039**	**Forwards and FX swaps**
37,246	16,808	10,100	107,897	with reporting dealers
16,405	14,252	4,938	81,546	with other financial institutions
11,525	8,124	4,693	38,581	with non-financial customers
56,142	**35,960**	**13,027**	**242,661**	**Currency swaps**
22,670	11,827	7,148	111,878	with reporting dealers
21,070	13,137	3,683	102,764	with other financial institutions
12,401	10,994	2,192	28,036	with non-financial customers
26,033	**6,008**	**2,224**	**90,780**	**Options sold**
15,953	2,966	899	42,852	with reporting dealers
7,357	2,055	866	35,378	with other financial institutions
2,718	983	455	12,562	with non-financial customers
147,353	**81,155**	**34,986**	**561,477**	**Total contracts**

[1] Counterparty breakdown partially estimated. [2] Calculated as the difference between the total and the sum of the listed components.

Table E.26 (cont)

Notional amounts outstanding of OTC foreign exchange by instrument, counterparty and remaining maturity at end-June 2010[1]

In millions of US dollars

	Total	One year or less	Over 1 year and up to 5 years	Over 5 years
Forwards and swaps	**50,825,407**	**32,282,575**	**10,159,882**	**8,389,912**
with reporting dealers	18,084,693	11,714,146	4,059,140	2,305,296
with other financial institutions	23,677,492	14,051,372	4,514,795	5,102,349
with non-financial customers	9,063,239	6,494,612	1,585,296	982,247
Options sold	**8,550,830**	**6,128,066**	**1,939,216**	**483,556**
with reporting dealers	4,826,250	3,275,891	1,216,854	330,780
with other financial institutions	2,393,299	1,867,443	440,450	85,375
with non-financial customers	1,331,289	982,604	280,373	67,402
Options bought	8,414,627	**5,560,605**	**1,872,315**	**981,749**
with reporting dealers	**4,891,384**	3,325,528	1,237,236	327,636
with other financial institutions	2,235,461	1,271,612	391,104	572,726
with non-financial customers	1,287,794	961,463	242,414	81,390
Total options	12,106,637	**8,387,966**	**2,584,491**	**1,136,101**
Other products	**1,075**	**...**	**...**	**...**
Total contracts	**62,933,119**	**40,670,527**	**12,744,367**	**9,526,012**
Total contracts including gold	**63,602,498**	**...**	**...**	**...**

[1] Data adjusted for inter-dealer double-counting. While data on total options are shown on a net basis, separate data on options sold and options bought are recorded on a gross basis, ie not adjusted for inter-dealer double-counting. Due to incomplete allocation, the maturity breakdown does not always sum to totals.

Table E.27

Notional amounts outstanding of OTC foreign exchange by instrument and counterparty at end-June 2004, 2007 and 2010[1]

In millions of US dollars

	End-June 2004		End-June 2007		End-June 2010	
	Notional amounts outstanding	Gross market values	Notional amounts outstanding	Gross market values	Notional amounts outstanding	Gross market values
Forwards and FX swaps	**16,763,791**	**459,617**	**29,775,280**	**667,587**	**31,935,312**	**1,329,600**
with reporting dealers	6,834,095	191,668	10,580,077	254,317	10,178,437	452,804
with other financial institutions	6,579,777	165,060	12,280,687	256,313	15,065,960	586,073
with non-financial customers	3,349,930	102,886	6,914,531	156,973	6,690,924	290,720
Total including gold	16,920,203	...	30,486,523	...	32,320,119	...
Currency swaps	**7,938,591**	**505,366**	**14,130,193**	**666,201**	**18,890,095**	**1,372,342**
with reporting dealers	3,078,941	114,194	5,714,743	174,697	7,906,256	461,548
with other financial institutions	3,112,463	229,223	5,941,666	308,004	8,611,532	644,311
with non-financial customers	1,747,196	161,950	2,473,788	183,495	2,372,315	266,478
Options sold	**4,702,476**	**98,624**	**9,915,023**	**204,856**	**8,550,830**	**324,478**
with reporting dealers	2,565,614	50,516	6,127,064	124,230	4,826,250	204,158
with other financial institutions	1,144,366	22,220	2,282,195	49,391	2,393,299	79,165
with non-financial customers	992,505	25,895	1,505,781	31,238	1,331,289	41,155
Total including gold	4,792,802	...	10,066,243	...	8,722,762	...
Options bought	**4,646,972**	**100,603**	**9,880,162**	**197,877**	**8,414,627**	**335,921**
with reporting dealers	2,554,475	52,989	6,139,281	125,530	4,891,384	202,042
with other financial institutions	1,102,087	20,518	2,215,249	44,442	2,235,461	75,061
with non-financial customers	990,416	27,100	1,525,647	27,909	1,287,794	58,813
Total including gold	4,804,363	...	10,144,470	...	8,590,477	...
Total options	**6,789,401**	**148,712**	**13,662,018**	**278,507**	**12,106,637**	**456,243**
Other products	**7,229**	**...**	**36,724**	**...**	**1,075**	**...**
Total contracts	**31,499,012**	**1,113,695**	**57,604,215**	**1,612,295**	**62,933,119**	**3,158,185**
Total contracts including gold	**31,857,932**	**1,159,925**	**58,655,148**	**1,668,515**	**63,602,238**	**3,212,349**

[1] Data adjusted for inter-dealer double-counting. While data on total options are shown on a net basis, separate data on options sold and options bought are recorded on a gross basis, ie not adjusted for inter-dealer double-counting. The counterparty breakdown for the gross market values was estimated.

Table E.28

Table 1
Global foreign exchange market turnover by instrument[1]

Average daily turnover in April, in billions of US dollars

Instrument	1998	2001	2004	2007	2010
Foreign exchange instruments	**1,527**	**1,239**	**1,934**	**3,324**	**3,981**
Spot transactions[2]	568	386	631	1,005	1,490
Outright forwards[2]	128	130	209	362	475
Foreign exchange swaps[2]	734	656	954	1,714	1,765
Currency swaps	10	7	21	31	43
Options and other products[3]	87	60	119	212	207
Memo:					
Turnover at April 2010 exchange rates [4]	*1,705*	*1,505*	*2,040*	*3,370*	*3,981*
Exchange-traded derivatives [5]	*11*	*12*	*26*	*80*	*168*

[1] Adjusted for local and cross-border inter-dealer double-counting (ie “net-net” basis). [2] Previously classified as part of the so-called "Traditional FX market". [3] The category "other FX products" covers highly leveraged transactions and/or trades whose notional amount is variable and where a decomposition into individual plain vanilla components was impractical or impossible. [4] Non-US dollar legs of foreign currency transactions were converted into original currency amounts at average exchange rates for April of each survey year and then reconverted into US dollar amounts at average April 2010 exchange rates. [5] Sources: FOW TRADEdata; Futures Industry Association; various futures and options exchanges. Reported monthly data were converted into daily averages of 20.5 days in 1998, 19.5 days in 2001, 20.5 in 2004, 20 in 2007 and 20 in 2010.

Table 2

Global foreign exchange market turnover by instrument, counterparty and maturity[1]

Daily averages in April, in billions of US dollars and percentages

Instrument/counterparty/ maturity	1998		2001		2004		2007		2010	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Spot	**568**	**37**	**386**	**31**	**631**	**33**	**1,005**	**30**	**1,490**	**37**
with reporting dealers	347	61	216	56	310	49	426	42	518	35
with other financial institutions	121	21	111	29	213	34	394	39	755	51
with non-financial customers	99	18	58	15	108	17	184	18	217	15
Outright forwards	**128**	**8**	**130**	**11**	**209**	**11**	**362**	**11**	**475**	**12**
with reporting dealers	49	38	52	40	73	35	96	27	113	24
with other financial institutions	34	27	41	31	80	38	159	44	254	54
with non-financial customers	44	35	37	29	56	27	107	30	108	23
Foreign exchange swaps	**734**	**48**	**656**	**53**	**954**	**49**	**1,714**	**52**	**1,765**	**44**
with reporting dealers	511	70	419	64	573	60	796	46	837	47
with other financial institutions	124	17	177	27	293	31	682	40	758	43
with non-financial customers	98	13	60	9	89	9	236	14	170	10
Currency swaps	**10**	**1**	**7**	**1**	**21**	**1**	**31**	**1**	**43**	**1**
with reporting dealers	5	55	4	53	12	58	12	39	20	47
with other financial institutions	2	23	2	21	5	23	13	41	19	45
with non-financial customers	2	22	2	25	3	14	6	20	4	8
FX options and other instruments[2]	**87**	**6**	**60**	**5**	**119**	**6**	**212**	**6**	**207**	**5**
with reporting dealers	48	55	28	47	49	41	62	29	60	29
with other financial institutions	18	20	15	26	44	37	91	43	113	55
with non-financial customers	21	24	16	27	21	18	59	28	33	16
Total	**1,527**	**100**	**1,239**	**100**	**1,934**	**100**	**3,324**	**100**	**3,981**	**100**
with reporting dealers	961	63	719	58	1,018	53	1,392	42	1,548	39
with other financial institutions	299	20	346	28	634	33	1,339	40	1,900	48
with non-financial customers	266	17	174	14	276	14	593	18	533	13
Local	698	46	525	42	743	38	1,274	38	1,395	35
Cross-border	828	54	713	58	1,185	61	2,051	62	2,586	65
Outright forwards	**128**	**100**	**130**	**100**	**209**	**100**	**362**	**100**	**475**	**100**
Up to 7 days	65	51	51	39	92	44	154	43	219	46
Over 7 days and up to 1 year	57	45	76	58	111	53	200	55	245	52
Over 1 year	5	4	4	3	5	3	7	2	11	2
Foreign exchange swaps	**734**	**100**	**656**	**100**	**954**	**100**	**1,714**	**100**	**1,765**	**100**
Up to 7 days	528	72	451	69	700	73	1,329	78	1,304	74
Over 7 days and up to 1 year	192	26	196	30	242	25	365	21	444	25
Over 1 year	10	1	8	1	10	1	18	1	15	1

[1] Adjusted for local and cross-border inter-dealer double-counting (ie “net-net” basis). Due to incomplete reporting, components do not always add up to totals. [2] The category "other FX products" covers highly leveraged transactions and/or trades whose notional amount is variable and where a decomposition into individual plain vanilla components was impractical or impossible.

Table 3
Currency distribution of global foreign exchange market turnover[1]

Percentage shares of average daily turnover in April

Currency	1998	2001	2004	2007	2010
US dollar	86.8	89.9	88.0	85.6	84.9
Euro	...	37.9	37.4	37.0	39.1
Deutsche mark	30.5	...	...	...	...
French franc	5.0	...	...	...	...
ECU and other EMS currencies	16.8	...	...	...	...
Slovak koruna[2]	...	0.0	0.0	0.1	...
Japanese yen	21.7	23.5	20.8	17.2	19.0
Pound sterling	11.0	13.0	16.5	14.9	12.9
Australian dollar	3.0	4.3	6.0	6.6	7.6
Swiss franc	7.1	6.0	6.0	6.8	6.4
Canadian dollar	3.5	4.5	4.2	4.3	5.3
Hong Kong dollar[3, 4]	1.0	2.2	1.8	2.7	2.4
Swedish krona[5]	0.3	2.5	2.2	2.7	2.2
New Zealand dollar[3, 4]	0.2	0.6	1.1	1.9	1.6
Korean won[3,4]	0.2	0.8	1.1	1.2	1.5
Singapore dollar[3]	1.1	1.1	0.9	1.2	1.4
Norwegian krone[3]	0.2	1.5	1.4	2.1	1.3
Mexican peso[3]	0.5	0.8	1.1	1.3	1.3
Indian rupee[3,4]	0.1	0.2	0.3	0.7	0.9
Russian Rouble[3]	0.3	0.3	0.6	0.7	0.9
Chinese renminbi[4]	0.0	0.0	0.1	0.5	0.9
Polish zloty[3]	0.1	0.5	0.4	0.8	0.8
Turkish new lira[2]	...	0.0	0.1	0.2	0.7
South African rand[3, 4]	0.4	0.9	0.7	0.9	0.7
Brazilian real[3, 4]	0.2	0.5	0.3	0.4	0.7
Danish krone[3]	0.3	1.2	0.9	0.8	0.6
New Taiwan dollar[3]	0.1	0.3	0.4	0.4	0.5
Hungarian forint[3]	0.0	0.0	0.2	0.3	0.4
Malaysian ringgit[2]	0.0	0.1	0.1	0.1	0.3
Thai baht[3]	0.1	0.2	0.2	0.2	0.2
Czech koruna[3]	0.3	0.2	0.2	0.2	0.2
Philipine peso[2]	0.0	0.0	0.0	0.1	0.2
Chilean peso[2]	0.1	0.2	0.1	0.1	0.2
Indonesian rupiah[2]	0.1	0.0	0.1	0.1	0.2
Israeli new shekel[2]	...	0.1	0.1	0.2	0.2
Colombian peso[2]	...	0.0	0.0	0.1	0.1
Saudi Riyal[2]	0.1	0.1	0.0	0.1	0.1
Other currencies	8.9	6.5	6.6	7.6	4.8
All currencies	**200.0**	**200.0**	**200.0**	**200.0**	**200.0**

[1] Because two currencies are involved in each transaction, the sum of the percentage shares of individual currencies totals 200% instead of 100%. Adjusted for local and cross-border inter-dealer double-counting (ie “net-net” basis). [2] Data previous to 2007 cover local home currency trading only. [3] For 1998, the data cover local home currency trading only. [4] Included as main currency from 2010. For more details on the set of new currencies covered by the 2010 survey, see the statistical notes in Section IV. [5] For 1998, the data cover local home currency trading only. Included as main currency from 2007.

Table 4

Global foreign exchange market turnover by currency pair[1]

Daily averages in April, in billions of US dollars and percentages

Currency pair	1998		2001		2004		2007		2010	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
USD/EUR	.	.	372	30	541	28	892	27	1,101	28
USD/DEM	309	20	.	.	.	.	.	.	.	.
USD/FRF	60	4	.	.	.	.	.	.	.	.
USD/XEU	17	1	.	.	.	.	.	.	.	.
USD/OthEMS	178	12	.	.	.	.	.	.	.	.
USD/JPY	292	19	250	20	328	17	438	13	568	14
USD/Oth	140	9	152	12	251	13	498	15	445	11
USD/GBP	122	8	129	10	259	13	384	12	360	9
USD/AUD	44	3	51	4	107	6	185	6	249	6
USD/CAD	52	3	54	4	77	4	126	4	182	5
USD/CHF	82	5	59	5	83	4	151	5	168	4
EUR/JPY	.	.	36	3	61	3	86	3	111	3
EUR/GBP	.	.	27	2	47	2	69	2	109	3
EUR/Oth	0	0	17	1	35	2	83	2	102	3
USD/HKD[2]	14	1	19	2	19	1	51	2	85	2
EUR/CHF	.	.	13	1	30	2	62	2	72	2
USD/KRW[2]	2	0	8	1	16	1	25	1	58	1
JPY/Oth	9	1	4	0	11	1	43	1	49	1
USD/SEK[3]	3	0	6	0	7	0	57	2	45	1
USD/INR[2]	1	0	3	0	5	0	17	1	36	1
EUR/SEK[3]	.	.	3	0	3	0	24	1	35	1
USD/CNY[2]	0	0	.	.	1	0	9	0	31	1
USD/BRL[2]	3	0	5	0	3	0	5	0	25	1
USD/ZAR[2]	6	0	7	1	6	0	7	0	24	1
JPY/AUD[2]	1	0	1	0	3	0	6	0	24	1
EUR/CAD	.	.	1	0	2	0	7	0	14	0
EUR/AUD	.	.	1	0	4	0	9	0	12	0
JPY/NZD[2]	0	0	0	0	0	0	0	0	4	0
DEM/JPY	30	2	.	.	.	.	.	.	.	.
DEM/GBP	36	2	.	.	.	.	.	.	.	.
DEM/CHF	21	1	.	.	.	.	.	.	.	.
DEM/FRF	10	1	.	.	.	.	.	.	.	.
DEM/XEU	3	0	.	.	.	.	.	.	.	.
DEM/OthEMS	37	2	.	.	.	.	.	.	.	.
DEM/Oth	22	1	.	.	.	.	.	.	.	.
OthEMS[4]	4	0	.	.	.	.	.	.	.	.
Other pairs	30	2	23	2	36	2	90	3	72	2
All currency pairs	1,527	100	1,239	100	1,934	100	3,324	100	3,981	100

[1] Adjusted for local and cross-border inter-dealer double-counting (ie "net-net" basis). [2] Included as main currency pair from 2010. For more details on the set of currency pairs covered by the 2010 survey, see the statistical notes in Section IV. [3] Included as main currency pair from 2007. [4] OthEMS/OthEMS: the data cover local home currency trading only.

Table 5

Geographical distribution of global foreign exchange market turnover[1]

Daily averages in April, in billions of US dollars and percentages

Country	1995		1998		2001		2004		2007		2010	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Argentina	…	…	2.2	0.1	…	…	0.7	0.0	1.1	0.0	1.6	0.0
Australia	40.5	2.5	48.3	2.3	54.0	3.2	107.1	4.1	176.3	4.1	192.1	3.8
Austria	13.5	0.8	11.8	0.6	8.4	0.5	14.6	0.6	18.8	0.4	19.5	0.4
Bahrain	3.2	0.2	2.6	0.1	3.0	0.2	2.7	0.1	3.2	0.1	4.5	0.1
Belgium	28.5	1.7	27.3	1.3	10.4	0.6	20.8	0.8	50.1	1.2	32.5	0.6
Brazil[2]	…	…	5.1	0.2	5.5	0.3	3.8	0.1	5.8	0.1	14.1	0.3
Bulgaria	…	…	…	…	…	…	…	…	0.5	0.0	0.9	0.0
Canada	30.7	1.9	37.9	1.8	44.2	2.6	59.3	2.3	64.0	1.5	61.9	1.2
Chile	…	…	1.3	0.1	2.3	0.1	2.5	0.1	4.0	0.1	5.5	0.1
China[3]	…	…	0.2	0.0	…	…	0.6	0.0	9.3	0.2	19.8	0.4
Chinese Taipei	…	…	4.9	0.2	4.8	0.3	9.5	0.4	15.5	0.4	18.0	0.4
Colombia	…	…	…	…	0.4	0.0	0.8	0.0	1.9	0.0	2.8	0.1
Czech Republic	…	…	5.1	0.2	2.1	0.1	2.4	0.1	5.0	0.1	5.1	0.1
Denmark	31.8	1.9	28.0	1.3	23.8	1.4	42.1	1.6	88.2	2.1	120.5	2.4
Estonia	…	…	…	…	…	…	0.2	0.0	1.3	0.0	1.1	0.0
Finland	5.4	0.3	4.4	0.2	1.6	0.1	1.8	0.1	8.3	0.2	31.3	0.6
France	61.5	3.8	77.2	3.7	49.6	2.9	66.5	2.6	126.8	3.0	151.6	3.0
Germany	79.2	4.8	99.6	4.7	91.5	5.4	120.4	4.6	101.4	2.4	108.6	2.1
Greece	3.3	0.2	7.2	0.3	4.8	0.3	4.3	0.2	5.0	0.1	5.2	0.1
Hong Kong SAR	90.9	5.6	79.9	3.8	68.4	4.0	106.0	4.1	181.0	4.2	237.6	4.7
Hungary	…	…	1.4	0.1	0.6	0.0	2.8	0.1	6.9	0.2	4.2	0.1
India	…	…	2.4	0.1	3.4	0.2	6.9	0.3	38.4	0.9	27.4	0.5
Indonesia	…	…	1.8	0.1	3.9	0.2	2.3	0.1	3.0	0.1	3.4	0.1
Ireland	4.9	0.3	10.7	0.5	8.7	0.5	7.5	0.3	11.4	0.3	14.6	0.3
Israel	…	…	…	…	1.5	0.1	5.0	0.2	8.4	0.2	10.0	0.2
Italy	24.2	1.5	28.6	1.4	17.6	1.0	23.5	0.9	37.6	0.9	28.6	0.6
Japan	167.7	10.3	146.3	7.0	152.7	9.0	207.4	8.0	250.2	5.8	312.3	6.2
Korea	…	…	3.6	0.2	9.8	0.6	20.5	0.8	35.2	0.8	43.8	0.9
Latvia	…	…	…	…	…	…	2.0	0.1	2.6	0.1	2.2	0.0
Lithuania	…	…	…	…	…	…	1.0	0.0	1.0	0.0	1.2	0.0
Luxembourg	19.2	1.2	22.7	1.1	13.1	0.8	14.6	0.6	43.9	1.0	33.4	0.7
Malaysia	…	…	1.1	0.1	1.4	0.1	1.7	0.1	3.5	0.1	7.3	0.1
Mexico	…	…	8.7	0.4	8.6	0.5	15.3	0.6	15.3	0.4	17.0	0.3
Netherlands	26.6	1.6	42.8	2.0	30.5	1.8	52.1	2.0	24.8	0.6	18.3	0.4
New Zealand	7.2	0.4	7.0	0.3	4.0	0.2	7.0	0.3	12.8	0.3	8.8	0.2
Norway	7.6	0.5	8.9	0.4	13.0	0.8	14.5	0.6	32.1	0.7	22.2	0.4
Peru	…	…	…	…	0.2	0.0	0.3	0.0	0.8	0.0	1.4	0.0
Philippines	…	…	0.8	0.0	1.1	0.1	0.7	0.0	2.3	0.1	5.0	0.1
Poland	…	…	2.7	0.1	5.1	0.3	6.5	0.3	9.2	0.2	7.8	0.2
Portugal	2.4	0.1	4.4	0.2	1.7	0.1	1.9	0.1	4.3	0.1	3.7	0.1
Romania	…	…	…	…	…	…	…	…	2.5	0.1	3.2	0.1
Russia	…	…	6.9	0.3	9.6	0.6	29.8	1.1	50.2	1.2	41.7	0.8
Saudi Arabia	…	…	2.4	0.1	2.1	0.1	2.1	0.1	4.5	0.1	5.3	0.1
Singapore	107.3	6.6	144.9	6.9	103.7	6.1	133.6	5.1	241.8	5.6	266.0	5.3
Slovakia	…	…	…	…	0.8	0.0	1.6	0.1	3.5	0.1	0.4	0.0
Slovenia	…	…	…	…	0.1	0.0	0.1	0.0	0.3	0.0	…	…
South Africa	5.2	0.3	8.9	0.4	9.9	0.6	9.8	0.4	14.0	0.3	14.4	0.3
Spain	18.4	1.1	20.0	1.0	8.1	0.5	13.9	0.5	17.1	0.4	29.3	0.6
Sweden	20.4	1.2	16.1	0.8	24.9	1.5	31.9	1.2	43.9	1.0	44.8	0.9
Switzerland	88.4	5.4	91.6	4.4	76.3	4.5	85.3	3.3	253.6	5.9	262.6	5.2
Thailand	…	…	3.1	0.1	1.9	0.1	3.1	0.1	6.3	0.1	7.4	0.1
Turkey	…	…	…	…	1.0	0.1	3.5	0.1	4.1	0.1	16.8	0.3
United Kingdom	478.8	29.3	685.2	32.6	541.7	31.8	835.3	32.0	1,483.2	34.6	1,853.6	36.7
United States	265.8	16.3	383.4	18.3	272.6	16.0	498.6	19.1	745.2	17.4	904.4	17.9
Total	**1,632.7**	**100.0**	**2,099.4**	**100.0**	**1,704.7**	**100.0**	**2,608.5**	**100.0**	**4,281.1**	**100.0**	**5,056.3**	**100.0**

[1] Adjusted for local inter-dealer double-counting (ie “net-gross” basis). Tables 1, 2, 3 and 4 are expressed on a "net-net" basis. Estimated coverage of the foreign exchange market ranged between 90% and 100% in most countries. [2] Data for 1998 only cover spot transactions. [3] Data from 1998 to 2004 only cover spot transactions.

Table 6

Global OTC interest rate derivatives market turnover by instrument[1]

Average daily turnover in April, in billions of US dollars

Instrument	1998	2001	2004	2007	2010
Interest rate instruments[2]	**265**	**489**	**1,025**	**1,686**	**2,057**
FRAs	74	129	233	258	600
Swaps	155	331	621	1,210	1,275
Options and other instruments[3]	36	29	171	217	182
Memo:					
Turnover at April 2010 exchange rates[4]	*310*	*640*	*1,085*	*1,680*	*2,057*
Exchange-traded derivatives[5]	*1,381*	*2,188*	*4,524*	*6,099*	*8,142*

[1] Adjusted for local and cross-border inter-dealer double-counting (ie “net-net” basis). [2] Single currency interest rate contracts only. [3] The category "other interest rate products" covers highly leveraged transactions and/or trades whose notional amount is variable and where a decomposition into individual plain vanilla components was impractical or impossible. [4] Non-US dollar legs of foreign currency transactions were converted into original currency amounts at average exchange rates for April of each survey year and then reconverted into US dollar amounts at average April 2010 exchange rates. [5] Sources: FOW TRADEdata; Futures Industry Association; various futures and options exchanges. Reported monthly data were converted into daily averages of 20.5 days in 1998, 19.5 days in 2001, 20.5 in 2004, 20 in 2007 and 20 in 2010.

Table 7

Gobal OTC interest rate market turnover by instrument, counterparty[1]

Daily averages in April, in billions of US dollars and percentages

Instrument/counterparty	1998		2001		2004		2007		2010	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
FRAs	**74**	**28**	**129**	**26**	**233**	**23**	**258**	**15**	**600**	**29**
with reporting dealers	46	61	88	68	112	48	143	55	296	49
with other financial institutions	21	29	37	28	113	48	89	34	267	44
with non-financial customers	7	10	5	4	8	3	27	10	37	6
Swaps	**155**	**58**	**331**	**68**	**621**	**61**	**1,210**	**72**	**1,275**	**62**
with reporting dealers	87	56	219	66	325	52	552	46	537	42
with other financial institutions	56	36	98	30	241	39	574	47	585	46
with non-financial customers	11	7	14	4	55	9	85	7	154	12
Options and other instruments[2]	**36**	**14**	**29**	**6**	**171**	**17**	**217**	**13**	**182**	**9**
with reporting dealers	17	46	16	55	57	34	106	49	65	36
with other financial institutions	12	32	7	26	96	56	85	39	86	47
with non-financial customers	8	21	5	18	16	9	24	11	30	16
Total	**265**	**100**	**489**	**100**	**1,025**	**100**	**1,686**	**100**	**2,057**	**100**
with reporting dealers	150	56	323	66	494	48	800	47	898	44
with other financial institutions	89	34	142	29	450	44	747	44	939	46
with non-financial customers	27	10	25	5	79	8	136	8	221	11
Local	133	50	207	42	414	40	564	33	757	37
Cross-border	132	50	282	58	609	59	1,120	66	1,300	63

[1] Adjusted for local and cross-border inter-dealer double-counting (ie “net-net” basis). Due to incomplete reporting, components do not always add up to totals. [2] The category "other interest rate products" covers highly leveraged transactions and/or trades whose notional amount is variable and where a decomposition into individual plain vanilla components was impractical or impossible.

Table 8

Global OTC interest rate derivatives turnover by currency[1]

Daily averages in April, in billions of US dollars

Currency	1998	2001	2004	2007	2010
FRAs	**74**	**129**	**233**	**258**	**600**
US dollar	23	39	59	98	282
Euro	.	48	116	66	202
Japanese yen	3	9	0	4	2
Pound sterling	8	12	25	42	53
Swiss franc	4	2	2	4	12
Canadian dollar	3	1	2	1	9
Australian dollar	2	4	5	3	8
Swedish krona	1	4	9	18	10
Other	31	10	16	22	22
Swaps	**155**	**331**	**621**	**1,210**	**1,275**
US dollar	36	100	195	322	302
Euro	.	173	288	528	562
Japanese yen	14	16	35	110	114
Pound sterling	8	23	59	124	142
Swiss franc	5	4	7	14	8
Canadian dollar	3	4	5	12	38
Australian dollar	1	4	7	14	28
Swedish krona	0	1	4	13	7
Other	87	5	20	74	73
Options and other instruments[2]	**36**	**29**	**171**	**217**	**182**
US dollar	12	12	93	113	70
Euro	.	11	57	62	70
Japanese yen	10	2	10	23	8
Pound sterling	1	2	6	6	19
Swiss franc	0	0	1	0	0
Canadian dollar	1	1	1	3	1
Australian dollar	0	0	1	1	1
Swedish krona	0	0	0	1	4
Other	11	0	1	6	8
Total	**265**	**489**	**1,025**	**1,686**	**2,057**
US dollar	71	152	347	532	654
Euro	.	232	461	656	835
Japanese yen	27	27	46	137	124
Pound sterling	17	37	90	172	214
Swiss franc	9	6	10	19	21
Canadian dollar	7	6	8	15	48
Australian dollar	3	8	12	19	37
Swedish krona	2	5	13	33	20
Other	129	16	38	102	103

[1] Adjusted for local and cross-border inter-dealer double-counting (ie “net-net” basis). Single currency interest rate contracts only. [2] The category "other interest rate products" covers highly leveraged transactions and/or trades whose notional amount is variable and where a decomposition into individual plain vanilla components was impractical or impossible.

Table 9

Geographical distribution of global interest rate derivatives turnover[1]

Daily averages in April, in billions of US dollars and percentages

Country	1998		2001		2004		2007		2010	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Argentina	0.0	0.0	…	…	…	…	0.0	0.0	0.0	0.0
Australia	2.8	0.8	9.8	1.5	12.8	1.0	22.7	1.0	40.6	1.5
Austria	3.3	1.0	4.2	0.6	13.5	1.0	4.9	0.2	4.8	0.2
Bahrain	0.2	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.0
Belgium	4.9	1.4	14.1	2.1	30.5	2.3	21.6	1.0	10.0	0.4
Brazil	…	…	0.3	0.0	0.9	0.1	0.1	0.0	7.0	0.3
Bulgaria	…	…	…	…	…	…	0.0	0.0	0.0	0.0
Canada	6.4	1.9	9.9	1.5	12.1	0.9	20.6	0.9	41.7	1.6
Chile	…	…	…	…	0.0	0.0	0.0	0.0	0.2	0.0
China	…	…	…	…	…	…	0.0	0.0	1.5	0.1
Chinese Taipei	0.1	0.0	0.1	0.0	1.5	0.1	1.5	0.1	1.6	0.1
Colombia	…	…	…	…	…	…	0.0	0.0	0.0	0.0
Czech Republic	…	…	0.2	0.0	0.6	0.0	0.7	0.0	0.3	0.0
Denmark	4.2	1.2	5.8	0.9	10.8	0.8	10.0	0.5	16.4	0.6
Estonia	…	…	…	…	…	…	0.0	0.0	0.0	0.0
Finland	2.1	0.6	0.5	0.1	0.3	0.0	3.0	0.1	1.3	0.1
France	40.6	11.8	65.1	9.6	151.3	11.4	176.1	8.1	193.3	7.3
Germany	29.1	8.5	94.0	13.9	42.8	3.2	90.2	4.2	48.5	1.8
Greece	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.2	0.0
Hong Kong SAR	2.4	0.7	2.6	0.4	11.3	0.8	17.3	0.8	18.5	0.7
Hungary	0.0	0.0	0.0	0.0	0.2	0.0	0.8	0.0	0.2	0.0
India	…	…	0.1	0.0	0.7	0.1	3.4	0.2	3.5	0.1
Indonesia	…	…	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Ireland	1.8	0.5	5.8	0.9	12.4	0.9	7.2	0.3	7.1	0.3
Israel	…	…	…	…	…	…	0.0	0.0	0.0	0.0
Italy	4.1	1.2	23.7	3.5	37.9	2.8	29.8	1.4	27.3	1.0
Japan	31.6	9.2	15.7	2.3	30.9	2.3	76.4	3.5	89.9	3.4
Korea	0.0	0.0	0.1	0.0	0.9	0.1	5.4	0.2	10.7	0.4
Latvia	…	…	…	…	…	…	0.0	0.0	0.0	0.0
Lithuania	…	…	…	…	0.0	0.0	0.1	0.0	0.0	0.0
Luxembourg	2.0	0.6	4.5	0.7	7.3	0.6	3.4	0.2	2.4	0.1
Malaysia	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	1.0	0.0
Mexico	0.2	0.1	0.4	0.1	1.4	0.1	2.9	0.1	1.4	0.1
Netherlands	3.5	1.0	24.2	3.6	18.8	1.4	27.0	1.2	61.3	2.3
New Zealand	0.4	0.1	0.3	0.0	1.3	0.1	2.8	0.1	1.5	0.1
Norway	2.8	0.8	2.9	0.4	5.2	0.4	6.6	0.3	11.9	0.5
Peru	…	…	…	…	…	…	0.0	0.0	0.0	0.0
Philippines	0.0	0.0	…	…	0.0	0.0	0.0	0.0	1.1	0.0
Poland	…	…	0.4	0.1	1.0	0.1	2.7	0.1	1.6	0.1
Portugal	1.0	0.3	0.3	0.0	0.7	0.1	0.8	0.0	0.7	0.0
Romania	…	…	…	…	…	…	0.0	0.0	0.0	0.0
Russia	0.0	0.0	…	…	…	…	0.0	0.0	0.0	0.0
Saudi Arabia	0.2	0.1	0.1	0.0	0.1	0.0	0.3	0.0	0.1	0.0
Singapore	5.3	1.6	3.2	0.5	8.6	0.6	57.4	2.6	34.6	1.3
Slovakia	…	…	0.0	0.0	…	…	0.0	0.0	0.0	0.0
Slovenia	…	…	…	…	…	…	0.0	0.0	…	…
South Africa	0.7	0.2	0.6	0.1	3.0	0.2	4.5	0.2	6.0	0.2
Spain	2.9	0.8	20.5	3.0	11.9	0.9	16.8	0.8	30.7	1.2
Sweden	3.6	1.0	3.2	0.5	7.4	0.6	12.3	0.6	18.2	0.7
Switzerland	5.9	1.7	9.6	1.4	12.0	0.9	60.7	2.8	78.8	3.0
Thailand	…	…	0.0	0.0	0.1	0.0	0.4	0.0	0.7	0.0
Turkey	…	…	…	…	0.0	0.0	0.1	0.0	0.0	0.0
United Kingdom	122.9	35.8	237.8	35.2	563.0	42.3	957.1	44.0	1234.9	46.5
United States	58.4	17.0	115.7	17.1	317.4	23.8	525.0	24.2	641.8	24.2
Total	**343.6**	**100.0**	**676.0**	**100.0**	**1331.1**	**100.0**	**2173.2**	**100.0**	**2653.7**	**100.0**

[1] Adjusted for local inter-dealer double-counting (ie “net-gross” basis). Tables 6, 7 and 8 are expressed on a "net-net" basis.

EXHIBIT B

CME Submission 12-053

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CME Group

Lisa Dunsky
Director and Associate General Counsel
Legal Department

February 22, 2012

BY ELECTRONIC SUBMISION AND OVERNIGHT DELIVERY

Mr. David Stawick
Office of the Secretariat
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, N.W.
Washington, DC 20581

Re: **Mandatory Clearing Determination for Pre-Enactment Swaps and Swaps Cleared as of February 1, 2012, CME Submission No. 12-053**

Dear Mr. Stawick:

This is in response to Sarah Josephson's letter of February 1, 2012 to Kim Taylor, president of the clearing house division of Chicago Mercantile Exchange Inc. ("CME Clearing"), with respect to the CFTC's mandatory clearing determinations. Among other things, the letter requests derivatives clearing organizations ("DCOs") to agree to further extend the deadline for a determination by the CFTC on pre-enactment swaps until the review process outlined in Regulation 39.5(b) is completed. CME Clearing agrees to such an extension, per the CFTC's request.

For the sake of clarity, we thought it best to identify those pre-enactment swaps that CME Clearing continued to accept for clearing as of February 1, 2012 (the relevant date specified in Ms. Josephson's letter for purposes of this submission). Those "swaps" (utilizing the CFTC's proposed definition of that term) consist of the following:

- Credit Default Swaps ("CDS"): CDX Indices (IG 12 and IG 13, 5-year tenors)
- Denatured Fuel Ethanol Forward Month Swaps, and Cash-Settled Options on those swaps
- Freight Route Forwards
- Grain Calendar Swaps (corn, soybean and wheat)
- Equity Index Swaps:
  - S&P GSCI Excess Return ("ER") Index Swaps and Index Forwards
  - S&P GSCI Gold ER Index Swaps and Crude Oil ER Index Swaps
  - S&P GSCI ER Index Forward Swaps (2-Month and 3-Month)
  - Dow Jones-UBS Commodity Index Swaps
  - Dow-Jones Index Forward Swaps (2-Month and 3-Month)

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Since the date of enactment of the Dodd-Frank Act, CME Clearing began clearing other CDS CDX Indices, and we are seeking a mandatory clearing determination for CDX North American Investment Grade series 9 and forward (including all future on-the-runs), and High Yield series 11 and forward (including all future on-the-runs). Also since Dodd-Frank was enacted, CME Clearing began clearing certain interest rate swaps (IRS). We are seeking a mandatory clearing determination for all non-option interest rate swaps denominated in a currency cleared by any qualified DCO.[1] Also included in this submission are Fertilizer Swaps, which CME Clearing accepted for clearing as of February 1, 2012, but not as of the enactment date of the Dodd-Frank Act.

In addition, as of February 1, 2012, but not as of the date of enactment of the Dodd-Frank Act, CME Clearing listed for clearing 38 OTC FX products that fall within the CFTC proposed definition of "swap". We are not seeking a mandatory clearing determination for these products, some of which we understand Treasury may exempt from a central-clearing requirement under its Dodd-Frank authority. For these reasons, CME's OTC FX products are not part of this submission.

Pursuant to Regulation 39.5(b)(3)(i), we hereby state that CME Clearing is eligible to accept each swap and each group, category, type and class of swaps that is the subject of this submission. If the CFTC determines that each such swap and group, category, type and class of swap is required to be cleared, CME Clearing will be able to maintain compliance with the 15 DCO core principles set forth in section 5b(c)(2) of the Commodity Exchange Act, and the regulations promulgated thereunder. In accordance with Regulation 39.5(b)(3)(ii)-(viii), we are providing the following information in support of this submission:

39.5(b)(3)(ii)(A): Outstanding Notional Exposures, Trading Liquidity and Pricing Data

We have enclosed an Excel spreadsheet with information regarding the relevant products' outstanding notional exposures, trading liquidity and pricing data (as applicable) at CME Clearing, as of February 1, 2012. This document has been marked for Confidential Treatment.[2]

39.5(b)(3)(ii)(B): Rule Framework, Capacity, Operational Expertise and Resources, Credit Support Infrastructure

In general, the rule framework for the products that are the subject of this submission can be found in the rule books of CME, the Chicago Board of Trade ("CBOT") for Grain Calendar and Ethanol Swaps, and the New York Mercantile Exchange ("NYMEX") for Freight Route Forwards. Each of these rule books is available at http://www.cmegroup.com/market-regulation/rulebook/index.html.

Attached is a product-specifications document that describes each "swap" that is part of this submission. The document includes links to pertinent product chapters in the CME, CBOT and NYMEX rule books.[3] Also relevant to the rule framework are three CME Clearing House Manuals (one for CDS, one for IRS, and one for all remaining products), copies of which are enclosed and which have been designated for

[1] We believe that the CFTC should clarify that any swap (or group, category, type or class of swap) subject to mandatory clearing based on a submission made by one DCO may be cleared by any other qualified DCO. The legislative intent of the Dodd-Frank Act and the open-access provisions therein are strong authority for the proposition that any swap determined to be subject to mandatory clearing may be cleared by any qualified DCO.

[2] For purposes of this submission, we have separated the documents that are marked for Confidential Treatment from those that are not so marked.

[3] To utilize the links in the attached document, place your cursor over the underlined link and press the Control button on your computer. This will turn the cursor into a hand icon and activate the link.

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Confidential Treatment.[4] The enclosed document entitled *CME Clearing Financial Safeguards* contains information regarding CME Clearing's capacity, expertise, resources and financial safeguards system.

39.5(b)(3)(ii)(C): Effect on Mitigation of Systemic Risk

While markets in certain OTC derivatives asset classes continued to function well during the recent financial crisis, the crisis demonstrated the potential for systemic risk arising from the interconnectedness of OTC derivatives market participants and the limited transparency of bilateral counterparty relationships. To help mitigate systemic risk in the OTC derivatives markets, the G-20 Leaders agreed that all standardized OTC derivatives contracts should be cleared through central counterparties by the end of 2012. One of the key goals of the Dodd-Frank Act is the reduction of systemic risk through the use of central clearing for OTC derivatives.

As a central counterparty, CME Clearing interposes itself between counterparties to the swaps (and other derivatives products) that it clears, becoming the buyer to every seller and the seller to every buyer. For each swap that it clears, CME Clearing provides all clearing house services, including a mark-to-market function, on a daily basis. Depending upon the particular asset class, CME Clearing may standardize contract-critical dates (*e.g.*, start dates, last trade dates, expiry dates) and other contract terms. This may enable customers who hold positions to liquidate or to adjust positions simply by buying back or selling the relevant contracts. The associated benefits are considerable:

- *Centralized clearing.* Clearing OTC swaps through CME Clearing allows market participants to free up counterparty credit lines. The daily mark-to-market process employed by CME Clearing enhances customer risk management.

- *Operational efficiencies.* Centralized clearing of swaps reduces operational burdens in several ways. Standardization and centralized clearing enables consolidation of collateral management and cash flows and eliminates the need for novations or tear-ups.

- *Ease of position adjustment.* In non-cleared markets, the only means to completely eliminate the risk of a swap is to (i) enter into a tear-up agreement with the swap counterparty, or (ii) enter into a novation (*i.e.*, find another entity willing to assume its side of the swap). In either case, the tear-up or the novation must be approved by the bilateral swap counterparty. For most asset classes, central clearing may be used to offset by a contra trade.

As further described in the enclosed document entitled *CME Clearing Financial Safeguards*, and as reflected in the enclosed Clearing House Manuals, CME Clearing has the necessary resources available to clear the swaps that are the subject of this submission. With respect to margining in particular, please see Chapter 7 of the IRS Manual and the CDS Manual, and the enclosed document entitled *CME SPAN* (the margin methodology utilized for our Grain Calendar Swaps, Ethanol Swaps, Equity Index Swaps, Freight Route Forwards and Fertilizer Swaps). With regard to the size of the OTC markets for the products that are the subject of this submission, please see the enclosed copy of Table 19 (Amounts of outstanding OTC derivatives) from the BIS Quarterly Review, December 2011.

39.5(b)(3)(ii)(D): Effect on Competition – Fees and Charges

We have enclosed documents regarding fees and charges for the "swaps" that are the subject of this submission.

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[4] Portions of the CME, CBOT and NYMEX rule books, and the enclosed Clearing House Manuals, will be revised, as necessary and appropriate, to comply with new CFTC DCO regulations that go into effect on May 7 and November 8, 2012.

39.5(b)(3)(ii)(E): Reasonable Legal Certainty in DCO or Clearing Member Insolvency

The bankruptcy of a DCO would be governed by subchapter IV of Chapter 7 of the U.S. Bankruptcy Code (11 U.S.C. §§ 761-767), and by the CFTC's Part 190 bankruptcy regulations. Also relevant in the event that CME were to enter into bankruptcy proceedings is CME Rule 818 (Close-Out Netting), a copy of which is enclosed.

The bankruptcy of a clearing member that is a U.S. futures commission merchant ("FCM") would be governed by subchapter IV of Chapter 7 of the U.S. Bankruptcy Code (11 U.S.C. §§ 761-767) and the CFTC's Part 190 bankruptcy regulations. If an FCM is also registered as a broker-dealer, certain aspects of its insolvency proceeding may also be governed by the Securities Investor Protection Act. For further details regarding the legal certainty provided under the relevant U.S. insolvency laws, please see pages 17-18 of the enclosed *CME Clearing Financial Safeguards* document.

39.5(b)(3)(iii): Product Specifications

With regard to product specifications for the "swaps" that are included in this submission, please see the attached product-specifications document and the enclosed Clearing House Manuals, including but not limited to, in the CDS Manual, Chapter 4 Appendix 1 – Cleared CDS Trade Confirmation, and Chapter 9, Credit Event/Succession Event Processing, and in the IRS Manual, Chapter 4 Appendix 1 – Cleared IRS Trade Processing.

39.5(b)(3)(iv): Participant Eligibility Standards

We have enclosed a *Summary of Requirements* for clearing membership, and the *CME Handbook for OTC Clearing Membership*. In addition, please see CME Rule 8F004 (OTC Clearing Member Obligations), 8G04 (IRS Clearing Member Obligations) and 8H04 (CDS Clearing Member Obligations). Certain of these rules and requirements will be revised, as necessary and appropriate, to comply with new CFTC regulations regarding Participant and Product Eligibility, which go into effect on May 7, 2012.

39.5(b)(3)(v): Pricing Sources, Models and Procedures

We have enclosed documents concerning settlement procedures for certain swaps that are the subject of this submission. Please also see Chapter VII (Daily Settlements and Asset Management) of the Clearing House Manual of Operations, and Chapter 8 (End of Day Valuations) of the CDS and IRS Manuals. In addition, we have enclosed a copy of a services agreement between CME and Credit Market Analysis Ltd. relating to CME's CDS products, which has been marked for Confidential Treatment.

39.5(b)(3)(vi): Risk Management Procedures

We have enclosed documents concerning CME Clearing's risk management procedures, which have been marked for Confidential Treatment. In addition, please refer to the Clearing House Manual of Operations, including but not limited to Chapters VI (Performance Bonds/Margin) and VII (Daily Settlements and Asset Management); the CDS Manual, including but not limited to Chapters 7 (CDS Margining), 8 (End of Day Valuations), 10 (Guaranty Fund Calculation) and 11 (CDS Default Management); and the IRS Manual, including but not limited to Chapters 7 (Interest Rates Margining), 8 (End of Day Valuations), 9 (Financial Safeguards – Guaranty Fund Calculation) and 11 (Interest Rate Swaps Default Management). Certain of these materials will be revised, as necessary and appropriate, to comply with new CFTC regulations regarding Risk Management, which go into effect on May 7, 2012.

39.5(b)(3)(vii): Applicable Rules, Manuals, Policies and Procedures

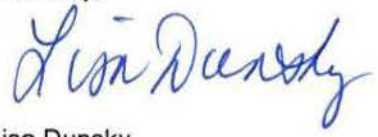
Links to applicable rule books are included in this submission, and copies of Clearing House Manuals and relevant policies and procedures are enclosed.

39.5(b)(3)(viii): Notice of Submission

Notice of this submission (without enclosures, many of which have been designated for Confidential Treatment) has been concurrently posted on CME's web site at http://www.cmegroup.com/market-regulation/rule-filings.html.

Because of the large volume of enclosures with this letter, we are sending you a copy of the letter with a complete set of the enclosures via overnight courier. Should you have any questions regarding this submission, or if any additional information is required, please contact me at (312) 338-2483 or via e-mail at lisa.dunsky@cmegroup.com.

Sincerely,



Lisa Dunsky
Director and Associate General Counsel

Enclosures

cc: Sarah Josephson (by e-mail and overnight courier, w/ encl.)

EXHIBIT C

CME Submission 11-360R
&
CME Submission 11-144

Timothy R. Elliott
Director and Associate General Counsel
Legal Department

September 22, 2011

Mr. David Stawick
Office of the Secretariat
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, N.W.
Washington, DC 20581

RE: Section 5c(c)(1), Rules 39.4(c)(2), 40.2 and 40.6(a) – Exchange Certification of CME Rule Amendments and Notification of Launch Date for Selected Cash Settlement, Cleared OTC CME WM/Reuters Foreign Exchange (FX) Spot, Forward and Swaps and Non-Deliverable Forward (NDF) Transactions. CME Submission 11-360

Dear Mr. Stawick:

Chicago Mercantile Exchange Inc. hereby notifies the Commission that on Tuesday, January 3, 2012, CME will launch certain new Cash Settlement, Cleared Over-the-Counter (OTC) CME WM/Reuters Spot, Forward and Swaps and Non-Deliverable Forward (NDF) Transactions. This submission includes rule amendments supporting the new product offerings, which are summarized as follows.

CLEARED OTC SPOT, FORWARD AND SWAP TRANSACTIONS

Effective Tuesday, January 3, 2012, Chicago Mercantile Exchange Inc. will begin offering clearing services for 26 new foreign exchange (FX) pairs for over-the-counter (OTC) cash settlement as CME WM/Reuters spot, forward and swap transactions. These FX pairs will include: GBP/USD; USD/CAD; USD/JPY; USD/CHF; AUD/USD; USD/MXN; NZD/USD; USD/ZAR; EUR/USD; USD/NOK; USD/SEK; USD/CZK; USD/HUF; USD/PLN; USD/ILS; USD/TRY; USD/DKK; EUR/GBP; EUR/JPY; EUR/CHF; AUD/JPY; CAD/JPY; EUR/AUD; USD/HKD; USD/SGD; and USD/THB.

Also, at this same time, CME will begin offering clearing services for 11 new FX pairs for traditional OTC cash settlement non-deliverable spot, forward and swap transactions. CME has already offered clearing services for traditional Cleared OTC U.S. Dollar / Chilean Peso (USD/CLP) non-deliverable forward (NDF) transactions, beginning on Monday, April 18, 2011, as the first step of a broad product suite. Like the OTC USD/CLP products that CME is already offering for clearing, the new OTC USD/Brazilian real (BRL), USD/Chinese Renminbi (RMB), USD/Russian ruble (RUB), USD/Colombian peso (COP), USD/Peruvian sol (PEN), USD/Korean won (KRW), USD/Indian rupee (INR), USD/Malaysian ringgit (MYR), USD/Indonesian rupiah (IDR), USD/Taiwan dollar (TWD) and USD/Philippines peso (PHP) products that are included in this submission are cash-settlement NDFs.

Please note that the new 26 FX pairs OTC CME WM/Reuters (branded) spot, forward and swap products that are described in this submission, although capable of being physically deliverable, are also cash settlement in U.S. dollars to the OTC FX benchmark WM/Reuters London FX Closing Spot Rate (4 PM London time). These 26 new offerings constitute two-thirds of the second phase of CME Group plans to introduce clearing services for a wide range of OTC FX spot, forward, swaps; and options on FX spot and forward contracts. OTC FX transactions that are executed bilaterally through brokers, ECNs or other FX trading platforms, when submitted to the CME Clearing House, are novated for purposes of clearing and

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application of financial safeguards, bookkeeping, trade processing, and final delivery or cash settlement. These contracts will be carried in the new OTC sequestered account class.

Contract Summary – There will be NDF-style transactions for U.S. dollar (USD) versus BRL, RMB, RUB, COP, PEN, KRW, INR, MYR, IDR, TWD and PHP; where original trades can be submitted for clearing that were conducted, for example, in the standard "USD/BRL" or "USD/RMB" interbank terms of Brazilian reais per U.S. dollar or Chinese renminbi per U.S. dollar, respectively. At termination only U.S. dollars are paid from or to the counterparties depending upon the final settlement price and notional amounts of the trade based upon OTC NDF standard rates published oftentimes by the central banks or their designated agents of the country of the counter currency. The CME WM/Reuters contracts are cash settled also in major currencies (mostly USD) at termination based upon the benchmark 4:00 PM London time WM/Reuters Closing Spot Prices on the valid value dates for cash settlement. CME Clearing systems are flexible to accommodate any style of quoted trade with any size notional amounts down to the precision of $0.01 and any date. Some notable contract details are highlighted as follows.

- **Sequestered Accounts:** The contracts are carried as OTC instruments in the clearing system. These positions will be carried in the OTC sequestered account class.

- **Held as True OTC FX Spot & Forwards in Clearing:** Positions shall remain open until the final cash settlement date, except that participants may request that offsetting positions be compressed prior to contract maturity.

- **Cash Settlement, NDF-Style:** Like the initial CME OTC FX products for USD/CLP, which are currently offered, the USD versus BRL, RMB, RUB, COP, PEN, KRW, INR, MYR, IDR, TWD and PHP products are offered NDF-style contracts financially or cash settled in U.S. dollars with positions held in clearing at the original trade price marked to the applicable standard OTC NDF settlement rate option (many are central bank determined/sanctioned rates). For example, final settlements for USD/BRL spot transactions are concluded based on the difference between (1) the spot exchange rate of Brazilian real per U.S. dollar, "Central Bank of Brazil PTAX offered rate" as reported for the valid value date for cash settlement by Banco Central do Brasil for the formal exchange market, and (2) the original trade price for each transaction, and (3) the result divided by the BRL per USD spot exchange rate to convert notional BRLs to USDs. Cash settlement of cleared only transactions occurs on a net basis at the customer account level.

- **Cash Settlement to WM/Reuters FX Benchmark Rates:** Analogous to the OTC NDF, cash settlement style products discussed above, the cleared OTC WM/Reuters FX spot, forward or swap products are cash settled mostly in U.S. dollars with positions held in clearing at the original trade price, but marked at termination to the applicable WM/Reuters 4:00 PM London Closing Spot Rate for the twenty-six FX pairs, such as, U.S. dollar/Mexican peso rate on the valid value date for cash settlement. Please note that CME will list for clearing FX pairs, where the spot, forward and swaps represent currency pairs where both currencies in the pair are physically deliverable. However, due to customer preferences and operational efficiencies, CME is co-branding a selection of cash settlement OTC spot, forwards and swap products with the WM/Reuters Company, based upon the OTC FX benchmark 4:00 PM London FX Closing Spot Rates.

- **Allowable Maturities:** CME Clearing will accept spot and forward transactions into clearing with delivery or cash settlement dates starting with the next business day for spot and extending outward into the future two years initially for forwards. At a later date, CME Clearing expects to expand maturity dates out an additional three years for a total maturity out five years.

- **Swaps:** Swap transactions accepted into clearing are a combination (spread) of a spot or forward position and another deferred date forward.

- **CME Clearing Set Up Structures for Cleared OTC FX:** CME Clearing operational infrastructure defines FX pair products by the price nomenclature of the trade. For example, USD/MXN OTC transactions, where the normal quotation mechanism is "MXN per USD," will be processed in the clearing structure for transactions quoted in "MXN per USD."

- **Normalization Rule:** CME Rule 856 – NORMALIZATION OF OTC FX SPOT, FORWARD, SWAP AND OPTIONS TRANSACTIONS, enables CME Clearing to accept OTC FX transactions negotiated in notional amounts of either currency. OTC FX conventions imply deals to be struck in notional amounts of a specific currency for a given currency pair. For example, the USD/MXN or "Dollar/Mexican Peso" transaction described above defines price in numbers of MXN per USD with the notional amount given in U.S. dollars. The normalization rule explains CME Clearing procedures for taking non-standard notional amounts in the contra-currency (here MXN) and "normalizing" it into standard amounts of base currency (here USD). See Appendix 1 for the Normalization rule.

- **Definitions:** New DEFINITIONS have been added to the CME Rulebook to support the Cleared OTC FX initiative. Appendix 2 provides the new definitions.

- **Position Accountability & Position Limits:** Individual rule chapters for each FX pair for cleared OTC FX will specify either Position Accountability (PA) or Position Limits (PL) or a combination of both (*e.g.,* PA with spot month PL) depending generally on the liquidity in the underlying OTC instruments and coordinating with existing and similar FX futures and options on futures contracts. Highly liquid underlying FX pair activity enable Position Accountability trigger levels as opposed to finite limits, and less liquid underlying FX pair activity require the more restrictive Position Limits. Since FX futures, options on FX futures, cleared OTC FX spot, forwards and swaps; and OTC FX options on spot and forwards, are essentially extensions of the same market, CME rules will aggregate positions for an account holder across all of these product lines per FX pair. Notional level equivalents for the existing FX pair futures contracts for Position Accountability and/or Position Limits are carried over to the Cleared OTC FX rules. Also carried over to the Cleared OTC FX rules is a new provision for an exemption from finite position limits, where the account holder demonstrates to Market Regulation a bona fide hedging strategy meeting the requirements of Regulation 1.3(z)(1) of the CFTC and other exchange rules. See Appendices 4 to 16 for the CME Rules 300.01.E.8., 257H01.F.5, 270H01.F.6, 260H01.F.7, 271H01.F.6, 273H01.F.6, 277H01.F.6, 279H01.F.6, 280H01.F.6, 281H01.F.6, 282H01.F.6, 283H01.F.6, providing for the exemptions.

  Please note, when there is not an underlying FX pair futures or options on futures contract for an FX pair listed for cleared OTC transactions, then notional amounts of cleared OTC FX positions will be translated into contract equivalents and amendments to the Chapter 5 interpretation table will be added. See Appendix 3 for Position Accountability and Position Limits changes for such cases as cleared only U.S. dollar/Chilean peso, U.S. dollar/Hong Kong dollar, U.S. dollar/Singapore dollar, U.S. dollar/Thailand baht, U.S. dollar/Colombian peso, U.S. dollar/Peruvian sol, U.S. dollar/Indian rupee, U.S. dollar/Malaysian ringgit, U.S. dollar/Indonesian rupiah, U.S. dollar/Taiwan dollar and U.S. dollar/Philippines peso. The notional contract equivalent level for these Cleared OTC FX spot, forwards and swaps is 100,000 U.S. dollars for purposes of Position Accountability and Position Limits. Therefore, the position accountability trigger level for these Cleared OTC FX spot, forwards and swaps is 600,000,000 U.S. dollars (6,000 contracts x 100,000 U.S. dollar per contract = 600 million USD).

  CME is continuing its Position Limits and Position Accountability rule structure for these Cleared OTC FX Spot, Forward and Swap Transactions in an analogous manner to the existing Cleared OTC USD/CLP Spot, Forward and Swap Transactions, to enable the exchange's Market Regulation Department to aggregate positions for a given FX pair that settle between the second and third Wednesdays (inclusive) of March, June, September and December and make these positions applicable to a 20,000 contract (USD 100,000 notional per contract) "Spot Position Limit" during this time period only. CME expects business in various cross-currency swaps to be booked on the

exchange in the future, and in particular, Latin American (LATAM) currencies versus other LATAM currencies, including OTC USD/CLP, USD/COP and USD/PEN Spot, Forwards and Swaps. The exchange wants the OTC portion of such cross-currency swaps to roll up into the Spot Position Limit rule, but be restrictive during the week preceding CME FX futures deliveries. Therefore, the exchange's Mexican peso futures contract Spot Position Limit rule is used as the template for the OTC USD/CLP contract Spot Position Limit rule. As the exchange rolls out additional cleared only OTC non-deliverable forward (NDF) products, it will adhere to this template, if applicable. See Appendices 4 to 15 for the amendments to the Position Limits and Position Accountability rules in each contract chapter and the 5.C. Position Limit and Reportable Level Table in the Interpretations section of Chapter 5.

- **Reportable Positions:** As with the USD/CLP product, please note that currently, service bureaus used by clearing firms do not have the capability to aggregate cleared OTC FX positions of clearing firm customers for subsequent reporting of the information by the clearing firms to the CFTC and CME. Therefore, CME has not set reportable level requirements characteristic of FX futures and options contracts at this time for the cleared OTC FX spot, forward and swap products. However, as noted in the section above, CME will aggregate cleared OTC spot, forward and swap positions by account holder for Position Accountability and Position Limits purposes.

- **Rule Chapters:** Appendices 4 through 15 illustrate the format that will be followed for the cleared OTC FX initiative. All CME WM/Reuters branded products will be contained in Chapter 300. Appendix 4 displays the rules for these first 26 such products. Appendices 5 through 15 illustrate the 11 new traditional OTC NDF, cash settlement products (analogous to current OTC USD/CLP NDF contract). A revised "number" and "letter" format for the FX product rulebook chapters was developed to rationalize the growing permutations of the CME Group FX product suite.

- **Cleared Only Transactions:** Note that CME Group does not intend at this time to provide a trading platform for such transactions. Rather, such transactions will be executed on a bi-lateral, privately negotiated basis amongst the two counterparties. These transactions are submitted to the CME Clearing House on a post-trade basis. Once submitted and accepted ("novated") to the CME Clearing House, these transactions are assigned the trade type "OPNT" which acronym stands for Over-the-counter Privately Negotiated Trade.

Performance Bonds & Daily Mark to Market – Recent conversations with key customers has resulted in CME moving from a "collateralization" method of valuing open positions in cleared only OTC FX spot, forward and swap transactions, to a daily mark-to-market method. Hence, in the near future, CME plans to implement a revised clearing method for its USD/CLP NDF products (there is no open interest to date). Currently, CME Clearing has deployed the SPAN system to establish performance bond or "margin" requirements for FX spot, forwards and swaps. Initial performance bond requirements are established at levels that are consistent with observed levels of volatility in the particular currency pairing and generally aligned with initial margin levels applied to current CME FX futures and option contracts, where applicable. These components of the clearing system are unchanged. However, the administration of the new margin regime will require a daily mark-to-market (MTM) on a cash basis, similar to traded FX futures. Variation margins may be satisfied with the posting of appropriate amounts of collateral, where CME Clearing collects and pays in cash between the counterparties each day.

CME Clearing will accept as collateral cash or any other instruments currently designated as approved collateral for posting for performance bonds. In order to calculate variation requirements, settlement prices will be established for each contract and for each delivery date referencing data collected from a variety of market sources.

Operationally, the CME clearing system recognizes two types of cash settled, cleared OTC FX spot, forward and swap products, namely, either as an non-deliverable forward (NDF) or cash-settled forward

(CSF). Further, CME Clearing defines the cleared OTC FX products' "valuation method" with two new values:

- **FWDB** – "forward banked" -- cash mark-to-market denominated in the contra currency or minimum fluctuation currency (the normal case)
- **FWDBI** – "forward banked inverse" – cash mark-to-market denominated in the primary currency or clearing unit currency (the inverse case)

The "mark-to-market currency," or "MTMCur," is the currency code in which the mark-to-market is denominated, which is either the contra currency (FWDB) or the primary currency (FWDBI).

So for all the NDF's, the MTM currency is USD. For the CSF's, the MTM currency is primarily USD, with some in EUR, and a couple in JPY. For each pair, CME Clearing picks the convention so that it has the minimum number of currencies in which MTM is denominated.

The mark to market amount is calculated as follows:

For the normal, forward banked pairs:

Express the trade quantity as a positive number for a buy, and a negative number for a sell.
Subtract the trade price from the settlement price.
Take the product of this price difference and the trade quantity.
Round normally to the normal precision of the contra currency.

For the inverse pairs:

Express the trade quantity as a positive number for a buy, and a negative number for a sell.
Subtract the trade price from the settlement price.
Take the product of this price difference and the trade quantity.
Divide by the current day's settlement price.
Round normally to the normal precision of the primary currency.

In other words, the inverse calculation is the same as the normal calculation, except that it adds the additional factor of dividing by the settlement price.

The cash amount to be banked, then, is determined by subtracting the mark-to-market amount calculated on the prior business date from the MTM amount on the current date. The calculation sign convention reflects that a positive number reflects cash the firm is receiving, and a negative number reflects cash the firm is paying.

The "normal precision" of USD and EUR is two decimal places, and the normal precision of JPY is two decimal places. The clearing system specifies rules to determine the date on which the final marking price is determined. For the current slate of products, this is either "1 day prior" for USD or "2 days prior" for EUR and JPY to the value date. Appendix 16 is a table illustrating the various attributes of the cleared OTC FX clearing system that reflects daily mark to market in cash for open positions.

ICAP / CME Group Collaboration – As with the cleared OTC USD/CLP Non-Deliverable Forward (NDF), CME Group may collaborate with ICAP in the introduction of additional cleared only OTC FX NDF transaction services. ICAP has strong institutional and customer relationships especially in Latin America, developed from operating as a multi-service broker. CME Group believes that ICAP may be in a good position to assist with daily valuations of more OTC NDF positions cleared on the books of CME Clearing. As with the current OTC USD/CLP NDF, ICAP may be engaged to coordinate the collection of daily valuation curves from market participants used to perform open position mark to market (or daily settlement valuation). CME may name additional partners in the future that will assist with daily

valuations of open positions in other Cleared OTC FX products. To remove any doubt, CME will always retain complete control and final authority on the settlement process.

GDP, FX Turnover & Stock Market Capitalization Statistics for Countries of Listed Currencies – Appendix 17 provides data on the Gross Domestic Product (GDP), Bank for International Settlements (BIS) average daily foreign exchange turnover and stock market capitalization for the countries for whom CME is listing clearing services for cash settlement, OTC FX spot, forward and swap products on their currencies. Demand for these cleared only services arises from market participants who trade foreign exchange in their normal course of business and desire to limit counterparty credit risk. The BIS estimates in its "Triennial Central Bank Survey for April 2010" that the world foreign exchange market is on average a 4.0 trillion U.S. dollar per day market, of which 37.4% is spot, 11.9% is outright forwards, 44.4% is FX swaps, 1.1% is currency swaps and 5.2% is options and other instruments. CME currently lists 52 FX futures and 31 options contracts covering 40 currency pairs. However, the financial market crisis of 2008, the resulting Dodd-Frank Wall Street Reform and Consumer Protection Act (2009-2010) and recent financial market volatility, has increased our customer interest in cleared OTC FX products, especially, the traditional NDF currency pairs. Proactive CME customers have requested the timely listing of many more currency pairs, both deliverable and non-deliverable as cash settlement, cleared OTC products. These customers wish to be in compliance with the mandated central counterparty clearing requirement for OTC FX NDF transactions. Therefore, CME is listing cash settlement cleared products for ten new currencies, namely, Hong Kong dollar, Singapore dollar, Indian rupee, Denmark kroner, Taiwan dollar, Malaysian ringgit, Indonesian rupiah, Thailand baht, Philippines peso and Peruvian sol versus the U.S. dollar. In the future, CME plans to list for clearing a broad array of physical delivery FX pairs as well.

Initial Performance Bonds – CME will provide performance bonds to market participants prior to launch of cleared only OTC FX spot, forwards and swaps.

The Exchange certifies that these rule amendments and procedures comply with the Act and the rules thereunder.

Members/shareholders will be notified of the information contained herein in CME Group Special Executive Report, S-5954, dated Tuesday, September 27, 2011.

If you require any additional information regarding this action, please do not hesitate to contact Steve Youngren, at 312-930-4583 or via e-mail at Steve.Youngren@cmegroup.com or me. Please reference our CME Submission #11-360 in any related correspondence.

Sincerely,

/s/ Timothy Elliott
Director and Associate General Counsel

Enclosure

Appendix 1

[Current rules for reference purposes only.]

CME GROUP OTC FX NORMALIZATION RULE

856. NORMALIZATION OF OTC FX SPOT, FORWARD, SWAP AND OPTIONS TRANSACTIONS FOR CLEARING.

For over-the-counter (OTC) foreign exchange (FX) transactions submitted for clearing and any non-standard specification of the transaction as defined by the price format shall be normalized by CME Group Clearing to standard or normal specifications by the following "normalization process."

Instrument: Currency 1/Currency 2 (CCY1/CCY2)

Generically, for spot and forward OTC FX transactions…

Standard or Normal: Buy (B)/Sell (S) CCY1 notional amount at CCY2 per CCY1 rate.

Non-standard or Non-normal: B/S CCY2 notional amount at CCY2 per CCY1 rate.

To normalize:

1. Convert B to S, or S to B
2. Convert CCY2 notional to CCY1: CCY2 amount divided by CCY2 per CCY1 rate to obtain CCY1 amount.

For example, for Instrument: EUR/USD …
Standard: EUR/USD- Quote USD per EUR; notional amount in EUR
Trade comes in as SELL €15 million at 1.350000 USD per EUR →BUY $20,250,000 (€15 million x 1.350000 USD/EUR)

Non-standard: EUR/USD- Notional amount in USD, but quote still in USD per EUR.
Trade comes in as buy $20 million at 1.350000 USD per EUR →SELL €14,814,814.81 ($20 million / 1.350000 USD/EUR).

To normalize the non-standard EUR/USD transaction, CME Clearing shall:

3. Convert Buy to Sell, or Sell to Buy
4. Convert USD notional to EUR: USD amount divided by USD per EUR rate.

Example: The trade "BUY $20 million at 1.350000 ⇨SELL €14,814,814.81 ($20/1.350000) at 1.350000 USD per EUR" shall be normalized and held in CME Clearing as:

The trade "SELL €14,814,814.81 ($20/1.350000) at 1.350000 USD per EUR⇨ BUY $20 million at 1.350000."

For swap OTC FX transactions, …
Standard or Normal: Leg 1 B/S CCY1 notional amount at $CCY2_t$ per CCY1 rate.

Leg 2 S/B CCY1 notional amount at $CCY2_{t+n}$ per CCY1 rate.

Non-standard or Non-normal:

Leg 1 B/S CCY2 notional amount at $CCY2_t$ per CCY1 rate.

Leg 2 S/B CCY2 notional amount at $CCY2_{t+n}$ per CCY1 rate.

To normalize:

1. Convert B to S, or S to B
2. Convert CCY2 notional to CCY1: CCY2 amount divided by CCY2 per CCY1 rate to obtain CCY1 amount.

For example, for instrument: EUR/USD…

Standard: Leg 1 EUR/USD- Quote USD per EUR; notional amount in EUR
Leg 2 EUR/USD- Quote USD per EUR; notional amount in EUR

Trade comes in as "Leg 1 BUY €20 million at 1.305000 ⇨SELL $26,100,000 ($20 million x 1.305000) at 1.305000 USD per EUR; Leg 2 SELL €20 million at 1.315000 USD per EUR (1.3050 + 0.0100 swap points)"

Non-Standard: Leg 1 EUR/USD- Notional amount in USD, but quote still in USD per EUR.
Leg 2 EUR/USD- Notional amount in USD, but quote still in USD per EUR.

Trade comes in as "Leg 1 SELL $26.1 million at 1.305000 ⇨BUY €20 million ($26.1 million / 1.305000) at 1.305000 USD per EUR; Leg 2 BUY $26.3 million at 1.315000 USD per EUR (1.3050 + 0.0100 swap points)."
To normalize the non-standard EUR/USD transaction, CME Clearing shall:

3. Convert Buy to Sell, or Sell to Buy
4. Convert USD notional to EUR: USD amount divided by USD per EUR rate.

Example: The trade "Leg 1 SELL $26.1 million at 1.305000 ⇨BUY €20 million ($26.1 million / 1.305000) at 1.305000 USD per EUR; Leg 2 BUY $26.3 million at 1.315000 USD per EUR (1.3050 + 0.0100 swap points)" shall be normalized and held in CME Clearing as:

The trade "Leg 1 BUY €20 million at 1.305000 ⇨SELL $26,100,000 ($20 million x 1.305000) at 1.305000 USD per EUR; Leg 2 SELL €20 million at 1.315000 USD per EUR (1.3050 + 0.0100 swap points)"

For option OTC FX transactions, …

Standard or Normal: B/S CCY1/CCY2 CALL (PUT) at STRIKE PRICE in units of CCY2 per CCY1 for a notional amount of CCY1 for a premium in CCY2 (CCY1 amount x premium price in CCY2 per CCY1, that is, CCY2 pips) or % of CCY1 (CCY1 premium / CCY1 notional amount).

Non-standard or Non-normal: B/S CCY1/CCY2 CALL (PUT) at STRIKE PRICE in units of CCY2 per CCY1 for a notional amount of CCY2 for a premium in CCY1 (CCY2 amount / premium price in CCY2 per CCY1, that is, CCY1 pips) or % of CCY2 (CCY2 premium / CCY2 notional amount).
To normalize:

1. Retain B/S direction
2. Convert CCY2 Put to CCY1 Call, CCY2 Call to CCY1 Put
3. Convert CCY2 notional to CCY1: CCY2 amount divided by Strike Price expressed in CCY2 per CCY1.
4. Process original premium amount and currency.
5. Take premium amount and divide by CCY1 notional to express price in CCY1 terms for reference purposes.

For example, for Instrument: EUR/USD …
Standard: EUR/USD- Quote USD per EUR; notional amount in EUR, premium in either % of EUR notional (EUR premium) or USD pips (USD premium)

Trade comes in as BUY EUR/USD PUT at 1.350000 USD per EUR for a notional amount of €20 million with premium of $100,000 (€20 million x option price of 0.0050 USD per EUR, that is, USD pips) or 1.0% of €20 million (€200,000 premium / €20 million) → SELL EUR/USD PUT at 1.350000 USD per EUR for a notional amount of €20 million with premium of $100,000 (€20 million x option price of 0.0050 USD per EUR, that is, USD pips) or 1.0% of €20 million (€200,000 premium / €20 million).

Non-standard: EUR/USD- Notional amount in USD, but quote still in USD per EUR, premium in either % of USD notional (USD premium) or EUR pips (EUR premium).

Trade comes in as BUY EUR/USD PUT at 1.350000 USD per EUR for a notional amount of $20 million with premium of €170,100 ($20 million x option price of 0.008505 EUR per USD, that is, EUR pips) or 1.0% of $20 million ($200,000 premium / $20 million) → SELL EUR/USD PUT at 1.350000 USD per EUR for a notional amount of $20 million with premium of €170,100 ($20 million x option price of 0.008505 USD per EUR, that is, EUR pips) or 1.0% of $20 million ($200,000 premium / $20 million).

To normalize the non-standard EUR/USD transaction, CME Clearing shall:

6. Retain B/S direction

7. Convert USD Put to EUR Call, USD Call to EUR Put
8. Convert USD notional to EUR: USD amount divided by Strike Price expressed in USD per EUR.
9. Process original premium amount and currency.
10. Take premium amount and divide by EUR notional to express price in EUR terms for reference purposes.

Example: Trade comes in as BUY EUR/USD PUT at 1.350000 USD per EUR for a notional amount of $20 million with premium of €170,100 ($20 million x option price of 0.008505 EUR per USD, that is, EUR pips) or 1.0% of $20 million ($200,000 premium / $20 million) → SELL EUR/USD PUT at 1.350000 USD per EUR for a notional amount of $20 million with premium of €170,100 ($20 million x option price of 0.008505 USD per EUR, that is, EUR pips) or 1.0% of $20 million ($200,000 premium / $20 million) shall be normalized and held in CME Clearing as:

BUY EUR/USD CALL at 1.350000 USD per EUR for a notional amount of €14,814,814.81 ($20 million/1.350000 USD per EUR) with a premium of €170,100 ($20 million x option price of 0.008505 EUR per USD, that is, EUR pips) or 1.148% of €14,814,814.81 (€170,100 / €14,814,814.81).

Appendix 2

[Current rules for reference purposes only.]

ADDITIONS TO "DEFINITIONS" SECTION OF CME RULEBOOK

CLASS B STOCKHOLDER

The registered owner of one or more Class B Shares.

CLEAR DATE OF THE FX OTC CLEARED TRANSACTION

For purposes of these rules, the "clear date of the foreign exchange (FX) over-the-counter (OTC) cleared transaction" is the date on which an original spot, forward and swap FX OTC transaction clears at CME Clearing as a substituted, cleared transaction.

CLEARING HOUSE

The department of the Exchange through which all trades on the Exchange are adjusted and cleared.
…

FORMS

All forms referred to herein; *e.g.*, "Buyer Delivery Commitment," shall be forms prescribed by the Exchange.

FORWARD FX OTC CLEARED TRANSACTION

For purposes of these rules, a "forward" foreign exchange (FX) over-the-counter (OTC) cleared transaction shall be an agreement between counterparties to exchange ("delivery") of the associated currency pairs at a maturity date greater than one or two business days in the future. A forward FX transaction may be for standard delivery maturities from the original trade date, such as TOM Next (tomorrow next or day after tomorrow), 1-week, 2-weeks, 3-weeks, 1-month, 2-months, 3-months, …, 6-months, …, 1-year, 18-months, 2-years, etc. Also, a forward FX transaction may be for broken date maturities, that is, for delivery on any good business day in both the issuing countries of the associated currency pair that is not one of the standard delivery dates.

FUTURES CONTRACT

A contract made on the Exchange for the purpose or sale of any commodity which may be satisfied by offset or delivery during such specified months pursuant to these rules.
…

ORDERS

(Note that not all order types are eligible to be entered into the GLOBEX System…

ORIGINAL TRADE DATE OF AN FX OTC TRANSACTION

For purposes of these rules, an "original trade date of a foreign exchange (FX) over-the-counter (OTC) cleared transaction," is the date on which the two counterparties agreed to the OTC transaction that is being replaced with the FX OTC cleared transaction.

PANEL

A subcommittee elected in accordance with committee procedure to adjudicate or make a particular determination. A decision of a panel shall be deemed a decision of the committee.
…

SPOT

The actual or physical commodity, also called "cash" commodity.

SPOT FX OTC CLEARED TRANSACTION

For purposes of these rules, a “spot” foreign exchange (FX) over-the-counter (OTC) cleared transaction shall be a very short-dated forward transaction with counterparties agreeing to exchange (“delivery”) of the associated currency pairs in one or two business days, whichever is the standard OTC market convention for the particular currency pairs.

SPOT MONTH

The contract month of a futures contract which is also the current calendar month.

…

STRADDLE

The assumption of a long and short position on different business days in the same or related commodities for the same account.

SWAP FX OTC CLEARED TRANSACTION

For purposes of these rules, a “swap” foreign exchange (FX) over-the-counter (OTC) cleared transaction shall be an agreement between counterparties to execute the combination of a spot or forward FX OTC cleared transaction and a subsequent-dated forward FX OTC cleared transaction, where the buyer of the spot or forward currency pair becomes the seller of the subsequent-dated forward currency pair and the seller of the spot or forward currency pair becomes the buyer of the subsequent-dated forward currency pair. In other words, the counterparties are agreeing to the prices on the original trade date to exchange currency pairs for immediate (or nearby forward) delivery, and reverse the same transaction on some mutually agreed to subsequent “forward date,” which according to the definition above for a “forward” may be a standard delivery date or a broken delivery date.

TIME

Except as otherwise specifically provided, any reference to time shall mean local Chicago time.

…

TRADE DATE OF AN FX OTC CLEARED TRANSACTION

The trade date of a foreign exchange (FX) over-the-counter (OTC) cleared transaction” is the date on which counterparties to the OTC transaction submit the FX OTC transaction to clearing as a cleared contract. Although in most instances counterparties may submit an FX OTC cleared transaction for clearing on the same date as the original trade for the FX OTC spot, forward and swap transaction, there is no requirement that it is submitted on the same date. Therefore, an FX OTC cleared transaction may be submitted on any date for clearing on the exchange.

TRADING SESSION

A trading session will mean either the pit trading session (the hours designated for open outcry trading for a product) and/or the GLOBEX session (the hours on a particular trading day when a product can be traded on the GLOBEX system.

VALID VALUE DATE FOR DELIVERY OR CASH SETTLEMENT OF AN FX OTC CLEARED TRANSACTION

“Cleared only” foreign exchange (FX) over-the-counter (OTC) cleared transactions shall be delivered or cash settled for any valid value date mutually agreed to by buyer and seller, including all applicable standard valid value dates for delivery or cash settlement in futures offered for “trading and clearing.” In general, for any currency pair, a valid value date shall be any business day that is a banking business day in the countries of issue for both currencies.

VOLATILITY QUOTE

An alternative means of quoting options, or combinations involving options, by bidding or offering the implied volatility. Any transactions quoted in volatility terms will be translated into price terms for clearing purposes by means of a standard options pricing model maintained and disseminated by the Exchange.

(End Definitions)

Appendix 3

5.C. POSITION LIMIT AND REPORTABLE LEVEL TABLE
POSITION LIMIT, POSITION ACCOUNTABILITY AND REPORTABLE LEVEL TABLE

CONTRACT NAME	OPTIONS	FIRST SCALE-DOWN SPOT MONTH	SECOND SCALE-DOWN SPOT MONTH	SPOT MONTH	SINGLE MONTH	ALL MONTHS COMBINED	POSITION ACCOUNT-ABILITY	REPORT-ABLE FUT LEVEL	REPORT-ABLE OPT LEVEL
CME Foreign Exchange									
Canadian Dollar/Japanese Yen							6,000	25	
U.S. Dollar/Chilean Peso (Cleared OTC Equivalents)				20,000			6,000	NA	
U.S. Dollar Mexican Peso (Cleared OTC Equivalents)				20,000			6,000	NA	
U.S. Dollar/Brazilian Real (Cleared OTC Equivalents)					24,000	40,000		NA	
U.S. Dollar/Polish Zloty (Cleared OTC Equivalents)				2,000			6,000	NA	
U.S. Dollar /Chinese Renminbi (Cleared OTC Equivalents)				2,000			6,000	NA	
U.S. Dollar/Russian Ruble (Cleared OTC Equivalents)				2,000		10,000		NA	
British Pound/U.S. Dollar (Cleared OTC Equivalents)							10,000	NA	
U.S. Dollar/Canadian Dollar (Cleared OTC Equivalents)							6,000	NA	
U.S. Dollar/Japanese Yen (Cleared OTC Equivalents)							10,000	NA	
U.S. Dollar/Swiss Franc (Cleared OTC Equivalents)							10,000	NA	
Australian Dollar/U.S. Dollar (Cleared OTC Equivalents)							6,000	NA	
New Zealand Dollar/U.S. Dollar (Cleared OTC Equivalents)							6,000	NA	
U.S. Dollar/South African Rand (Cleared OTC Equivalents)				5,000			6,000	NA	
Euro/U.S. Dollar (Cleared OTC Equivalents)							10,000	NA	
U.S. Dollar/Norwegian Krone (Cleared OTC Equivalents)							6,000	NA	
U.S. Dollar/Swedish Krona (Cleared OTC Equivalents)							6,000	NA	
U.S Dollar/Czech Koruna (Cleared OTC				2,000			6,000	NA	

Equivalents)									
U.S Dollar/Hungarian Forint (Cleared OTC Equivalents)				2,000			6,000	NA	
U.S Dollar/Israeli Shekel (Cleared OTC Equivalents)				2,000			6,000	NA	
U.S Dollar/Turkish Lira (Cleared OTC Equivalents)				2,000			6,000	NA	
U.S. Dollar/Danish Krone (Cleared OTC Equivalents)							6,000	NA	
Euro/British Pounds (Cleared OTC Equivalents)							6,000	NA	
Euro/Japanese Yen (Cleared OTC Equivalents)							6,000	NA	
Euro/Swiss Franc (Cleared OTC Equivalents)							6,000	NA	
Canadian Dollar/Japanese Yen (Cleared OTC Equivalents)							6,000	NA	
Euro/ Australian Dollar (Cleared OTC Equivalents)							6,000	NA	
Australian Dollar/Japanese Yen (Cleared OTC Equivalents)							6,000	NA	
U.S. Dollar/Hong Kong Dollar (Cleared OTC Equivalents)							6,000	NA	
U.S. Dollar/Singapore Dollar (Cleared OTC Equivalents)				5,000			6,000	NA	
U.S. Dollar/Thailand Baht (Cleared OTC Equivalents)				2,000			6,000	NA	
U.S. Dollar/Colombian Peso (Cleared OTC Equivalents)				20,000			6,000	NA	
U.S. Dollar/Peruvian Sol (Cleared OTC Equivalents)				20,000			6,000	NA	
U.S. Dollar/Argentine Peso (Cleared OTC Equivalents)				20,000			6,000	NA	
U.S. Dollar/Korean Won (Cleared OTC Equivalents)				20,000			6,000	NA	
U.S. Dollar/Indian Rupee (Cleared OTC Equivalents)				20,000			6,000	NA	
U.S. Dollar/Malaysian Ringgit (Cleared OTC Equivalents)				20,000			6,000	NA	
U.S. Dollar/Indonesian Rupiah (Cleared OTC Equivalents)				20,000			6,000	NA	

U.S. Dollar/Taiwan Dollar (Cleared OTC Equivalents)				20,000			6,000	NA	
U.S. Dollar/Philippines Peso (Cleared OTC Equivalents)				20,000			6,000	NA	
Chinese Renminbi/Euro FX	Y			2,000			6,000	25	25

****For purposes of Position Accountability and Position Limits, notional value in the cleared only product will be converted to contract units, whereby, notional 100,000 U.S. dollars will equal one contract equivalent. Spot month position limits will be calculated based upon contract equivalents for cleared transactions which are settled in the spot period between the second and third Wednesdays (inclusive) during the months of March, June, September and December.

Appendix 4

Chapter 300
CME WM/Reuters OTC Spot, Forward and Swap Contracts

300.00. SCOPE OF CHAPTER

This chapter is limited in application to CME WM/Reuters OTC Spot, Forward, and Swap Contracts ("CME WMR Contracts"), based on specified currency pairs, cash-settled by reference to WM/Reuters Closing Spot Rates ("WMR Rates")[1]. Parties to transactions in CME WMR Contracts shall be limited to "eligible contract participants" as defined in Section 1a(12) of the Commodity Exchange Act.

Transactions in CME WMR Contracts shall also be subject to the general rules of the Exchange insofar as applicable. The clearing and settlement of transactions in CME WMR Contracts shall also be subject to the provisions of Chapter 8-F of the CME Rulebook (Over-the-Counter Derivative Clearing).

300.01. CONTRACT SPECIFICATIONS

300.01.A. Contract Summary

CME WMR Contracts shall be based upon specified currency pairings as cataloged in the Appendix to this Chapter.

The Unit of Trading and Clearing shall be specified in terms of the "clearing-unit currency." CME WMR Contracts shall be based on a Unit of Clearing to a Precision as specified in the Appendix to this Chapter. The minimum price fluctuation shall be specified in terms of the "minimum-fluctuation currency." CME WMR contracts shall be quoted in minimum price fluctuations as specified in the Appendix to this Chapter.

For purposes of Position Accountability and the application of Position Limits, per Rule 300.01.E, each CME WMR Contract shall be deemed to be the notional value contract equivalent as specified in the Appendix to this Chapter. The levels of Position Accountability and Position Limits, as applicable, are further specified in the Appendix to this Chapter.

300.01.B. Hours for Trading and Clearing Entry

The Exchange shall determine the hours during which CME WMR Contracts may be traded and submitted to the Clearing House.

300.01.C. Valid Value Dates for Cash Settlement

CME WMR Contracts shall be cash settled for any valid value date mutually agreed to by buyer and seller, and accepted by the Exchange for the applicable currency pair as a valid value date(s) for cash settlement and clearing. In general, for any currency pair, a valid value date shall be any business day that is a banking business day in the countries of issue for both currencies.

300.01.D. Delivery Price and Delivery Value

Delivery for CME WMR Contracts assigned pursuant to Chapter 300 shall be by cash settlement according to Rule 300.02.

300.01.E. Position Limits and Position Accountability

1. Authority - Position Limits and Position Accountability may be applicable, as defined by Rule 560, and as per the following.
2. Aggregation - For purposes of this Rule, where applicable:

- futures,
- options on futures,
- E-mini futures,

[1] The WM/Reuters Closing Spot Rates are provided by The World Markets Company PLC (WM) in conjunction with Reuters and are used for certain currencies (the "Rates") displayed herein. WM and Reuters shall not be liable for any errors in or delays in providing or making available the WM/Reuters Closing Spot Rates, nor for any actions taken in reliance on the same. The Rates can not be used, reproduced, distributed, redistributed, licensed or disclosed in any way without a written agreement with WM.

- E-micro futures,
- spot, forward and swaps (combinations of spot and forwards or two maturity forwards), including but not limited to CME WMR Contracts,
- options on spot and forwards, including but not limited to CME WMR Contracts; and
- in addition, where applicable, the analogous reciprocal versions of the aforementioned contracts for the respective foreign exchange pairs, shall be aggregated with all products utilizing that foreign exchange (FX) pair regardless of quoting conventions. The baseline for this aggregation shall be the denomination of the underlying full-size CME futures contract. Contract equivalents shall be determined through the conversion of the notional value (or contract size times the number of contracts in standardized products) to the CME base currency using the prior day's Regular Trading Hours (RTH) settlement, and dividing the result by the contract size or notional of the full-size CME futures contract.

3. Contract Equivalent - For purposes of this Rule, each CME WMR Contract shall be deemed to be the notional value contract equivalent as specified in the Appendix to this Chapter.

4. Position Accountability - A participant owning or controlling more than the aggregated equivalent of the number of contracts specified in the Appendix to this Chapter, net long or net short, shall provide, in a timely fashion, upon request by the Exchange, information regarding the nature of the position, trading strategy, and hedging information if applicable.

5. Spot Position Limit – A participant shall not own or control more than the equivalent of the number of contracts specified in the Appendix to this Chapter which are settled in the spot period between the second and third Wednesdays (inclusive) during the months of March, June, September and December.

6. Single Expiration Position Limit – A participant shall not own or control more than the equivalent of the number of contracts specified in the Appendix to this Chapter that expire on the same date.

7. Aggregate Position Limit– A participant shall not own or control more than the equivalent of the number of contracts specified in the Appendix to this Chapter, net long or net short, in all expiration dates combined.

8. Exemptions - The foregoing position limits shall not apply to bona fide hedge positions meeting the requirements of Regulation 1.3(z)(1) of the CFTC and the rules of the Exchange, and shall not apply to other positions exempted pursuant to Rule 559.

300.01.F. Last Day of Trading

The last day on which a transaction in a CME WMR Contract may be traded, in respect of a specified cash settlement date, shall be one (1) valid business day prior to the cash settlement date.

300.01.G. Liquidation and Delivery Standards

(1) At Maturity. After clearing of CME WMR Contracts in respect of a specified cash settlement date has ceased, in accordance with Rule 300.01.G. of this chapter, outstanding contracts for such cash settlement date shall be liquidated by cash settlement through procedures as prescribed in Rule 300.02 and in a manner prescribed by the Clearing House.

(2) Prior to Maturity. Standard offsets of futures and options on futures shall not apply to positions in CME WMR Contracts. Prior to the Cash Settlement Date, positions may be closed out upon the request of the clearing firm to the Clearing House, and in the manner prescribed by the Clearing House.

300.01.H. Contract Modifications

Specifications shall be fixed as of the first day of trading of a contract, except that all deliveries must conform to government regulations in force at the time of delivery. If any national or international government agency or body issues an order, ruling, directive or law that conflicts with the requirements of these rules, such order, ruling, directive or law shall be construed to take precedence and become part of these rules and all open and new contracts shall be subject to such government orders.

300.02. CASH SETTLEMENT

300.02.A. Day of Cash Settlement

Each CME WMR Contract, for a valid value date for cash settlement in one business day, shall be liquidated by cash settlement at a price equal to the daily Final Settlement Price for that day. The daily Final Settlement Price shall be equal to the WM/Reuters Closing Spot Rate for that day for the specific currency pair in question, rounded to the nearest integral multiple of the minimum price increment as identified per the Appendix to this Chapter.

All open positions for that valid value date for cash settlement will be cash settled in the minimum fluctuation currency based upon the difference between the Final Settlement Price for the valid value date for cash settlement and the original trade price as submitted for clearing, times the notional value of the transaction in the clearing unit currency.

300.02.B. Procedures if No Cash Settlement Price is Available

In the event that the Final Settlement Price for a valid value date for cash settlement cannot be published on a given day by WM/Reuters, and in order to minimize basis risk, the Final Settlement Price shall be determined as the next available WM/Reuters Closing Spot Rate for the specific currency pair in question.

300.02.C. Amendments to Timings

The Exchange may amend the timings of notifications, deliveries, and transfers under this Rule 300.02 to reflect as appropriate the adoption of daylight savings time in the relevant countries of delivery.

300.03. DISPUTES

All disputes between interested parties may be settled by arbitration as provided in the Rules.

(End Chapter 300)

Appendix to Chapter 300: Contract Specifications

Currency Pairing	Unit of Trading and Clearing	Precision	Minimum Price Fluctuation	Contract Equivalent	Position Account-ability	Spot Month Position Limit	Single Month Position Limit	All Months Combined Position Limit
GBP/USD	1 GBP	0.01 GBP	0.000001 USD/GBP	62,500 GBP	10,000	Na	Na	Na
USD/CAD	1 USD	0.01 USD	0.000001 CAD/USD	100,000 USD	6,000	Na	Na	Na
USD/JPY	1 USD	0.01 USD	0.0001 JPY/USD	100,000 USD	10,000	Na	Na	Na
USD/CHF	1 USD	0.01 USD	0.000001 CHF/USD	100,000 USD	10,000	Na	Na	Na
AUD/USD	1 AUD	0.01 AUD	0.000001 USD/AUD	100,000 AUD	6,000	Na	Na	Na
USD/MXN	1 USD	0.01 USD	0.000001 MXN/USD	100,000 USD	6,000	20,000	Na	Na
NZD/USD	1 NZD	0.01 NZD	0.000001 USD/NZD	100,000 NZD	6,000	Na	Na	Na
USD/ZAR	1 USD	0.01 USD	0.000001 ZAR/USD	100,000 USD	6,000	5.000	Na	Na
EUR/USD	1 EUR	0.01 EUR	0.000001 USD/EUR	125,000 EUR	10,000	Na	Na	Na
USD/NOK	1 USD	0.01 USD	0.000001 NOK/USD	100,000 USD	6,000	Na	Na	Na
USD/SEK	1 USD	0.01 USD	0.000001 SEK/USD	100,000 USD	6,000	Na	Na	Na
USD/CZK	1 USD	0.01 USD	0.00001 CZK/USD	100,000 USD	6,000	2,000	Na	Na
USD/HUF	1 USD	0.01 USD	0.0001 HUF/USD	100,000 USD	6,000	2,000	Na	Na
USD/PLN	1 USD	0.01 USD	0.000001 PLN/USD	100,000 USD	6,000	2,000	Na	Na
USD/ILS	1 USD	0.01 USD	0.000001 ILS/USD	100,000 USD	6,000	2,000	Na	Na
USD/TRY	1 USD	0.01 USD	0.000001 TRY/USD	100,000 USD	6,000	2,000	Na	Na
USD/DKK	1 USD	0.01 USD	0.000001 DKK/USD	100,000 USD	6,000	Na	Na	Na

EUR/GBP	1 EUR	0.01 EUR	0.0000001 GBP/EUR	125,000 EUR	6,000	Na	Na	Na
EUR/JPY	1 EUR	0.01 EUR	0.0001 JPY/EUR	125,000 EUR	6,000	Na	Na	Na
EUR/CHF	1 EUR	0.01 EUR	0.0000001 CHF/EUR	125,000 EUR	6,000	Na	Na	Na
AUD/JPY	1 AUD	0.01 AUD	0.000001 JPY/AUD	100,000 AUD	6,000	Na	Na	Na
CAD/JPY	1 CAD	0.01 CAD	0.00001 JPY/CAD	100,000 CAD	6,000	Na	Na	Na
EUR/AUD	1 EUR	0.01 EUR	0.000001 AUD/EUR	125,000 EUR	6,000	Na	Na	Na
USD/HKD	1 USD	0.01 USD	0.000001 HKD/USD	100,000 USD	6,000	Na	Na	Na
USD/SGD	1 USD	0.01 USD	0.000001 SGD/USD	100,000 USD	6,000	5,000	Na	Na
USD/THB	1 USD	0.01 USD	0.0001 THB/USD	100,000 USD	6,000	2,000	Na	Na

NOTES

AUD = Australian dollar
CAD = Canadian dollar
CHF = Swiss franc
CZK = Czech koruna
DKK = Danish krone
EUR = Euro
GBP = British pound
HKD = Hong Kong dollar
HUF = Hungarian forint
ILS = Israeli shekel
JPY = Japanese yen
MXN = Mexican peso
NOK = Norwegian krone
NZD = New Zealand dollar
PLN = Polish zloty
SEK = Swedish krona
SGD = Singapore dollar
THB = Thailand baht
TRY = Turkish lira
USD = U.S. dollar
ZAR = South African Rand

Appendix 5

Chapter 257H
Cleared OTC U.S. Dollar/ Brazilian Real (USD/BRL)
Spot, Forwards and Swaps

257H.00. SCOPE OF CHAPTER

This chapter is limited in application to U.S. dollar/ Brazilian real Spot, Forwards, and Swaps that are executed between two counterparties on an Over-the-Counter ("OTC") basis and subsequently novated to the CME Clearing House for purposes of clearance ("Cleared OTC Contracts"). Parties to transactions in Cleared OTC Contracts shall be limited to "eligible contract participants" as defined in Section 1a(12) of the Commodity Exchange Act. Cleared OTC Contracts are listed by CME for clearing-only. Transactions in Cleared OTC Contracts shall also be subject to the general rules of the Exchange insofar as applicable. The clearing and settlement of transactions in Cleared OTC Contracts shall also be subject to the provisions of Chapter 8-F of the CME Rulebook (Over-the-Counter Derivative Clearing). For purposes of these Rules, the minimum-fluctuation currency is the Brazilian real and the clearing-unit currency is the U.S. dollar.

257F.01. CONTRACT SPECIFICATIONS

257H.01.A. Unit of Clearing

The unit of clearing shall be 1 U.S. dollar in any amount to a precision of 0.01 U.S. dollar.

257H.01.B. Hours for Clearing Entry

The Exchange shall determine the hours during which Cleared OTC Contracts may be submitted to the Clearing House. Positions shall be initiated or closed out using off-exchange transactions.

257H.01.C. Minimum Price Increments

Minimum price fluctuations shall be in multiples of 0.000001 Brazilian real per U.S. dollar for transactions in Cleared OTC Contracts.

257H.01.D. Valid Value Dates for Cash Settlement

Cleared OTC Contracts shall be cash settled for any valid value date mutually agreed to by buyer and seller, and accepted by the Exchange for the applicable currency pair as a valid value date(s) for cash settlement and clearing. In general, for any currency pair, a valid value date shall be any business day that is a banking business day in the countries of issue for both currencies.

257H.01.E. Delivery Price and Delivery Value

Delivery for Cleared OTC Contracts assigned pursuant to Chapter 257H shall be by cash settlement according to Rule 257H.02.

257H.01.F. Position Limits and Position Accountability

1. Authority - Position Limits and Position Accountability may be applicable, as defined by Rule 560, and as per the following.
2. Aggregation - For purposes of this Rule, where applicable:

- futures,
- options on futures,
- E-mini futures,
- E-micro futures,
- cleared only spot, forward and swaps (combinations of spot and forwards or two maturity forwards),
- cleared only options on spot and forwards; and
- in addition, where applicable, the analogous reciprocal versions of the aforementioned contracts for the respective foreign exchange pairs, shall be aggregated with all products utilizing that foreign exchange (FX) pair regardless of quoting conventions. The baseline for this aggregation shall be the denomination of the underlying full-size CME futures contract. Contract equivalents shall be determined through the conversion of the notional value (or contract size times the number of contracts in standardized products) to the CME base currency using the prior day's

Regular Trading Hours (RTH) settlement, and dividing the result by the contract size or notional of the full-size CME futures contract.

3. Contract Equivalent - For purposes of this Rule, a contract shall be deemed to be the equivalent of 100,000 Brazilian reals in notional value.

4. Position Limit - A participant may not own or control more than the aggregated equivalent across all contract months of 40,000 contracts, or 4 billion Brazilian reals in notional value, or 24,000 contracts in any single contract month or 2.4 billion Brazilian reals, net long or net short.

5. Exemptions - The foregoing position limits shall not apply to bona fide hedge positions meeting the requirements of Regulation 1.3(z)(1) of the CFTC and the rules of the Exchange, and shall not apply to other positions exempted pursuant to Rule 559.

6. Reserved

7. Reserved

257H.01.G. Last Day of Clearing

The last day on which a transaction in a Cleared OTC Contract may be submitted for clearing in respect of a specified cash settlement date shall be one (1) valid business day prior to the cash settlement date.

257H.01.H. Liquidation and Delivery Standards

(1) At Maturity. After clearing of Cleared OTC Contracts in respect of a specified cash settlement date has ceased, in accordance with Rule 257H.01.G. of this chapter, outstanding contracts for such cash settlement date shall be liquidated by cash settlement through procedures as prescribed in Rule 257H.02 and in a manner prescribed by the Clearing House.

(2) Prior to Maturity. Standard offsets of futures and options on futures shall not apply to positions in Cleared OTC Contracts. Prior to the Cash Settlement Date, positions may be closed out upon the request of the clearing firm to the Clearing House, and in the manner prescribed by the Clearing House.

257H.01.I. Contract Modifications

Specifications shall be fixed as of the first day of clearing of a contract, except that all final settlements via cash settlement must conform to government regulations in force at the time of final settlement. If any national or international government agency or body issues an order, ruling, directive or law that conflicts with the requirements of these rules, such order, ruling, directive or law shall be construed to take precedence and become part of these rules and all open and new contracts shall be subject to such government orders.

257H.02. CASH SETTLEMENT

257H.02.A. Day of Cash Settlement

Each Cleared OTC Contract, for a valid value date for cash settlement in one business day, shall be liquidated by cash settlement at a price equal to the daily Final Settlement Price for that day. The daily Final Settlement Price shall be determined as the reciprocal of the Final Settlement Price determined per the procedures set forth in Rule 25702.B., Cash Settlement, rounded to the nearest integral multiple of the minimum price increment as identified per Rule 257H.01.C., Minimum Price Increments.

All open positions for that valid value date for cash settlement will be cash settled in the minimum fluctuation currency based upon the difference between the Final Settlement Price for the valid value date for cash settlement and the original trade price as submitted for clearing, times the notional value of the transaction in the clearing unit currency, and divided by the Final Settlement Price for the valid value date for cash settlement.

257H.02.B. Procedures if No Cash Settlement Price is Available

In the event that the Final Settlement Price for a valid value date for cash settlement cannot be published on a given day by CME, and in order to minimize basis risk, the Exchange shall determine a Final Settlement Price as the

reciprocal of the Final Settlement Price determined per procedures set forth in the INTERPRETATION TO CHAPTER 257.

257H.02.C. Amendments to Timings

The Exchange may amend the timings of notifications, deliveries, and transfers under this Rule 257H.02 to reflect as appropriate the adoption of daylight savings time in the relevant countries of delivery.

257H.03. DISPUTES

All disputes between interested parties may be settled by arbitration as provided in the Rules.

(End Chapter 257H)

Appendix 6

Chapter 270H
Cleared OTC U.S. Dollar/ Chinese Renminbi (USD/RMB) Spot, Forwards and Swaps

270H.00. SCOPE OF CHAPTER

This chapter is limited in application to U.S. dollar/ Chinese renminbi Spot, Forwards, and Swaps that are executed between two counterparties on an Over-the-Counter ("OTC") basis and subsequently novated to the CME Clearing House for purposes of clearance ("Cleared OTC Contracts"). Parties to transactions in Cleared OTC Contracts shall be limited to "eligible contract participants" as defined in Section 1a(12) of the Commodity Exchange Act. Cleared OTC Contracts are listed by CME for clearing-only. Transactions in Cleared OTC Contracts shall also be subject to the general rules of the Exchange insofar as applicable. The clearing and settlement of transactions in Cleared OTC Contracts shall also be subject to the provisions of Chapter 8-F of the CME Rulebook (Over-the-Counter Derivative Clearing). For purposes of these Rules, the minimum-fluctuation currency is the Chinese renminbi and the clearing-unit currency is the U.S. dollar.

270F.01. CONTRACT SPECIFICATIONS

270H.01.A. Unit of Clearing

The unit of clearing shall be 1 U.S. dollar in any amount to a precision of 0.01 U.S. dollar.

270H.01.B. Hours for Clearing Entry

The Exchange shall determine the hours during which Cleared OTC Contracts may be submitted to the Clearing House. Positions shall be initiated or closed out using off-exchange transactions.

270H.01.C. Minimum Price Increments

Minimum price fluctuations shall be in multiples of 0.0001 Chinese renminbi per U.S. dollar for transactions in Cleared OTC Contracts.

270H.01.D. Valid Value Dates for Cash Settlement

Cleared OTC Contracts shall be cash settled for any valid value date mutually agreed to by buyer and seller, and accepted by the Exchange for the applicable currency pair as a valid value date(s) for cash settlement and clearing. In general, for any currency pair, a valid value date shall be any business day that is a banking business day in the countries of issue for both currencies.

270H.01.E. Delivery Price and Delivery Value

Delivery for Cleared OTC Contracts assigned pursuant to Chapter 270H shall be by cash settlement according to Rule 270H.02.

270H.01.F. Position Limits and Position Accountability

1. Authority - Position Limits and Position Accountability may be applicable, as defined by Rule 560, and as per the following.
2. Aggregation - For purposes of this Rule, where applicable:

- futures,
- options on futures,
- E-mini futures,
- E-micro futures,
- cleared only spot, forward and swaps (combinations of spot and forwards or two maturity forwards),
- cleared only options on spot and forwards; and
- in addition, where applicable, the analogous reciprocal versions of the aforementioned contracts for the respective foreign exchange pairs, shall be aggregated with all products utilizing that foreign exchange (FX) pair regardless of quoting conventions. The baseline for this aggregation shall be the denomination of the underlying full-size CME futures contract. Contract equivalents shall be determined through the conversion of the notional value (or contract size times the number of contracts in standardized products) to the CME base currency using the prior day's

Regular Trading Hours (RTH) settlement, and dividing the result by the contract size or notional of the full-size CME futures contract.

3. Contract Equivalent - For purposes of this Rule, a contract shall be deemed to be the equivalent of 1,000,000 Chinese renminbi in notional value.

4. Position Accountability - A participant owning or controlling more than the aggregated equivalent of 6,000 contracts, or 6 billion Chinese renminbi in notional value, net long or net short, shall provide, in a timely fashion, upon request by the Exchange, information regarding the nature of the position, trading strategy, and hedging information if applicable.

5. Spot Position Limit – A participant shall not own or control more than the equivalent of 2,000 contracts, or 2 billion Chinese renminbi, which are settled in the spot period between the second and third Wednesdays (inclusive) during the months of March, June, September and December.

6. Exemptions - The foregoing position limits shall not apply to bona fide hedge positions meeting the requirements of Regulation 1.3(z)(1) of the CFTC and the rules of the Exchange, and shall not apply to other positions exempted pursuant to Rule 559.

7. Reserved

270H.01.G. Last Day of Clearing

The last day on which a transaction in a Cleared OTC Contract may be submitted for clearing in respect of a specified cash settlement date shall be one (1) valid business day prior to the cash settlement date.

270H.01.H. Liquidation and Delivery Standards

(1) At Maturity. After clearing of Cleared OTC Contracts in respect of a specified cash settlement date has ceased, in accordance with Rule 270H.01.G. of this chapter, outstanding contracts for such cash settlement date shall be liquidated by cash settlement through procedures as prescribed in Rule 270H.02 and in a manner prescribed by the Clearing House.

(2) Prior to Maturity. Standard offsets of futures and options on futures shall not apply to positions in Cleared OTC Contracts. Prior to the Cash Settlement Date, positions may be closed out upon the request of the clearing firm to the Clearing House, and in the manner prescribed by the Clearing House.

270H.01.I. Contract Modifications

Specifications shall be fixed as of the first day of clearing of a contract, except that all final settlements via cash settlement must conform to government regulations in force at the time of final settlement. If any national or international government agency or body issues an order, ruling, directive or law that conflicts with the requirements of these rules, such order, ruling, directive or law shall be construed to take precedence and become part of these rules and all open and new contracts shall be subject to such government orders.

270H.02. CASH SETTLEMENT

270H.02.A. Day of Cash Settlement

Each Cleared OTC Contract, for a valid value date for cash settlement in one business day, shall be liquidated by cash settlement at a price equal to the daily Final Settlement Price for that day. The daily Final Settlement Price shall be determined as the reciprocal of the Final Settlement Price determined per the procedures set forth in Rule 27002.B., Cash Settlement, rounded to the nearest integral multiple of the minimum price increment as identified per Rule 270H.01.C., Minimum Price Increments.

All open positions for that valid value date for cash settlement will be cash settled in the clearing-unit currency based upon the difference between the Final Settlement Price for the valid value date for cash settlement and the original trade price as submitted for clearing, times the notional value of the transaction in the clearing unit currency, and divided by the Final Settlement Price for the valid value date for cash settlement.

270H.02.B. Procedures if No Cash Settlement Price is Available

In the event that the Final Settlement Price for a valid value date for cash settlement cannot be published on a given day by CME, and in order to minimize basis risk, the Exchange shall determine a Final Settlement Price as the reciprocal of the Final Settlement Price determined per procedures set forth in the INTERPRETATION TO CHAPTER 270.

270H.02.C. Amendments to Timings

The Exchange may amend the timings of notifications, deliveries, and transfers under this Rule 270H.02 to reflect as appropriate the adoption of daylight savings time in the relevant countries of delivery.

270H.03. DISPUTES

All disputes between interested parties may be settled by arbitration as provided in the Rules.

(End Chapter 270H)

Appendix 7

Chapter 260H
Cleared OTC U.S. Dollar / Russian Ruble (USD/ RUB)
Spot, Forwards and Swaps

260H.00. SCOPE OF CHAPTER

This chapter is limited in application to U.S. dollar / Russian ruble Spot, Forwards, and Swaps that are executed between two counterparties on an Over-the-Counter ("OTC") basis and subsequently novated to the CME Clearing House for purposes of clearance ("Cleared OTC Contracts"). Parties to transactions in Cleared OTC Contracts shall be limited to "eligible contract participants" as defined in Section 1a(12) of the Commodity Exchange Act. Cleared OTC Contracts are listed by CME for clearing-only. Transactions in Cleared OTC Contracts shall also be subject to the general rules of the Exchange insofar as applicable. The clearing and settlement of transactions in Cleared OTC Contracts shall also be subject to the provisions of Chapter 8-F of the CME Rulebook (Over-the-Counter Derivative Clearing). For purposes of these Rules, the minimum-fluctuation currency is the Russian ruble and the clearing-unit currency is the U.S. dollar.

260H.01. CONTRACT SPECIFICATIONS

260H.01.A. Unit of Clearing

The unit of clearing shall be 1 U.S. dollar in any amount to a precision of 0.01 U.S. dollar.

260H.01.B. Hours for Clearing Entry

The Exchange shall determine the hours during which Cleared OTC Contracts may be submitted to the Clearing House. Positions shall be initiated or closed out using off-exchange transactions.

260H.01.C. Minimum Price Increments

Minimum price fluctuations shall be in multiples of 0.000001 Russian ruble per U.S. dollar for transactions in Cleared OTC Contracts.

260H.01.D. Valid Value Dates for Cash Settlement

Cleared OTC Contracts shall be cash settled for any valid value date mutually agreed to by buyer and seller, and accepted by the Exchange for the applicable currency pair as a valid value date(s) for cash settlement and clearing. In general, for any currency pair, a valid value date shall be any business day that is a banking business day in the countries of issue for both currencies.

260H.01.E. Delivery Price and Delivery Value

Delivery for Cleared OTC Contracts assigned pursuant to Chapter 260H shall be by cash settlement according to Rule 260H.02.

260H.01.F. Position Limits and Position Accountability

1. Authority - Position Limits and Position Accountability may be applicable, as defined by Rule 560, and as per the following.
2. Aggregation - For purposes of this Rule, where applicable:

- futures,
- options on futures,
- E-mini futures,
- E-micro futures,
- cleared only spot, forward and swaps (combinations of spot and forwards or two maturity forwards),
- cleared only options on spot and forwards; and
- in addition, where applicable, the analogous reciprocal versions of the aforementioned contracts for the respective foreign exchange pairs, shall be aggregated with all products utilizing that foreign exchange (FX) pair regardless of quoting conventions. The baseline for this aggregation shall be the denomination of the underlying full-size CME futures contract. Contract equivalents shall be determined through the conversion of the notional value (or contract size times the number of contracts in standardized products) to the CME base currency using the prior day's

Regular Trading Hours (RTH) settlement, and dividing the result by the contract size or notional of the full-size CME futures contract.

3. Contract Equivalent - For purposes of this Rule, a contract shall be deemed to be the equivalent of 2,500,000 Russian ruble in notional value.

4. Reserved.

5. Aggregate Position Limit– A person shall not own or control more than the equivalent of 10,000 contracts or 25,000,000,000 Russian rubles in notional value, net long or net short, in all expiration dates combined,

6. Spot Position Limit – A participant shall not own or control more than the equivalent of 2,000 contracts, or 5 billion Russian rubles, which are settled in the spot period between the fifteenth calendar day of the month and one week prior (inclusive) during the months of March, June, September and December, and

7. Exemptions - The foregoing position limits shall not apply to bona fide hedge positions meeting the requirements of Regulation 1.3(z)(1) of the CFTC and the rules of the Exchange, and shall not apply to other positions exempted pursuant to Rule 559.

260H.01.G. Last Day of Clearing

The last day on which a transaction in a Cleared OTC Contract may be submitted for clearing in respect of a specified cash settlement date shall be one (1) valid business day prior to the cash settlement date.

260H.01.H. Liquidation and Delivery Standards

(1) At Maturity. After clearing of Cleared OTC Contracts in respect of a specified cash settlement date has ceased, in accordance with Rule 260H.01.G. of this chapter, outstanding contracts for such cash settlement date shall be liquidated by cash settlement through procedures as prescribed in Rule 260H.02 and in a manner prescribed by the Clearing House.
(2) Prior to Maturity. Standard offsets of futures and options on futures shall not apply to positions in Cleared OTC Contracts. Prior to the Cash Settlement Date, positions may be closed out upon the request of the clearing firm to the Clearing House, and in the manner prescribed by the Clearing House.

260H.01.I. Contract Modifications

Specifications shall be fixed as of the first day of clearing of a contract, except that all final settlements via cash settlement must conform to government regulations in force at the time of final settlement. If any national or international government agency or body issues an order, ruling, directive or law that conflicts with the requirements of these rules, such order, ruling, directive or law shall be construed to take precedence and become part of these rules and all open and new contracts shall be subject to such government orders.

260H.02. CASH SETTLEMENT

260H.02.A. Day of Cash Settlement

Each Cleared OTC Contract, for a valid value date for cash settlement in one business day, shall be liquidated by cash settlement at a price equal to the daily Final Settlement Price for that day. The daily Final Settlement Price shall be determined as the reciprocal of the Final Settlement Price per the procedures set forth in Rule 26002.B., Cash Settlement, rounded to the nearest integral multiple of the minimum price increment as identified per Rule 260H.01.C., Minimum Price Increments.

All open positions for that valid value date for cash settlement will be cash settled in the clearing-unit currency based upon the difference between the Final Settlement Price for the valid value date for cash settlement and the original trade price as submitted for clearing, times the notional value of the transaction in the clearing unit currency and divided by the Final Settlement Price for the valid value date for cash settlement.

260H.02.B. Procedures if No Cash Settlement Price is Available

In the event that the Final Settlement Price for a valid value date for cash settlement cannot be published on a given day by CME, and in order to minimize basis risk, the Exchange shall determine a Final Settlement Price per procedures set forth in the INTERPRETATION TO CHAPTER 260.

260H.02.C. Amendments to Timings

The Exchange may amend the timings of notifications deliveries, and transfers under this Rule 260H.02 to reflect as appropriate the adoption of daylight savings time in the relevant countries of delivery.

260H.03. DISPUTES

All disputes between interested parties may be settled by arbitration as provided in the Rules.

(End Chapter 260H)

Appendix 8

Chapter 271H
Cleared OTC U.S. Dollar/Korean Won (USD/ KRW)
Spot, Forwards and Swaps

271H.00. SCOPE OF CHAPTER

This chapter is limited in application to U.S. dollar/Korean won Spot, Forwards, and Swaps that are executed between two counterparties on an Over-the-Counter ("OTC") basis and subsequently novated to the CME Clearing House for purposes of clearance ("Cleared OTC Contracts"). Parties to transactions in Cleared OTC Contracts shall be limited to "eligible contract participants" as defined in Section 1a(12) of the Commodity Exchange Act. Cleared OTC Contracts are listed by CME for clearing-only. Transactions in Cleared OTC Contracts shall also be subject to the general rules of the Exchange insofar as applicable. The clearing and settlement of transactions in Cleared OTC Contracts shall also be subject to the provisions of Chapter 8-F of the CME Rulebook (Over-the-Counter Derivative Clearing). For purposes of these Rules, the minimum-fluctuation currency is the Korean won and the clearing-unit currency is the U.S. dollar.

271H.01. CONTRACT SPECIFICATIONS

271H.01.A. Unit of Clearing

The unit of clearing shall be 1 U.S. dollar in any amount to a precision of 0.01 U.S. dollar.

271H.01.B. Hours for Clearing Entry

The Exchange shall determine the hours during which Cleared OTC Contracts may be submitted to the Clearing House. Positions shall be initiated or closed out using off-exchange transactions.

271H.01.C. Minimum Price Increments

Minimum price fluctuations shall be in multiples of [~~0.0001~~]0.01 Korean won per U.S. dollar for transactions in Cleared OTC Contracts.

271H.01.D. Valid Value Dates for Cash Settlement

Cleared OTC Contracts shall be cash settled for any valid value date mutually agreed to by buyer and seller, and accepted by the Exchange for the applicable currency pair as a valid value date(s) for cash settlement and clearing. In general, for any currency pair, a valid value date shall be any business day that is a banking business day in the countries of issue for both currencies.

271H.01.E. Delivery Price and Delivery Value

Delivery for Cleared OTC Contracts assigned pursuant to Chapter 271H shall be by cash settlement according to Rule 271H.02.

271H.01.F. Position Limits and Position Accountability

1. Authority - Position Limits and Position Accountability may be applicable, as defined by Rule 560, and as per the following.
2. Aggregation - For purposes of this Rule, where applicable:

- futures,
- options on futures,
- E-mini futures,
- E-micro futures,
- cleared only spot, forward and swaps (combinations of spot and forwards or two maturity forwards),
- cleared only options on spot and forwards; and
- in addition, where applicable, the analogous reciprocal versions of the aforementioned contracts for the respective foreign exchange pairs, shall be aggregated with all products utilizing that foreign exchange (FX) pair regardless of quoting conventions. The baseline for this aggregation shall be the denomination of the underlying full-size CME futures contract. Contract equivalents shall be determined through the conversion of the notional value (or contract size times the number of contracts in standardized products) to the CME base currency using the prior day's

Regular Trading Hours (RTH) settlement, and dividing the result by the contract size or notional of the full-size CME futures contract.
3. Contract Equivalent - For purposes of this Rule, a contract shall be deemed to be the equivalent of 125,000,000 Korean won in notional value.
4. Position Accountability - A person owning or controlling more than the aggregated equivalent of 6,000 contracts, or 750,000,000,000 Korean won in notional value, net long or net short, shall provide, in a timely fashion, upon request by the Exchange, information regarding the nature of the position, trading strategy, and hedging information if applicable.
5. Spot Position Limit – A participant shall not own or control more than the equivalent of 2,000 contracts, or 250 billion Korean won, which are settled in the spot period between the second and third Wednesdays (inclusive) during the months of March, June, September and December.
6. Exemptions - The foregoing position limits shall not apply to bona fide hedge positions meeting the requirements of Regulation 1.3(z)(1) of the CFTC and the rules of the Exchange, and shall not apply to other positions exempted pursuant to Rule 559.
7. Reserved

271H.01.G. Last Day of Clearing

The last day on which a transaction in a Cleared OTC Contract may be submitted for clearing in respect of a specified cash settlement date shall be one (1) valid business day prior to the cash settlement date.

271H.01.H. Liquidation and Delivery Standards

(1) At Maturity. After clearing of Cleared OTC Contracts in respect of a specified cash settlement date has ceased, in accordance with Rule 271H.01.G. of this chapter, outstanding contracts for such cash settlement date shall be liquidated by cash settlement through procedures as prescribed in Rule 271H.02 and in a manner prescribed by the Clearing House.
(2) Prior to Maturity. Standard offsets of futures and options on futures shall not apply to positions in Cleared OTC Contracts. Prior to the Cash Settlement Date, positions may be closed out upon the request of the clearing firm to the Clearing House, and in the manner prescribed by the Clearing House.

271H.01.I. Contract Modifications

Specifications shall be fixed as of the first day of clearing of a contract, except that all deliveries must conform to government regulations in force at the time of delivery. If any national or international government agency or body issues an order, ruling, directive or law that conflicts with the requirements of these rules, such order, ruling, directive or law shall be construed to take precedence and become part of these rules and all open and new contracts shall be subject to such government orders.

271H.02. CASH SETTLEMENT

271H.02.A. Day of Cash Settlement

Each Cleared OTC Contract, for a valid value date for cash settlement in one business day, shall be liquidated by cash settlement at a price equal to the daily Final Settlement Price for that day. The daily Final Settlement Price shall be determined as the reciprocal of the Final Settlement Price per the procedures set forth in Rule 27102.B., Cash Settlement, rounded to the nearest integral multiple of the minimum price increment as identified per Rule 271H.01.C., Minimum Price Increments.

All open positions for that valid value date for cash settlement will be cash settled in the clearing-unit currency based upon the difference between the Final Settlement Price for the valid value date for cash settlement and the original trade price as submitted for clearing, times the notional value of the transaction in the clearing unit currency and divided by the Final Settlement Price for the valid value date for cash settlement.

271H.02.B. Procedures if No Cash Settlement Price is Available

In the event that the Final Settlement Price for a valid value date for cash settlement cannot be published on a given day by CME, and in order to minimize basis risk, the Exchange shall determine a Final Settlement Price per procedures set forth in the INTERPRETATION TO CHAPTER 271.

271H.02.C. Amendments to Timings

The Exchange may amend the timings of notifications deliveries, and transfers under this Rule 271H.02 to reflect as appropriate the adoption of daylight savings time in the relevant countries of delivery.

271H.03. DISPUTES

All disputes between interested parties may be settled by arbitration as provided in the Rules.

(End Chapter 271H)

Appendix 9

Chapter 273H
Cleared OTC U.S. Dollar/ Colombian Peso (USD/COP) Spot, Forwards and Swaps

273H.00. SCOPE OF CHAPTER

This chapter is limited in application to U.S. Dollar/Colombian Peso Spot, Forwards, and Swaps that are executed between two counterparties on an Over-the-Counter ("OTC") basis and subsequently novated to the CME Clearing House for purposes of clearance ("Cleared OTC Contracts"). Parties to transactions in Cleared OTC Contracts shall be limited to "eligible contract participants" as defined in Section 1a(12) of the Commodity Exchange Act. Cleared OTC Contracts are listed by CME for clearing-only. Transactions in Cleared OTC Contracts shall also be subject to the general rules of the Exchange insofar as applicable. The clearing and settlement of transactions in Cleared OTC Contracts shall also be subject to the provisions of Chapter 8-F of the CME Rulebook (Over-the-Counter Derivative Clearing). For purposes of these Rules, the minimum-fluctuations currency is the Colombian peso and the clearing-unit currency is the U.S. dollar.

273H.01. CONTRACT SPECIFICATIONS

273H.01.A. Unit of Clearing

The unit of clearing shall be 1 U.S. Dollar in any amount down to a precision of 0.01 U.S. Dollar.

273H.01.B. Hours for Clearing Entry

The Exchange shall determine the hours during which Cleared OTC Contracts may be submitted to the Clearing House. Positions shall be initiated or closed out using off-exchange transactions.

273H.01.C. Minimum Price Increments

Minimum price fluctuations shall be in multiples of 0.01 Colombian Peso per U.S. Dollar for transactions in Cleared OTC Contracts.

273H.01.D. Valid Value Dates for Cash Settlement

Cleared OTC Contracts shall be cash settled for any valid value date(s) mutually agreed to by buyer and seller, and accepted by the Exchange for the applicable currency pair as a valid value date(s) for cash settlement and clearing. In general, for any currency pair, a valid value date shall be any business day that is a banking business day in the countries of issue for both currencies.

273H.01.E. Delivery Price and Delivery Value

Delivery for the Cleared OTC Contracts assigned pursuant to Chapter 273H shall be by cash settlement according to Rule 273H.02.

273H.01.F. Position Limits and Position Accountability

1. Authority - Position Limits and Position Accountability may be applicable, as defined by Rule 560, and as per the following.
2. Aggregation - For purposes of this Rule, where applicable:

- futures,
- options on futures,
- E-mini futures,
- E-micro futures,
- cleared only spot, forward and swaps (combinations of spot and forwards or two maturity forwards),
- cleared only options on spot and forwards; and
- in addition, where applicable, the analogous reciprocal versions of the aforementioned contracts for the respective foreign exchange pairs,

shall be aggregated with all products utilizing that foreign exchange (FX) pair regardless of quoting conventions. The baseline for this aggregation shall be the denomination of the underlying full-size CME futures contract. Contract equivalents shall be determined through the conversion of the notional value (or contract size times the number of contracts in standardized products) to the CME base currency using the prior day's Regular Trading Hours (RTH)

settlement, and dividing the result by the contract size or notional of the full-size CME futures contract.

3. Contract Equivalent - For purposes of this Rule, a contract shall be deemed to be the equivalent of 100,000 U.S. dollars in notional value.

4. Position Accountability - A participant owning or controlling more than the aggregated equivalent of 6,000 contracts, or 600,000,000 U.S. dollars in notional value, net long or net short, shall provide, in a timely fashion, upon request by the Exchange, information regarding the nature of the position, trading strategy, and hedging information if applicable.

5. Spot Position Limit – A participant shall not own or control more than 20,000 net contract equivalents (USD 100,000 notional per synthetic contract) which are settled in the spot period between the second and third Wednesdays (inclusive) during the months of March, June, September and December.

6. Exemptions - The foregoing position limits shall not apply to bona fide hedge positions meeting the requirements of Regulation 1.3(z)(1) of the CFTC and the rules of the Exchange, and shall not apply to other positions exempted pursuant to Rule 559.

7. Reserved

273H.01.G. Last Day of Clearing

The last day on which a Cleared OTC Contract may be submitted for clearing in respect of a specified cash settlement date shall be one valid business day prior to the cash settlement date.

273H.01.H. Liquidation and Delivery Standards

(1) At Maturity. After clearing of Cleared OTC Contracts in respect of a specified cash settlement date has ceased, in accordance with Rule 273H.01.G. of this chapter, outstanding contracts for such cash settlement date shall be liquidated by cash settlement through procedures as prescribed in Rule 273H.02 and in a manner prescribed by the Clearing House.

(2) Prior to Maturity. Standard offsets of futures and options on futures, if applicable, shall not apply to positions in Cleared OTC Contracts. Prior to the Cash Settlement Date, positions may be closed out upon the request of the clearing firm to the Clearing House, and in the manner prescribed by the Clearing House.

273H.01.I. Contract Modifications

Specifications shall be fixed as of the first day of clearing of a contract, except that all final settlements via cash settlement must conform to government regulations in force at the time of final settlement. If any national or international government agency or body issues an order, ruling, directive or law that conflicts with the requirements of these rules, such order, ruling, directive or law shall be construed to take precedence and become part of these rules and all open and new contracts shall be subject to such government orders.

273H.02. CASH SETTLEMENT

273H.02.A. Day of Cash Settlement

Each Cleared OTC Contract, for the valid value date for cash settlement in two business days, shall be liquidated by cash settlement at a price equal to the daily Final Settlement Price (FSP) for that day. The daily Final Settlement Price shall be equal to the Colombian official exchange rate – the Tasa Representativa del Mercado or TRM (also known as the Colombian Peso index) as published by Superintendencia Financiera de Colombia on the Central bank of Colombia's Web site (see http://www.banrep.gov.co/statistics/sta_exchange_d.htm for the daily TRM) on the valid value date for cash settlement, rounded to two decimal places. This rate is used widely by the interbank foreign exchange market to cash settle non-deliverable forward contracts for Colombian peso versus U.S. dollars. All open positions for that valid value date for cash settlement will be cash settled in U.S. dollars based upon the difference between the Final Settlement Price for the valid value date for cash settlement and the original trade price as submitted for clearing times the notional value of the transaction in USDs divided by Final Settlement Price. In the event, this U.S. dollar amount is positive, then the Clearing House shall debit the seller's clearing member account and credit the buyer's clearing member account for this amount in U.S. dollars. In the event, this U.S. dollar amount is

negative, then the Clearing House shall debit the buyer's clearing member account and credit the seller's clearing member account for this amount in U.S. dollars.

For example, if the TRM for the valid value date for cash settlement in two business days, is as follows: "Market Exchange Rate for MMMMM, DD - YYYY is 1887.80 COP per USD," and the original trade price submitted for clearing by clearing firms of the buyer and seller was 1801.44 COP per USD for a notional amount of 100,000 USD, then the Clearing House on the business day following the valid value date for cash settlement shall credit the clearing members account for the buyer with US$4,574.64 (*i.e.*, 1,887.80 COP per USD – 1,801.44 COP per USD =(+86.36 COP per USD x 100,000 USD) / 1,887.80 COP per USD) = $4,574.64.). Similarly, the Clearing House on the business day following the valid value date for cash settlement shall debit the clearing member account for the seller with US$4,574.64.

[~~In the event that the TRM of Colombia Pesos per U.S. Dollar is not published on the last trading day by the Central Bank of Colombia, and in order to minimize basis risk between the Colombian peso / U.S. dollar futures contracts and the non-deliverable forward ("NDF") market, the Exchange shall determine a Final Settlement Price based on the EMTA COP Indicative Survey Rate, when available. The EMTA COP Indicative Survey Rate Methodology follows this chapter in an Interpretation.~~)]

In the event that the "Tasa Representativa del Mercado or TRM" Colombian peso per U.S. dollar rate is not published on a valid date for cash settlement, then Rule 701. – ACTS OF GOVERNMENT, ACTS OF GOD AND OTHER EMERGENCIES shall be in effect.

273H.02.B. Reserved.

273H.02.C. Amendments to Timings

The Exchange may amend the timings of notifications, deliveries, and transfers under this Rule 273H.02 to reflect as appropriate the adoption of daylight savings time in the relevant countries of delivery.

273H.03. DISPUTES

All disputes between interested parties may be settled by arbitration as provided in the Rules.

Appendix 10

Chapter 277H
Cleared OTC U.S. Dollar/ Peruvian Sol (USD/PEN) Spot, Forwards and Swaps

277H.00. SCOPE OF CHAPTER

This chapter is limited in application to U.S. Dollar/Peruvian Sol Spot, Forwards, and Swaps that are executed between two counterparties on an Over-the-Counter ("OTC") basis and subsequently novated to the CME Clearing House for purposes of clearance ("Cleared OTC Contracts"). Parties to transactions in Cleared OTC Contracts shall be limited to "eligible contract participants" as defined in Section 1a(12) of the Commodity Exchange Act. Cleared OTC Contracts are listed by CME for clearing-only. Transactions in Cleared OTC Contracts shall also be subject to the general rules of the Exchange insofar as applicable. The clearing and settlement of transactions in Cleared OTC Contracts shall also be subject to the provisions of Chapter 8-F of the CME Rulebook (Over-the-Counter Derivative Clearing). For purposes of these Rules, the minimum-fluctuations currency is the Peruvian sol and the clearing-unit currency is the U.S. dollar.

277H.01. CONTRACT SPECIFICATIONS

277H.01.A. Unit of Clearing

The unit of clearing shall be 1 U.S. Dollar in any amount down to a precision of 0.01 U.S. Dollar.

277H.01.B. Hours for Clearing Entry

The Exchange shall determine the hours during which Cleared OTC Contracts may be submitted to the Clearing House. Positions shall be initiated or closed out using off-exchange transactions.

277H.01.C. Minimum Price Increments

Minimum price fluctuations shall be in multiples of 0.000001 Peruvian sol per U.S. Dollar for transactions in Cleared OTC Contracts.

277H.01.D. Valid Value Dates for Cash Settlement

Cleared OTC Contracts shall be cash settled for any valid value date(s) mutually agreed to by buyer and seller, and accepted by the Exchange for the applicable currency pair as a valid value date(s) for cash settlement and clearing. In general, for any currency pair, a valid value date shall be any business day that is a banking business day in the countries of issue for both currencies.

277H.01.E. Delivery Price and Delivery Value

Delivery for the Cleared OTC Contracts assigned pursuant to Chapter 277H shall be by cash settlement according to Rule 277H.02.

277H.01.F. Position Limits and Position Accountability

1. Authority - Position Limits and Position Accountability may be applicable, as defined by Rule 560, and as per the following.
2. Aggregation - For purposes of this Rule, where applicable:

- futures,
- options on futures,
- E-mini futures,
- E-micro futures,
- cleared only spot, forward and swaps (combinations of spot and forwards or two maturity forwards),
- cleared only options on spot and forwards; and
- in addition, where applicable, the analogous reciprocal versions of the aforementioned contracts for the respective foreign exchange pairs,

shall be aggregated with all products utilizing that foreign exchange (FX) pair regardless of quoting conventions. The baseline for this aggregation shall be the denomination of the underlying full-size CME futures contract. Contract equivalents shall be determined through the conversion of the notional value (or contract size times the number of contracts in standardized products) to the CME base currency using the prior day's Regular Trading Hours (RTH)

settlement, and dividing the result by the contract size or notional of the full-size CME futures contract.

3. Contract Equivalent - For purposes of this Rule, a contract shall be deemed to be the equivalent of 100,000 U.S. dollars in notional value.

4. Position Accountability - A participant owning or controlling more than the aggregated equivalent of 6,000 contracts, or 600,000,000 U.S. dollars in notional value, net long or net short, shall provide, in a timely fashion, upon request by the Exchange, information regarding the nature of the position, trading strategy, and hedging information if applicable.

5. Spot Position Limit – A participant shall not own or control more than 20,000 net contract equivalents (USD 100,000 notional per synthetic contract) which are settled in the spot period between the second and third Wednesdays (inclusive) during the months of March, June, September and December.

6. Exemptions - The foregoing position limits shall not apply to bona fide hedge positions meeting the requirements of Regulation 1.3(z)(1) of the CFTC and the rules of the Exchange, and shall not apply to other positions exempted pursuant to Rule 559.

7. Reserved

277H.01.G. Last Day of Clearing

The last day on which a Cleared OTC Contract may be submitted for clearing in respect of a specified cash settlement date shall be one valid business day prior to the cash settlement date.

277H.01.H. Liquidation and Delivery Standards

(1) At Maturity. After clearing of Cleared OTC Contracts in respect of a specified cash settlement date has ceased, in accordance with Rule 277H.01.G. of this chapter, outstanding contracts for such cash settlement date shall be liquidated by cash settlement through procedures as prescribed in Rule 277H.02 and in a manner prescribed by the Clearing House.

(2) Prior to Maturity. Standard offsets of futures and options on futures, if applicable, shall not apply to positions in Cleared OTC Contracts. Prior to the Cash Settlement Date, positions may be closed out upon the request of the clearing firm to the Clearing House, and in the manner prescribed by the Clearing House.

277H.01.I. Contract Modifications

Specifications shall be fixed as of the first day of clearing of a contract, except that all final settlements via cash settlement must conform to government regulations in force at the time of final settlement. If any national or international government agency or body issues an order, ruling, directive or law that conflicts with the requirements of these rules, such order, ruling, directive or law shall be construed to take precedence and become part of these rules and all open and new contracts shall be subject to such government orders.

277H.02. CASH SETTLEMENT

277H.02.A. Day of Cash Settlement

Each Cleared OTC Contract, for the valid value date for cash settlement in two business days, shall be liquidated by cash settlement at a price equal to the daily Final Settlement Price (FSP) for that day. The daily Final Settlement Price shall be equal to the “PEN INTERBANK AVE (PEN05),” which is the “Peruvian Sol per U.S. dollar" average exchange rate published by the Banco Central de Reserva del Peru (BCRP) as the “Tipo de Cambio Interbancario Promedio” at approximately 2:00 p.m. Lima time on Reuters “PEBCR05” page, rounded to four decimal places. This rate is used widely by the interbank foreign exchange market to cash settle non-deliverable forward contracts for Peruvian sol versus U.S. dollars. All open positions for that valid value date for cash settlement will be cash settled in U.S. dollars based upon the difference between the Final Settlement Price for the valid value date for cash settlement and the original trade price as submitted for clearing times the notional value of the transaction in USDs divided by Final Settlement Price. In the event, this U.S. dollar amount is positive, then the Clearing House shall debit the seller’s clearing member account and credit the buyer’s clearing member account for this amount in U.S. dollars. In the event, this U.S. dollar amount is negative, then the Clearing House shall debit the buyer’s clearing member account and credit the seller’s clearing member account for this amount in U.S. dollars.

For example, if the “PEN INTERBANK AVE (PEN05),” for the valid value date for cash settlement in two business days, is as follows: MMMMM, DD - YYYY is 2.739600 PEN per USD,” and the original trade price submitted for clearing by clearing firms of the buyer and seller was 2.728156 PEN per USD for a notional amount of 100,000 USD, then the Clearing House on the business day following the valid value date for cash settlement shall credit the clearing members account for the buyer with US$417.73 (*i.e.*, 2.739600 PEN per USD – 2.728156 PEN per USD =(+0.011444 PEN per USD x 100,000 USD) / 2.739600 PEN per USD) = $417.73.). Similarly, the Clearing House on the business day following the valid value date for cash settlement shall debit the clearing member account for the seller with US$417.73.

In the event that the “PEN INTERBANK AVE (PEN05)” Peruvian sol per U.S. dollar rate is not published on a valid date for cash settlement, then Rule 701. – ACTS OF GOVERNMENT, ACTS OF GOD AND OTHER EMERGENCIES shall be in effect.

277H.02.B. Reserved.

277H.02.C. Amendments to Timings

The Exchange may amend the timings of notifications, deliveries, and transfers under this Rule 277H.02 to reflect as appropriate the adoption of daylight savings time in the relevant countries of delivery.

277H.03. DISPUTES

All disputes between interested parties may be settled by arbitration as provided in the Rules.

Appendix 11

Chapter 279H
Cleared OTC U.S. Dollar/ Indian Rupee (USD/INR) Spot, Forwards and Swaps

279H.00. SCOPE OF CHAPTER

This chapter is limited in application to U.S. Dollar/Indian Rupee Spot, Forwards, and Swaps that are executed between two counterparties on an Over-the-Counter ("OTC") basis and subsequently novated to the CME Clearing House for purposes of clearance ("Cleared OTC Contracts"). Parties to transactions in Cleared OTC Contracts shall be limited to "eligible contract participants" as defined in Section 1a(12) of the Commodity Exchange Act. Cleared OTC Contracts are listed by CME for clearing-only. Transactions in Cleared OTC Contracts shall also be subject to the general rules of the Exchange insofar as applicable. The clearing and settlement of transactions in Cleared OTC Contracts shall also be subject to the provisions of Chapter 8-F of the CME Rulebook (Over-the-Counter Derivative Clearing). For purposes of these Rules, the minimum-fluctuations currency is the Indian rupee and the clearing-unit currency is the U.S. dollar.

279H.01. CONTRACT SPECIFICATIONS

279H.01.A. Unit of Clearing

The unit of clearing shall be 1 U.S. Dollar in any amount down to a precision of 0.01 U.S. Dollar.

279H.01.B. Hours for Clearing Entry

The Exchange shall determine the hours during which Cleared OTC Contracts may be submitted to the Clearing House. Positions shall be initiated or closed out using off-exchange transactions.

279H.01.C. Minimum Price Increments

Minimum price fluctuations shall be in multiples of 0.0001 Indian Rupee per U.S. Dollar for transactions in Cleared OTC Contracts.

279H.01.D. Valid Value Dates for Cash Settlement

Cleared OTC Contracts shall be cash settled for any valid value date(s) mutually agreed to by buyer and seller, and accepted by the Exchange for the applicable currency pair as a valid value date(s) for cash settlement and clearing. In general, for any currency pair, a valid value date shall be any business day that is a banking business day in the countries of issue for both currencies.

279H.01.E. Delivery Price and Delivery Value

Delivery for the Cleared OTC Contracts assigned pursuant to Chapter 279H shall be by cash settlement according to Rule 279H.02.

279H.01.F. Position Limits and Position Accountability

1. Authority - Position Limits and Position Accountability may be applicable, as defined by Rule 560, and as per the following.
2. Aggregation - For purposes of this Rule, where applicable:

- futures,
- options on futures,
- E-mini futures,
- E-micro futures,
- cleared only spot, forward and swaps (combinations of spot and forwards or two maturity forwards),
- cleared only options on spot and forwards; and
- in addition, where applicable, the analogous reciprocal versions of the aforementioned contracts for the respective foreign exchange pairs,

shall be aggregated with all products utilizing that foreign exchange (FX) pair regardless of quoting conventions. The baseline for this aggregation shall be the denomination of the underlying full-size CME futures contract. Contract equivalents shall be determined through the conversion of the notional value (or contract size times the number of contracts in standardized products) to the CME base currency using the prior day's Regular Trading Hours (RTH)

settlement, and dividing the result by the contract size or notional of the full-size CME futures contract.

3. Contract Equivalent - For purposes of this Rule, a contract shall be deemed to be the equivalent of 100,000 U.S. dollars in notional value.

4. Position Accountability - A participant owning or controlling more than the aggregated equivalent of 6,000 contracts, or 600,000,000 U.S. dollars in notional value, net long or net short, shall provide, in a timely fashion, upon request by the Exchange, information regarding the nature of the position, trading strategy, and hedging information if applicable.

5. Spot Position Limit – A participant shall not own or control more than 20,000 net contract equivalents (USD 100,000 notional per synthetic contract) which are settled in the spot period between the second and third Wednesdays (inclusive) during the months of March, June, September and December.

6. Exemptions - The foregoing position limits shall not apply to bona fide hedge positions meeting the requirements of Regulation 1.3(z)(1) of the CFTC and the rules of the Exchange, and shall not apply to other positions exempted pursuant to Rule 559.

7. Reserved

279H.01.G. Last Day of Clearing

The last day on which a Cleared OTC Contract may be submitted for clearing in respect of a specified cash settlement date shall be one valid business day prior to the cash settlement date.

279H.01.H. Liquidation and Delivery Standards

(1) At Maturity. After clearing of Cleared OTC Contracts in respect of a specified cash settlement date has ceased, in accordance with Rule 279H.01.G. of this chapter, outstanding contracts for such cash settlement date shall be liquidated by cash settlement through procedures as prescribed in Rule 279H.02 and in a manner prescribed by the Clearing House.

(2) Prior to Maturity. Standard offsets of futures and options on futures, if applicable, shall not apply to positions in Cleared OTC Contracts. Prior to the Cash Settlement Date, positions may be closed out upon the request of the clearing firm to the Clearing House, and in the manner prescribed by the Clearing House.

279H.01.I. Contract Modifications

Specifications shall be fixed as of the first day of clearing of a contract, except that all final settlements via cash settlement must conform to government regulations in force at the time of final settlement. If any national or international government agency or body issues an order, ruling, directive or law that conflicts with the requirements of these rules, such order, ruling, directive or law shall be construed to take precedence and become part of these rules and all open and new contracts shall be subject to such government orders.

279H.02. CASH SETTLEMENT

279H.02.A. Day of Cash Settlement

Each Cleared OTC Contract, for the valid value date for cash settlement in two business days, shall be liquidated by cash settlement at a price equal to the daily Final Settlement Price (FSP) for that day. The daily Final Settlement Price shall be equal to the “INR RBIB (INR01),” which is the “Indian rupee per U.S. dollar" spot exchange rate published by the Reserve Bank of India (RBI) at approximately 12:30 p.m. Mumbai time (about 1:00 a.m. Central Time in the winter and 2:00 a.m. Central Time in the summer) . This rate is used widely by the interbank foreign exchange market to cash settle non-deliverable forward contracts for Indian rupee versus U.S. dollars. Reuters quotes this RBI USD/INR spot rate on its page RBIB. All open positions for that valid value date for cash settlement will be cash settled in U.S. dollars based upon the difference between the Final Settlement Price for the valid value date for cash settlement and the original trade price as submitted for clearing times the notional value of the transaction in USDs divided by Final Settlement Price. In the event, this U.S. dollar amount is positive, then the Clearing House shall debit the seller’s clearing member account and credit the buyer’s clearing member account for this amount in U.S. dollars. In the event, this U.S. dollar amount is negative, then the Clearing House shall debit the buyer’s clearing member account and credit the seller’s clearing member account for this amount in U.S. dollars.

For example, if the “INR RBIB (INR01),” for the valid value date for cash settlement in two business days, is as follows: MMMMM, DD - YYYY is 47.2143 INR per USD,” and the original trade price submitted for clearing by clearing firms of the buyer and seller was 47.7152 INR per USD for a notional amount of 100,000 USD, then the Clearing House on the business day following the valid value date for cash settlement shall debit the clearing members account for the buyer with US$1,060.91 (*i.e.*, 47.2143 INR per USD – 47.7152 INR per USD =(-0.5009 INR

per USD x 100,000 USD) / 47.2143 INR per USD) = -$1,060.91.). Similarly, the Clearing House on the business day following the valid value date for cash settlement shall credit the clearing member account for the seller with US$1,060.91.

In the event that the "INR RBIB (INR01) Indian rupee per U.S. dollar rate," is not published on a valid date for cash settlement, then Rule 701. – ACTS OF GOVERNMENT, ACTS OF GOD AND OTHER EMERGENCIES shall be in effect.

279H.02.B. Reserved

279H.02.C. Amendments to Timings

The Exchange may amend the timings of notifications, deliveries, and transfers under this Rule 279H.02 to reflect as appropriate the adoption of daylight savings time in the relevant countries of delivery.

279H.03. DISPUTES

All disputes between interested parties may be settled by arbitration as provided in the Rules.

Appendix 12

Chapter 280H
Cleared OTC U.S. Dollar/ Malaysian Ringgit (USD/MYR) Spot, Forwards and Swaps

280H.00. SCOPE OF CHAPTER

This chapter is limited in application to U.S. Dollar/Malaysian Ringgit Spot, Forwards, and Swaps that are executed between two counterparties on an Over-the-Counter ("OTC") basis and subsequently novated to the CME Clearing House for purposes of clearance ("Cleared OTC Contracts"). Parties to transactions in Cleared OTC Contracts shall be limited to "eligible contract participants" as defined in Section 1a(12) of the Commodity Exchange Act. Cleared OTC Contracts are listed by CME for clearing-only. Transactions in Cleared OTC Contracts shall also be subject to the general rules of the Exchange insofar as applicable. The clearing and settlement of transactions in Cleared OTC Contracts shall also be subject to the provisions of Chapter 8-F of the CME Rulebook (Over-the-Counter Derivative Clearing). For purposes of these Rules, the minimum-fluctuations currency is the Malaysian ringgit and the clearing-unit currency is the U.S. dollar.

280H.01. CONTRACT SPECIFICATIONS

280H.01.A. Unit of Clearing

The unit of clearing shall be 1 U.S. Dollar in any amount down to a precision of 0.01 U.S. Dollar.

280H.01.B. Hours for Clearing Entry

The Exchange shall determine the hours during which Cleared OTC Contracts may be submitted to the Clearing House. Positions shall be initiated or closed out using off-exchange transactions.

280H.01.C. Minimum Price Increments

Minimum price fluctuations shall be in multiples of 0.000001 Malaysian Ringgit per U.S. Dollar for transactions in Cleared OTC Contracts.

280H.01.D. Valid Value Dates for Cash Settlement

Cleared OTC Contracts shall be cash settled for any valid value date(s) mutually agreed to by buyer and seller, and accepted by the Exchange for the applicable currency pair as a valid value date(s) for cash settlement and clearing. In general, for any currency pair, a valid value date shall be any business day that is a banking business day in the countries of issue for both currencies.

280H.01.E. Delivery Price and Delivery Value

Delivery for the Cleared OTC Contracts assigned pursuant to Chapter 280H shall be by cash settlement according to Rule 280H.02.

280H.01.F. Position Limits and Position Accountability

1. Authority - Position Limits and Position Accountability may be applicable, as defined by Rule 560, and as per the following.
2. Aggregation - For purposes of this Rule, where applicable:

- futures,
- options on futures,
- E-mini futures,
- E-micro futures,
- cleared only spot, forward and swaps (combinations of spot and forwards or two maturity forwards),
- cleared only options on spot and forwards; and
- in addition, where applicable, the analogous reciprocal versions of the aforementioned contracts for the respective foreign exchange pairs,

shall be aggregated with all products utilizing that foreign exchange (FX) pair regardless of quoting conventions. The baseline for this aggregation shall be the denomination of the underlying full-size CME futures contract. Contract equivalents shall be determined through the conversion of the notional value (or contract size times the number of contracts in standardized products) to the CME base currency using the prior day's Regular Trading Hours (RTH)

settlement, and dividing the result by the contract size or notional of the full-size CME futures contract.

3. Contract Equivalent - For purposes of this Rule, a contract shall be deemed to be the equivalent of 100,000 U.S. dollars in notional value.

4. Position Accountability - A participant owning or controlling more than the aggregated equivalent of 6,000 contracts, or 600,000,000 U.S. dollars in notional value, net long or net short, shall provide, in a timely fashion, upon request by the Exchange, information regarding the nature of the position, trading strategy, and hedging information if applicable.

5. Spot Position Limit – A participant shall not own or control more than 20,000 net contract equivalents (USD 100,000 notional per synthetic contract) which are settled in the spot period between the second and third Wednesdays (inclusive) during the months of March, June, September and December.

6. Exemptions - The foregoing position limits shall not apply to bona fide hedge positions meeting the requirements of Regulation 1.3(z)(1) of the CFTC and the rules of the Exchange, and shall not apply to other positions exempted pursuant to Rule 559.

7. Reserved

280H.01.G. Last Day of Clearing

The last day on which a Cleared OTC Contract may be submitted for clearing in respect of a specified cash settlement date shall be one valid business day prior to the cash settlement date.

280H.01.H. Liquidation and Delivery Standards

(1) At Maturity. After clearing of Cleared OTC Contracts in respect of a specified cash settlement date has ceased, in accordance with Rule 280H.01.G. of this chapter, outstanding contracts for such cash settlement date shall be liquidated by cash settlement through procedures as prescribed in Rule 280H.02 and in a manner prescribed by the Clearing House.

(2) Prior to Maturity. Standard offsets of futures and options on futures, if applicable, shall not apply to positions in Cleared OTC Contracts. Prior to the Cash Settlement Date, positions may be closed out upon the request of the clearing firm to the Clearing House, and in the manner prescribed by the Clearing House.

280H.01.I. Contract Modifications

Specifications shall be fixed as of the first day of clearing of a contract, except that all final settlements via cash settlement must conform to government regulations in force at the time of final settlement. If any national or international government agency or body issues an order, ruling, directive or law that conflicts with the requirements of these rules, such order, ruling, directive or law shall be construed to take precedence and become part of these rules and all open and new contracts shall be subject to such government orders.

280H.02. CASH SETTLEMENT

280H.02.A. Day of Cash Settlement

Each Cleared OTC Contract, for the valid value date for cash settlement in two business days, shall be liquidated by cash settlement at a price equal to the daily Final Settlement Price (FSP) for that day. The daily Final Settlement Price shall be equal to the "MYR ABS (MYR01)," which is the “Malaysian ringgit per U.S. dollar" spot exchange rate spot rate at 11:30 a.m. Singapore time (9:30 p.m. CT on the preceding evening), expressed as the amount of Malaysian ringgit per one U.S. dollar, for settlement in two Business Days, reported by the Association of Banks in Singapore which appears on the Reuters/Telerate Page 50157 to the right of the caption “Spot” under the column “MYR” at approximately 11:30 a.m., Singapore time (9:30 p.m. CT on the preceding evening), rounded to four (4) decimal places. This rate is used widely by the interbank foreign exchange market to cash settle non-deliverable forward contracts for Malaysian ringgit versus U.S. dollars. All open positions for that valid value date for cash settlement will be cash settled in U.S. dollars based upon the difference between the Final Settlement Price for the valid value date for cash settlement and the original trade price as submitted for clearing times the notional value of the transaction in USDs divided by Final Settlement Price. In the event, this U.S. dollar amount is positive, then the Clearing House shall debit the seller’s clearing member account and credit the buyer’s clearing member account for this amount in U.S. dollars. In the event, this U.S. dollar amount is negative, then the Clearing House shall debit the buyer’s clearing member account and credit the seller’s clearing member account for this amount in U.S. dollars.

For example, if the "MYR ABS (MYR01),” for the valid value date for cash settlement in two business days, is as follows: MMMMM, DD - YYYY is 3.012300 MYR per USD,” and the original trade price submitted for clearing by clearing firms of the buyer and seller was 3.030801 MYR per USD for a notional amount of 100,000 USD, then the

Clearing House on the business day following the valid value date for cash settlement shall debit the clearing members account for the buyer with US$614.18 (*i.e.*, 3.012300 MYR per USD – 3.030801 MYR per USD =(-0.018501 MYR per USD x 100,000 USD) / 3.012300 MYR per USD) = -$614.18.). Similarly, the Clearing House on the business day following the valid value date for cash settlement shall credit the clearing member account for the seller with US$614.18.

In the event that the "MYR ABS (MYR01)" Malaysian ringgit per U.S. dollar rate is not published on a valid date for cash settlement, then Rule 701. – ACTS OF GOVERNMENT, ACTS OF GOD AND OTHER EMERGENCIES shall be in effect.

280H.02.B. Reserved

280H.02.C. Amendments to Timings

The Exchange may amend the timings of notifications, deliveries, and transfers under this Rule 280H.02 to reflect as appropriate the adoption of daylight savings time in the relevant countries of delivery.

280H.03. DISPUTES

All disputes between interested parties may be settled by arbitration as provided in the Rules.

Appendix 13

Chapter 281H
Cleared OTC U.S. Dollar/ Indonesian Rupiah (USD/IDR) Spot, Forwards and Swaps

281H.00. SCOPE OF CHAPTER

This chapter is limited in application to U.S. Dollar/Indonesian Rupiah Spot, Forwards, and Swaps that are executed between two counterparties on an Over-the-Counter ("OTC") basis and subsequently novated to the CME Clearing House for purposes of clearance ("Cleared OTC Contracts"). Parties to transactions in Cleared OTC Contracts shall be limited to "eligible contract participants" as defined in Section 1a(12) of the Commodity Exchange Act. Cleared OTC Contracts are listed by CME for clearing-only. Transactions in Cleared OTC Contracts shall also be subject to the general rules of the Exchange insofar as applicable. The clearing and settlement of transactions in Cleared OTC Contracts shall also be subject to the provisions of Chapter 8-F of the CME Rulebook (Over-the-Counter Derivative Clearing). For purposes of these Rules, the minimum-fluctuations currency is the Indonesian rupiah and the clearing-unit currency is the U.S. dollar.

281H.01. CONTRACT SPECIFICATIONS

281H.01.A. Unit of Clearing

The unit of clearing shall be 1 U.S. Dollar in any amount down to a precision of 0.01 U.S. Dollar.

281H.01.B. Hours for Clearing Entry

The Exchange shall determine the hours during which Cleared OTC Contracts may be submitted to the Clearing House. Positions shall be initiated or closed out using off-exchange transactions.

281H.01.C. Minimum Price Increments

Minimum price fluctuations shall be in multiples of 0.01 Indonesian Rupiah per U.S. Dollar for transactions in Cleared OTC Contracts.

281H.01.D. Valid Value Dates for Cash Settlement

Cleared OTC Contracts shall be cash settled for any valid value date(s) mutually agreed to by buyer and seller, and accepted by the Exchange for the applicable currency pair as a valid value date(s) for cash settlement and clearing. In general, for any currency pair, a valid value date shall be any business day that is a banking business day in the countries of issue for both currencies.

281H.01.E. Delivery Price and Delivery Value

Delivery for the Cleared OTC Contracts assigned pursuant to Chapter 281H shall be by cash settlement according to Rule 281H.02.

281H.01.F. Position Limits and Position Accountability

1. Authority - Position Limits and Position Accountability may be applicable, as defined by Rule 560, and as per the following.
2. Aggregation - For purposes of this Rule, where applicable:

- futures,
- options on futures,
- E-mini futures,
- E-micro futures,
- cleared only spot, forward and swaps (combinations of spot and forwards or two maturity forwards),
- cleared only options on spot and forwards; and
- in addition, where applicable, the analogous reciprocal versions of the aforementioned contracts for the respective foreign exchange pairs,

shall be aggregated with all products utilizing that foreign exchange (FX) pair regardless of quoting conventions. The baseline for this aggregation shall be the denomination of the underlying full-size CME futures contract. Contract equivalents shall be determined through the conversion of the notional value (or contract size times the number of contracts in standardized products) to the CME base currency using the prior day's Regular Trading Hours (RTH)

settlement, and dividing the result by the contract size or notional of the full-size CME futures contract.

3. Contract Equivalent - For purposes of this Rule, a contract shall be deemed to be the equivalent of 100,000 U.S. dollars in notional value.

4. Position Accountability - A participant owning or controlling more than the aggregated equivalent of 6,000 contracts, or 600,000,000 U.S. dollars in notional value, net long or net short, shall provide, in a timely fashion, upon request by the Exchange, information regarding the nature of the position, trading strategy, and hedging information if applicable.

5. Spot Position Limit – A participant shall not own or control more than 20,000 net contract equivalents (USD 100,000 notional per synthetic contract) which are settled in the spot period between the second and third Wednesdays (inclusive) during the months of March, June, September and December.

6. Exemptions - The foregoing position limits shall not apply to bona fide hedge positions meeting the requirements of Regulation 1.3(z)(1) of the CFTC and the rules of the Exchange, and shall not apply to other positions exempted pursuant to Rule 559.

7. Reserved

281H.01.G. Last Day of Clearing

The last day on which a Cleared OTC Contract may be submitted for clearing in respect of a specified cash settlement date shall be one valid business day prior to the cash settlement date.

281H.01.H. Liquidation and Delivery Standards

(1) At Maturity. After clearing of Cleared OTC Contracts in respect of a specified cash settlement date has ceased, in accordance with Rule 281H.01.G. of this chapter, outstanding contracts for such cash settlement date shall be liquidated by cash settlement through procedures as prescribed in Rule 281H.02 and in a manner prescribed by the Clearing House.

(2) Prior to Maturity. Standard offsets of futures and options on futures, if applicable, shall not apply to positions in Cleared OTC Contracts. Prior to the Cash Settlement Date, positions may be closed out upon the request of the clearing firm to the Clearing House, and in the manner prescribed by the Clearing House.

281H.01.I. Contract Modifications

Specifications shall be fixed as of the first day of clearing of a contract, except that all final settlements via cash settlement must conform to government regulations in force at the time of final settlement. If any national or international government agency or body issues an order, ruling, directive or law that conflicts with the requirements of these rules, such order, ruling, directive or law shall be construed to take precedence and become part of these rules and all open and new contracts shall be subject to such government orders.

281H.02. CASH SETTLEMENT

281H.02.A. Day of Cash Settlement

Each Cleared OTC Contract, for the valid value date for cash settlement in two business days, shall be liquidated by cash settlement at a price equal to the daily Final Settlement Price (FSP) for that day. The daily Final Settlement Price shall be equal to the "IDR ABS (IDR01)" which is the "Indonesian rupiah per U.S. dollar" spot exchange rate spot rate at 11:30 a.m. Singapore time (9:30 p.m. CT on the preceding evening), expressed as the amount of Indonesian rupiah per one U.S. dollar, for settlement in two business days, reported by the Association of Banks in Singapore which appears on the Reuters/Telerate Page 50157 to the right of the caption "Spot" under the column "IDR" at approximately 11:30 a.m., Singapore time (9:30 p.m. CT on the preceding evening), rounded to two (2) decimal places. This rate is used widely by the interbank foreign exchange market to cash settle non-deliverable forward contracts for Indonesian rupiah versus U.S. dollars. All open positions for that valid value date for cash settlement will be cash settled in U.S. dollars based upon the difference between the Final Settlement Price for the valid value date for cash settlement and the original trade price as submitted for clearing times the notional value of the transaction in USDs divided by Final Settlement Price. In the event, this U.S. dollar amount is positive, then the Clearing House shall debit the seller's clearing member account and credit the buyer's clearing member account for this amount in U.S. dollars. In the event, this U.S. dollar amount is negative, then the Clearing House shall debit the buyer's clearing member account and credit the seller's clearing member account for this amount in U.S. dollars.

For example, if the "IDR ABS (IDR01)," for the valid value date for cash settlement in two business days, is as follows: MMMMM, DD - YYYY is 8612.00 IDR per USD," and the original trade price submitted for clearing by clearing firms of the buyer and seller was 8682.45 IDR per USD for a notional amount of 100,000 USD, then the Clearing House on

the business day following the valid value date for cash settlement shall debit the clearing members account for the buyer with US$818.04 (*i.e.*, 8612.00 IDR per USD – 8682.45 IDR per USD =(-70.45 IDR per USD x 100,000 USD) / 8612.00 IDR per USD) = -$818.04.). Similarly, the Clearing House on the business day following the valid value date for cash settlement shall credit the clearing member account for the seller with US$818.04.
In the event that the "IDR ABS (IDR01)" Indonesian rupiah per U.S. dollar rate is not published on a valid date for cash settlement, then Rule 701. – ACTS OF GOVERNMENT, ACTS OF GOD AND OTHER EMERGENCIES shall be in effect.

281H.02.B. Reserved

281H.02.C. Amendments to Timings

The Exchange may amend the timings of notifications, deliveries, and transfers under this Rule 281H.02 to reflect as appropriate the adoption of daylight savings time in the relevant countries of delivery.

281H.03. DISPUTES

All disputes between interested parties may be settled by arbitration as provided in the Rules.

Appendix 14

Chapter 282H
Cleared OTC U.S. Dollar/ Taiwan Dollar (USD/TWD) Spot, Forwards and Swaps

282H.00. SCOPE OF CHAPTER

This chapter is limited in application to U.S. Dollar/Taiwan Dollar Spot, Forwards, and Swaps that are executed between two counterparties on an Over-the-Counter ("OTC") basis and subsequently novated to the CME Clearing House for purposes of clearance ("Cleared OTC Contracts"). Parties to transactions in Cleared OTC Contracts shall be limited to "eligible contract participants" as defined in Section 1a(12) of the Commodity Exchange Act. Cleared OTC Contracts are listed by CME for clearing-only. Transactions in Cleared OTC Contracts shall also be subject to the general rules of the Exchange insofar as applicable. The clearing and settlement of transactions in Cleared OTC Contracts shall also be subject to the provisions of Chapter 8-F of the CME Rulebook (Over-the-Counter Derivative Clearing). For purposes of these Rules, the minimum-fluctuations currency is the Taiwan dollar and the clearing-unit currency is the U.S. dollar.

282H.01. CONTRACT SPECIFICATIONS

282H.01.A. Unit of Clearing

The unit of clearing shall be 1 U.S. Dollar in any amount down to a precision of 0.01 U.S. Dollar.

282H.01.B. Hours for Clearing Entry

The Exchange shall determine the hours during which Cleared OTC Contracts may be submitted to the Clearing House. Positions shall be initiated or closed out using off-exchange transactions.

282H.01.C. Minimum Price Increments

Minimum price fluctuations shall be in multiples of 0.001 Taiwan Dollar per U.S. Dollar for transactions in Cleared OTC Contracts.

282H.01.D. Valid Value Dates for Cash Settlement

Cleared OTC Contracts shall be cash settled for any valid value date(s) mutually agreed to by buyer and seller, and accepted by the Exchange for the applicable currency pair as a valid value date(s) for cash settlement and clearing. In general, for any currency pair, a valid value date shall be any business day that is a banking business day in the countries of issue for both currencies.

282H.01.E. Delivery Price and Delivery Value

Delivery for the Cleared OTC Contracts assigned pursuant to Chapter 282H shall be by cash settlement according to Rule 282H.02.

282H.01.F. Position Limits and Position Accountability

1. Authority - Position Limits and Position Accountability may be applicable, as defined by Rule 560, and as per the following.
2. Aggregation - For purposes of this Rule, where applicable:

- futures,
- options on futures,
- E-mini futures,
- E-micro futures,
- cleared only spot, forward and swaps (combinations of spot and forwards or two maturity forwards),
- cleared only options on spot and forwards; and
- in addition, where applicable, the analogous reciprocal versions of the aforementioned contracts for the respective foreign exchange pairs,

shall be aggregated with all products utilizing that foreign exchange (FX) pair regardless of quoting conventions. The baseline for this aggregation shall be the denomination of the underlying full-size CME futures contract. Contract equivalents shall be determined through the conversion of the notional value (or contract size times the number of contracts in standardized products) to the CME base currency using the prior day's Regular Trading Hours (RTH)

settlement, and dividing the result by the contract size or notional of the full-size CME futures contract.

3. Contract Equivalent - For purposes of this Rule, a contract shall be deemed to be the equivalent of 100,000 U.S. dollars in notional value.

4. Position Accountability - A participant owning or controlling more than the aggregated equivalent of 6,000 contracts, or 600,000,000 U.S. dollars in notional value, net long or net short, shall provide, in a timely fashion, upon request by the Exchange, information regarding the nature of the position, trading strategy, and hedging information if applicable.

5. Spot Position Limit – A participant shall not own or control more than 20,000 net contract equivalents (USD 100,000 notional per synthetic contract) which are settled in the spot period between the second and third Wednesdays (inclusive) during the months of March, June, September and December.

6. Exemptions - The foregoing position limits shall not apply to bona fide hedge positions meeting the requirements of Regulation 1.3(z)(1) of the CFTC and the rules of the Exchange, and shall not apply to other positions exempted pursuant to Rule 559.

7. Reserved

282H.01.G. Last Day of Clearing

The last day on which a Cleared OTC Contract may be submitted for clearing in respect of a specified cash settlement date shall be one valid business day prior to the cash settlement date.

282H.01.H. Liquidation and Delivery Standards

(1) At Maturity. After clearing of Cleared OTC Contracts in respect of a specified cash settlement date has ceased, in accordance with Rule 282H.01.G. of this chapter, outstanding contracts for such cash settlement date shall be liquidated by cash settlement through procedures as prescribed in Rule 282H.02 and in a manner prescribed by the Clearing House.

(2) Prior to Maturity. Standard offsets of futures and options on futures, if applicable, shall not apply to positions in Cleared OTC Contracts. Prior to the Cash Settlement Date, positions may be closed out upon the request of the clearing firm to the Clearing House, and in the manner prescribed by the Clearing House.

282H.01.I. Contract Modifications

Specifications shall be fixed as of the first day of clearing of a contract, except that all final settlements via cash settlement must conform to government regulations in force at the time of final settlement. If any national or international government agency or body issues an order, ruling, directive or law that conflicts with the requirements of these rules, such order, ruling, directive or law shall be construed to take precedence and become part of these rules and all open and new contracts shall be subject to such government orders.

282H.02. CASH SETTLEMENT

282H.02.A. Day of Cash Settlement

Each Cleared OTC Contract, for the valid value date for cash settlement in two business days, shall be liquidated by cash settlement at a price equal to the daily Final Settlement Price (FSP) for that day. The daily Final Settlement Price shall be equal to the "TWD TAIFX1 (TWD03)" which is the "Taiwan dollar per U.S. dollar" spot exchange rate at 11:00 a.m. Taipei time (9:00 p.m. CT in winter or 10:00 p.m. CT in summer on the preceding evening), expressed as the amount of Taiwan dollar per one U.S. dollar, for settlement in two business days, reported by Taipei Forex Inc., which appears on the Reuters screen TAIFX1 page under the heading "Spot" as of 11:00 a.m. Taipei time, rounded to three (3) decimal places. This rate is used widely by the interbank foreign exchange market to cash settle non-deliverable forward contracts for Taiwan dollar versus U.S. dollars. All open positions for that valid value date for cash settlement will be cash settled in U.S. dollars based upon the difference between the Final Settlement Price for the valid value date for cash settlement and the original trade price as submitted for clearing times the notional value of the transaction in USDs divided by Final Settlement Price. In the event, this U.S. dollar amount is positive, then the Clearing House shall debit the seller's clearing member account and credit the buyer's clearing member account for this amount in U.S. dollars. In the event, this U.S. dollar amount is negative, then the Clearing House shall debit the buyer's clearing member account and credit the seller's clearing member account for this amount in U.S. dollars.

For example, if the "TWD TAIFX1 (TWD03)," for the valid value date for cash settlement in two business days, is as follows: MMMMM, DD - YYYY is 29.195 TWD per USD," and the original trade price submitted for clearing by clearing firms of the buyer and seller was 29.275 TWD per USD for a notional amount of 100,000 USD, then the Clearing House on the business day following the valid value date for cash settlement shall debit the clearing

members account for the buyer with US$274.02 (*i.e.*, 29.195 TWD per USD – 29.275 TWD per USD =(-0.080 TWD per USD x 100,000 USD) / 29.195 TWD per USD) = -$274.02.). Similarly, the Clearing House on the business day following the valid value date for cash settlement shall credit the clearing member account for the seller with US$274.02.

In the event that the "TWD TAIFX1 (TWD03)" Taiwan dollar per U.S. dollar rate is not published on a valid date for cash settlement, then Rule 701. – ACTS OF GOVERNMENT, ACTS OF GOD AND OTHER EMERGENCIES shall be in effect.

282H.02.B. Reserved

282H.02.C. Amendments to Timings

The Exchange may amend the timings of notifications, deliveries, and transfers under this Rule 282H.02 to reflect as appropriate the adoption of daylight savings time in the relevant countries of delivery.

282H.03. DISPUTES

All disputes between interested parties may be settled by arbitration as provided in the Rules.

Appendix 15

Chapter 283H
Cleared OTC U.S. Dollar/ Philippines Peso (USD/PHP) Spot, Forwards and Swaps

283H.00. SCOPE OF CHAPTER

This chapter is limited in application to U.S. Dollar/Philippines Peso Spot, Forwards, and Swaps that are executed between two counterparties on an Over-the-Counter ("OTC") basis and subsequently novated to the CME Clearing House for purposes of clearance ("Cleared OTC Contracts"). Parties to transactions in Cleared OTC Contracts shall be limited to "eligible contract participants" as defined in Section 1a(12) of the Commodity Exchange Act. Cleared OTC Contracts are listed by CME for clearing-only. Transactions in Cleared OTC Contracts shall also be subject to the general rules of the Exchange insofar as applicable. The clearing and settlement of transactions in Cleared OTC Contracts shall also be subject to the provisions of Chapter 8-F of the CME Rulebook (Over-the-Counter Derivative Clearing). For purposes of these Rules, the minimum-fluctuations currency is the Philippines peso and the clearing-unit currency is the U.S. dollar.

283H.01. CONTRACT SPECIFICATIONS

283H.01.A. Unit of Clearing

The unit of clearing shall be 1 U.S. Dollar in any amount down to a precision of 0.01 U.S. Dollar.

283H.01.B. Hours for Clearing Entry

The Exchange shall determine the hours during which Cleared OTC Contracts may be submitted to the Clearing House. Positions shall be initiated or closed out using off-exchange transactions.

283H.01.C. Minimum Price Increments

Minimum price fluctuations shall be in multiples of 0.001 Philippines Peso per U.S. Dollar for transactions in Cleared OTC Contracts.

283H.01.D. Valid Value Dates for Cash Settlement

Cleared OTC Contracts shall be cash settled for any valid value date(s) mutually agreed to by buyer and seller, and accepted by the Exchange for the applicable currency pair as a valid value date(s) for cash settlement and clearing. In general, for any currency pair, a valid value date shall be any business day that is a banking business day in the countries of issue for both currencies.

283H.01.E. Delivery Price and Delivery Value

Delivery for the Cleared OTC Contracts assigned pursuant to Chapter 283H shall be by cash settlement according to Rule 283H.02.

283H.01.F. Position Limits and Position Accountability

1. Authority - Position Limits and Position Accountability may be applicable, as defined by Rule 560, and as per the following.
2. Aggregation - For purposes of this Rule, where applicable:

- futures,
- options on futures,
- E-mini futures,
- E-micro futures,
- cleared only spot, forward and swaps (combinations of spot and forwards or two maturity forwards),
- cleared only options on spot and forwards; and
- in addition, where applicable, the analogous reciprocal versions of the aforementioned contracts for the respective foreign exchange pairs,

shall be aggregated with all products utilizing that foreign exchange (FX) pair regardless of quoting conventions. The baseline for this aggregation shall be the denomination of the underlying full-size CME futures contract. Contract equivalents shall be determined through the conversion of the notional value (or contract size times the number of contracts in standardized products) to the CME base currency using the prior day's Regular Trading Hours (RTH)

settlement, and dividing the result by the contract size or notional of the full-size CME futures contract.

3. Contract Equivalent - For purposes of this Rule, a contract shall be deemed to be the equivalent of 100,000 U.S. dollars in notional value.

4. Position Accountability - A participant owning or controlling more than the aggregated equivalent of 6,000 contracts, or 600,000,000 U.S. dollars in notional value, net long or net short, shall provide, in a timely fashion, upon request by the Exchange, information regarding the nature of the position, trading strategy, and hedging information if applicable.

5. Spot Position Limit – A participant shall not own or control more than 20,000 net contract equivalents (USD 100,000 notional per synthetic contract) which are settled in the spot period between the second and third Wednesdays (inclusive) during the months of March, June, September and December.

6. Exemptions - The foregoing position limits shall not apply to bona fide hedge positions meeting the requirements of Regulation 1.3(z)(1) of the CFTC and the rules of the Exchange, and shall not apply to other positions exempted pursuant to Rule 559.

7. Reserved

283H.01.G. Last Day of Clearing

The last day on which a Cleared OTC Contract may be submitted for clearing in respect of a specified cash settlement date shall be one valid business day prior to the cash settlement date.

283H.01.H. Liquidation and Delivery Standards

(1) At Maturity. After clearing of Cleared OTC Contracts in respect of a specified cash settlement date has ceased, in accordance with Rule 283H.01.G. of this chapter, outstanding contracts for such cash settlement date shall be liquidated by cash settlement through procedures as prescribed in Rule 283H.02 and in a manner prescribed by the Clearing House.

(2) Prior to Maturity. Standard offsets of futures and options on futures, if applicable, shall not apply to positions in Cleared OTC Contracts. Prior to the Cash Settlement Date, positions may be closed out upon the request of the clearing firm to the Clearing House, and in the manner prescribed by the Clearing House.

283H.01.I. Contract Modifications

Specifications shall be fixed as of the first day of clearing of a contract, except that all final settlements via cash settlement must conform to government regulations in force at the time of final settlement. If any national or international government agency or body issues an order, ruling, directive or law that conflicts with the requirements of these rules, such order, ruling, directive or law shall be construed to take precedence and become part of these rules and all open and new contracts shall be subject to such government orders.

283H.02. CASH SETTLEMENT

283H.02.A. Day of Cash Settlement

Each Cleared OTC Contract, for the valid value date for cash settlement in two business days, shall be liquidated by cash settlement at a price equal to the daily Final Settlement Price (FSP) for that day. The daily Final Settlement Price shall be equal to the "PHP PDSPESO (PHP06)" which is the "Philippines peso per U.S. dollar" spot exchange rate at 11:30 a.m. Manila time (9:30 p.m. CT in winter or 10:30 p.m. CT in summer on the preceding evening), expressed as the amount of Philippine pesos per one U.S. dollar, for settlement in two business days, reported as the weighted average of all foreign exchange transactions done through the electronic Philippine Dealing System (PDS) during the preceding business day pursuant to Circular Letter dated July 30, 1992 of the Bangko Sentral ng Pilipinas. This rate is used widely by the interbank foreign exchange market to cash settle non-deliverable forward contracts for Philippine peso versus U.S. dollars. Reuters quotes this spot rate on its page PDSPESO (PHP06) to the right of the caption "AM WT AVE." All open positions for that valid value date for cash settlement will be cash settled in U.S. dollars based upon the difference between the Final Settlement Price for the valid value date for cash settlement and the original trade price as submitted for clearing times the notional value of the transaction in USDs divided by Final Settlement Price. In the event, this U.S. dollar amount is positive, then the Clearing House shall debit the seller's clearing member account and credit the buyer's clearing member account for this amount in U.S. dollars. In the event, this U.S. dollar amount is negative, then the Clearing House shall debit the buyer's clearing member account and credit the seller's clearing member account for this amount in U.S. dollars.

For example, if the "PHP PDSPESO (PHP06)," for the valid value date for cash settlement in two business days, is as follows: MMMMM, DD - YYYY is 42.673 PHP per USD," and the original trade price submitted for clearing by

clearing firms of the buyer and seller was 42.619 PHP per USD for a notional amount of 100,000 USD, then the Clearing House on the business day following the valid value date for cash settlement shall credit the clearing members account for the buyer with US$126.54 (*i.e.*, 42.673 PHP per USD – 42.619 PHP per USD =(+0.054 PHP per USD x 100,000 USD) / 42.673 PHP per USD) = +$126.54.). Similarly, the Clearing House on the business day following the valid value date for cash settlement shall debit the clearing member account for the seller with US$126.54.

In the event that the "PHP PDSPESO (PHP06)" Philippines per U.S. dollar rate is not published on a valid date for cash settlement, then Rule 701. – ACTS OF GOVERNMENT, ACTS OF GOD AND OTHER EMERGENCIES shall be in effect.

283H.02.B. Reserved

283H.02.C. Amendments to Timings

The Exchange may amend the timings of notifications, deliveries, and transfers under this Rule 283H.02 to reflect as appropriate the adoption of daylight savings time in the relevant countries of delivery.

283H.03. DISPUTES

All disputes between interested parties may be settled by arbitration as provided in the Rules.

Appendix 16. Attributes of the Daily Mark to Market Clearing System for Cleared OTC FX Products

Code	Primary	Contra	Settle	Value	MTMCur	Type	Name	Tick	Deci-mals	Sample Price	Days prior	Fixing
USDBRL	USD	BRL	CASH	FWDBI	USD	NDF	Brazilian Real	0.000001	6	1.712356	1	PTAX
USDCLP	USD	CLP	CASH	FWDBI	USD	NDF	Chilean Peso	0.0001	4	478.2356	1	CLP10
USDCNY	USD	CNY	CASH	FWDBI	USD	NDF	Chinese Yuan	0.0001	4	6.3905	1	SAEC
USDCOP	USD	COP	CASH	FWDBI	USD	NDF	Colombian Peso	0.01	2	1823.45	1	TRM
USDIDR	USD	IDR	CASH	FWDBI	USD	NDF	Indonesia Rupiah	0.01	2	8760.23	1	IDR01
USDINR	USD	INR	CASH	FWDBI	USD	NDF	Indian Rupee	0.0001	4	47.5551	1	INR01
USDKRW	USD	KRW	CASH	FWDBI	USD	NDF	Korean Won	0.0001	4	1113.2568	1	KFTC18
USDMYR	USD	MYR	CASH	FWDBI	USD	NDF	Malaysia Ringgit	0.000001	6	3.089256	1	MYR01
USDPEN	USD	PEN	CASH	FWDBI	USD	NDF	Peruvian Sol	0.000001	6	2.732088	1	PEN05
USDPHP	USD	PHP	CASH	FWDBI	USD	NDF	Philippine Peso	0.001	3	43.295	1	PHP06
USDRUB	USD	RUB	CASH	FWDBI	USD	NDF	Russian Ruble	0.000001	6	30.497527	1	CME/EMTA
USDTWD	USD	TWD	CASH	FWDBI	USD	NDF	Taiwan Dollar	0.001	3	29.622	1	TWD03
AUDJPY	AUD	JPY	CASH	FWDB	JPY	CSF	Aussie/Yen	0.000001	6	78.816157	2	WM Reuters
AUDUSD	AUD	USD	CASH	FWDB	USD	CSF	Australian Dollar	0.000001	6	1.030956	1	WM Reuters
CADJPY	CAD	JPY	CASH	FWDB	JPY	CSF	Canadian/Yen	0.00001	5	77.66865	2	WM Reuters
EURAUD	EUR	AUD	CASH	FWDBI	EUR	CSF	Euro/Aussie	0.000001	6	1.346128	1	WM Reuters
EURCHF	EUR	CHF	CASH	FWDBI	EUR	CSF	Euro/Swiss	0.0000001	7	1.2051456	1	WM Reuters
EURGBP	EUR	GBP	CASH	FWDBI	EUR	CSF	Euro/Pound	0.0000001	7	0.8763629	1	WM Reuters
EURJPY	EUR	JPY	CASH	FWDBI	EUR	CSF	Euro/Yen	0.0001	4	106.2159	1	WM Reuters
EURUSD	EUR	USD	CASH	FWDB	USD	CSF	Euro	0.000001	6	1.385194	1	WM Reuters
GBPUSD	GBP	USD	CASH	FWDB	USD	CSF	British Pound	0.000001	6	1.580543	1	WM Reuters
NZDUSD	NZD	USD	CASH	FWDB	USD	CSF	New Zealand $	0.000001	6	0.823979	1	WM Reuters
USDCAD	USD	CAD	CASH	FWDBI	USD	CSF	Canadian Dollar	0.000001	6	0.987458	1	WM Reuters
USDCZK	USD	CZK	CASH	FWDBI	USD	CSF	Czech Koruna	0.00001	5	17.73312	1	WM Reuters
USDCHF	USD	CHF	CASH	FWDBI	USD	CSF	Swiss Franc	0.000001	6	0.870156	1	WM Reuters
USDDKK	USD	DKK	CASH	FWDBI	USD	CSF	Danish Krone	0.000001	6	5.377842	1	WM Reuters
USDHKD	USD	HKD	CASH	FWDBI	USD	CSF	Hong Kong $	0.000001	6	7.791657	1	WM Reuters
USDHUF	USD	HUF	CASH	FWDBI	USD	CSF	Hungarian Forint	0.0001	4	205.9383	1	WM Reuters
USDILS	USD	ILS	CASH	FWDBI	USD	CSF	Israeli Shekel	0.000001	6	3.669047	1	WM Reuters
USDJPY	USD	JPY	CASH	FWDBI	USD	CSF	Japanese Yen	0.0001	4	76.7192	1	WM Reuters
USDMXN	USD	MXN	CASH	FWDBI	USD	CSF	Mexican Peso	0.000001	6	12.909847	1	WM Reuters
USDNOK	USD	NOK	CASH	FWDBI	USD	CSF	Norway Krone	0.000001	6	5.593688	1	WM Reuters
USDPLN	USD	PLN	CASH	FWDBI	USD	CSF	Polish Zloty	0.000001	6	3.125932	1	WM Reuters
USDSEK	USD	SEK	CASH	FWDBI	USD	CSF	Swedish Krona	0.000001	6	6.616378	1	WM Reuters
USDSGD	USD	SGD	CASH	FWDBI	USD	CSF	Singapore Dollar	0.000001	6	1.244456	1	WM Reuters
USDTHB	USD	THB	CASH	FWDBI	USD	CSF	Thailand Baht	0.0001	4	30.3547	1	WM Reuters
USDTRY	USD	TRY	CASH	FWDBI	USD	CSF	Turkish Lira	0.000001	6	1.783092	1	WM Reuters
USDZAR	USD	ZAR	CASH	FWDBI	USD	CSF	S. African Rand	0.000001	6	7.395692	1	WM Reuters

Appendix 17

Countries' GDP, FX Turnover & Stock Market Capitalization Statistics

	Country	Currency	Ticker	2010 GDP (Bil USD)	2008 Stock Market Cap (Bil USD)	4/10 FX Market Turnover (Bil USD) (2)	4/10 FX Turnover Market Share (3)
1	United States	Dollars	USD	$14,720.00	$11,740.00	$1,689.9	21.23%
2	European Union (1)	Euros	EUR	$14,900.00	$7,644.00	$778.3	9.78%
3	Japan	Yen	JPY	$4,338.00	$3,290.00	$378.2	4.75%
4	United Kingdom	Pounds	GBP	$2,189.00	$1,852.00	$256.8	3.23%
5	Australia	Dollars	AUD	$889.60	$675.60	$151.3	1.90%
6	Switzerland	Francs	CHF	$326.50	$862.70	$127.4	1.60%
7	Canada	Dollars	CAD	$1,335.00	$1,002.00	$105.5	1.33%
8	Hong Kong	Dollars	HKD	$323.30	$1,320.00	$47.8	0.60%
9	Sweden	Kronor	SEK	$354.00	$252.50	$43.8	0.55%
10	New Zealand	Dollars	NZD	$119.20	$24.17	$31.8	0.40%
11	Korea	Won	KRW	$1,467.00	$494.60	$29.9	0.38%
12	Singapore	Dollars	SGD	$292.40	$474.30	$27.9	0.35%
13	Mexico	Pesos	MXN	$1,560.00	$232.60	$25.9	0.33%
14	Norway	Krone	NOK	$276.40	$125.90	$25.9	0.33%
15	India	Rupee	INR	$4,046.00	$645.50	$17.9	0.23%
16	Russia	Rubles	RUB	$2,229.00	$1,322.00	$17.9	0.23%
17	Poland	Zlotych	PLN	$725.20	$90.23	$15.9	0.20%
18	Brazil	Real	BRL	$2,194.00	$589.40	$13.9	0.18%
19	Turkey	New Lira	TRY	$958.30	$117.90	$13.9	0.18%
20	South Africa	Rand	ZAR	$527.50	$491.30	$13.9	0.18%
21	Denmark	Kroner	DKK	$201.40	$131.50	$11.9	0.15%
22	Taiwan	Dollars	TWD	$823.60	$657.30	$10.0	0.13%
23	Hungary	Forint	HUF	$190.00	$30.20	$8.0	0.10%
24	China	Yuan	CNY	$9,872.00	$2,794.00	$6.0	0.08%
25	Malaysia	Ringgits	MYR	$416.70	$187.10	$6.0	0.08%
26	Indonesia	Rupiah	IDR	$1,033.00	$178.20	$4.0	0.05%
27	Thailand	Baht	THB	$580.30	$102.60	$4.0	0.05%
28	Philippines	Pesos	PHP	$353.20	$130.50	$4.0	0.05%
29	Czech Republic	Krona	CZK	$262.80	$70.26	$4.0	0.05%
30	Chile	Pesos	CLP	$260.00	$132.40	$4.0	0.05%
31	Israel	Shekels	ILS	$217.10	$134.50	$4.0	0.05%
32	Colombia	Pesos	COP	$431.90	$133.30	$2.0	0.03%
33	Peru	Neuvo Soles	PEN	$274.70	$55.63		

NOTES

- Where CME Group already lists futures on the currency, the line item is shaded in green. If information unknown, cell is left blank.

(1) European Union includes Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, Spain

(2) Includes spot, outright forward and FX swap transactions

(3) Includes outright forwards, foreign exchange swaps, currency swaps, options and other derivative products

(4) Pink shading denotes non-CME traded currencies.

CME Group
A CME/Chicago Board of Trade/NYMEX Company

April 8, 2011

Mr. David Stawick
Office of the Secretariat
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, N.W.
Washington, DC 20581

RE: Section 5c(c)(1), Rules 40.2 and 40.6(a) – Exchange Certification of CME Rule Amendments and Notification of Launch Date for Cleared OTC U.S. Dollar / Chilean Dollar (USD/CLP) Spot, Forward and Swaps Transactions.
CME Submission 11-144.

Dear Mr. Stawick:

Chicago Mercantile Exchange Inc. hereby notifies the Commission that Monday, April 18, 2011, will be the launch date for Cleared Over-the-Counter (OTC) U.S. Dollar / Chilean Dollar (USD/CLP) Spot, Forward and Swaps Transactions. This submission includes rule amendments supporting the new product offering, which is summarized as follows.

CLEARED OTC U.S. DOLLAR / CHILEAN PESO SPOT, FORWARD AND SWAP TRANSACTIONS

Effective Monday, April 18, 2011, Chicago Mercantile Exchange Inc. will offer clearing services for non-deliverable forward (NDF) over-the-counter (OTC) U.S. dollar/Chilean peso spot, forward and swap transactions. Cleared OTC U.S. Dollar / Chilean Peso NDF transactions, the first of a broader NDF product suite to be rolled out at a later date, is the initial phase of CME Group plans to introduce clearing services for a wide range of OTC FX spot, forward, swaps; and options on FX spot and forward contracts. OTC FX transactions that are executed bilaterally through brokers, ECNs or other FX trading platforms, when submitted to the CME Clearing House, are novated for purposes of clearing and application of financial safeguards, bookkeeping, trade processing, and final delivery or cash settlement. These contracts will be carried in the new OTC sequestered account class.

Further, CME Group intends to secure such positions with a process that would require daily variations to be funded with collateral ("collateralization") instead of a standard daily mark-to-market (MTM) in cash. This process is intended to be consistent with processes that are frequently deployed in the context of the interbank or OTC FX markets.

Contract Summary – The initial product launch will be for NDF-style transactions for U.S. dollar (USD) versus Chilean peso (CLP), where original trades conducted in the standard "USD/CLP" interbank terms of Chilean peso per U.S. dollar, can be submitted for clearing. CME Clearing systems are flexible to accommodate any style of quoted trade with any size notional amounts down to the precision of $0.01 and any date. Appendix 1 provides a contract specifications summary in tabular form. Some notable contract details are highlighted as follows.

- **Sequestered Accounts:** The contracts are carried as OTC instruments in the clearing system. These positions will be carried in the OTC sequestered account class.

- **Held as True OTC FX Spot & Forwards in Clearing:** Positions shall remain open until delivery or the final cash settlement date. Accordingly, there shall be no netting of such positions. However, positions may be prematurely offset through a "tear-up" process whereby the two counterparties to the transaction mutually consent to negate a previous transaction with monetary consideration as appropriate.

- **Cash Settlement, NDF-Style:** The initial offered NDF-style contracts are financially or cash settled in U.S. dollars with positions held in clearing at the original trade price marked to the applicable standard OTC NDF settlement rate option. For example, final settlements for USD/CLP spot transactions are concluded based on the difference between (1) the spot exchange rate of Chilean peso per U.S. dollar,"CLP DÓLAR OBS (CLP10)," as reported for the valid value date for cash settlement by Banco Central de Chile for the formal exchange market, and (2) the original trade price for each transaction, and the result divided by the CLP per USD spot exchange rate to convert notional CLPs to USDs. Cash settlement of cleared only transactions occurs on a net basis at the customer account level.

- **Allowable Maturities:** CME Clearing will accept spot and forward transactions into clearing with delivery or cash settlement dates starting with the next business day for spot and extending outward into the future two years initially for forwards. At a later date, maturity dates will be expanded out an additional three years for a total maturity out five years.

- **Swaps:** Swap transactions accepted into clearing are a combination (spread) of a spot or forward position and another deferred date forward.

- **CME Clearing Set Up Structures for Cleared OTC FX:** CME Clearing operational infrastructure defines FX pair products by the price nomenclature of the trade. For example, USD/CLP OTC transactions, where the normal quotation mechanism is "CLP per USD," will be processed in the clearing structure for transactions quoted in "CLP per USD."

- **Normalization Rule:** New CME Rule 856 –**NORMALIZATION OF OTC FX SPOT, FORWARD, SWAP AND OPTIONS TRANSACTIONS**, enables CME Clearing to accept OTC FX transactions negotiated in notional amounts of either currency. OTC FX conventions imply deals to be struck in notional amounts of a specific currency for a given currency pair. For example, the USD/CLP or "Dollar/Chilean Peso" transaction described above defines price in numbers of CLP per USD with the notional amount given in U.S. dollars. The normalization rule explains CME Clearing procedures for taking non-standard notional amounts in the contra-currency (here CLP) and "normalizing" it into standard amounts of base currency (here USD). See Appendix 2 for the Normalization rule.

- **Definitions:** New DEFINITIONS will be added to the CME Rulebook to support the Cleared OTC FX initiative. Appendix 3 provides the new definitions.

- **Position Accountability & Position Limits:** Individual rule chapters for each FX pair for cleared OTC FX will specify either Position Accountability (PA) or Position Limits (PL) or a combination of both (*e.g.,* PA with spot month PL) depending generally on the liquidity in the underlying OTC instruments and coordinating with existing and similar FX futures and options on futures contracts. Highly liquid underlying FX pair activity enable Position Accountability trigger levels as opposed to finite limits, and less liquid underlying FX pair activity require the more restrictive Position Limits. Since FX futures, options on FX futures, cleared OTC FX spot, forwards and swaps; and OTC FX

options on spot and forwards, are essentially extensions of the same market, CME Group rules will aggregate positions for an account holder across all of these product lines per FX pair. Notional level equivalents for the existing FX pair futures contracts for Position Accountability and/or Position Limits are carried over to the Cleared OTC FX rules.

- **Reportable Positions:** Reportable position levels for FX pair futures and options on futures will carry over to the cleared OTC FX initiative. Notional amounts of cleared OTC FX positions will be translated into contract equivalents for purposes of reportable positions. When there is not an underlying FX pair futures or options on futures contract for an FX pair listed for cleared OTC transactions, then an amendment to the Chapter 5 interpretation table will be added. See Appendix 4 for such a case regarding cleared only U.S. dollar/Chilean peso references.

- **Rule Chapters:** Appendix 5 contains the "non-deliverable forward ("NDF") USD/CLP spot, forwards & swaps contract series that illustrate the format that will be followed for the cleared OTC FX initiative. A revised "number" and "letter" format for the FX product rulebook chapters was developed to rationalize the growing permutations of the CME Group FX product suite.

- **Cleared Only Transactions:** Note that CME Group does not intend at this time to provide a trading platform for such transactions. Rather, such transactions will be executed on a bi-lateral, privately negotiated basis amongst the two counterparties. These transactions are submitted to the CME Clearing House on a post-trade basis. Once submitted and accepted ("novated") to the CME Clearing House, these transactions are assigned the trade type "OPNT" which acronym stands for Over-the-counter Privately Negotiated Trade.

Collateralization – CME Clearing will deploy the SPAN system to establish performance bond or "margin" requirements for FX spot, forwards and swaps. Initial performance bond requirements will be established at levels that are consistent with observed levels of volatility in the particular currency pairing and generally aligned with initial margin levels applied to current CME FX futures and option contracts, where applicable. However, the administration of this margin regime shall depart from current practices in one notable way. Rather than requiring a daily mark-to-market (MTM) on a cash basis, all variation margins may be satisfied with the posting of appropriate amounts of collateral, rather than being collected and paid in cash between the counterparties.

Where additional variation margins are required as a result of adverse market fluctuations, such variation requirement will be added to the performance bond requirement. Position holders may deposit cash or collateral to fulfill this requirement, and these deposits will be held in their account. Where market fluctuations result in a favorable mark-to-market, such value is recognized as a credit against the performance bond requirement. However, such credit shall not be withdrawn from the account.

The CME Clearing House will accept as collateral cash or any other instruments currently designated as approved collateral. In order to calculate variation requirements, settlement prices will be established for each contract and for each delivery date referencing data collected from a variety of market sources.

ICAP / CME Group Collaboration – CME Group is collaborating with ICAP in the introduction of cleared only OTC U.S. Dollar/Chilean Peso NDF spot, forward and swap transaction services. ICAP has strong institutional and customer relationships in Latin America, developed from operating as a multi-service broker. CME Group believes that ICAP is in a good position to assist with daily valuations of OTC U.S. dollar / Chilean peso NDF positions cleared on the books of CME Clearing. ICAP will be the primary, but not exclusive, contributor to the daily valuation curve used for open position, non-banked, mark to market (or daily settlement valuation).

Initial Performance Bonds - As of April 7, 2011, CME Clearing calculated initial margins as follows based upon a notional trade amount of USD 100,000:

Outright Performance Bonds								
Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	Tier 6	Tier 7	Tier 8	Tier 9
Months 0-1	**Months 1-2**	**Months 2-3**	**Months 3-4**	**Months 4-5**	**Months 5-6**	**Months 6-9**	**Months 9-12**	**Months 12-24**
$ 2,790	$ 2,890	$ 3,000	$ 3,110	$ 3,220	$ 3,320	$ 3,630	$ 3,950	$ 4,280

Intra-Commodity Spreads										
		T1 **Months 0-1**	T2 **Months 1-2**	T3 **Months 2-3**	T4 **Months 3-4**	T5 **Months 4-5**	T6 **Months 5-6**	T7 **Months 6-9**	T8 **Months 9-12**	T9 **Months 12-24**
T1	**Months 0-1**	$ 110	$ 210	$ 320	$ 430	$ 540	$ 840	$ 1,160	$ 1,500	$2,030
T2	**Months 1-2**		$ 110	$ 220	$ 330	$ 440	$ 740	$ 1,060	$ 1,400	$1,930
T3	**Months 2-3**			$ 110	$ 220	$ 330	$ 630	$ 960	$ 1,290	$1,820
T4	**Months 3-4**				$ 110	$ 220	$ 520	$ 850	$ 1,780	$1,710
T5	**Months 4-5**					$ 110	$ 420	$ 740	$ 1,070	$1,560
T6	**Months 5-6**						$ 110	$ 630	$ 960	$1,500
T7	**Months 6-9**							$ 330	$ 660	$1,190
T8	**Months 9-12**								$ 330	$ 870
T9	**Months 12-24**									$ 540

The Exchange certifies that these rule amendments and procedures comply with the Act and the rules thereunder.

Members/shareholders will be notified of the information contained herein in CME Group Special Executive Report, S-5713, dated Thursday, April 14, 2011.

If you require any additional information regarding this action, please do not hesitate to contact Steve Youngren, at 312-930-4583 or via e-mail at Steve.Youngren@cmegroup.com or me. Alternatively, you may contact me at (312) 930-8167. Please reference our CME Submission #11-144 in any related correspondence.

Sincerely,

/s/ Sean Downey
Associate Director and Assistant General Counsel

Appendix 1. Cleared Only Contract Specifications Summary

Cleared Only CME Group U.S. Dollar / Chilean Peso Transactions

OTC FX NDF-Style "True Forwards" Collateralized Model

	USD / CLP Spot, Forwards and Swaps
Unit of Clearing	Units of 1 U.S. Dollar in any amount down to a precision of 0.01 U.S. Dollar.
Sample Quotes	**Spot:** **508.3000** Chilean pesos (CLP) per U.S. dollar (USD) for buy or sell **Forward:** Spot =508.3000 + Forward Points= -1.0852 = **507.2148** CLP per USD for buy or sell **Swap:** Spot =**508.3000** CLP per USD for buy (sell) Frwd =**507.2148** CLP per USD for sell (buy)
Tick Size	0.0001 Chilean peso per U.S. dollar, equivalent to 0.0001 Chilean peso for spot, forward and swap FX OTC cleared transactions.
Performance Bonds	Performance bonds denominated in USD. CME Clearing will calculate daily pays & collects in CLP, but will not "bank" them. Rather CME Clearing will "collateralize" these CLP amounts with a translation to USD and apply appropriate adjustments to posted performance bonds.
Clearing Hours	Sundays through Fridays: ClearPort® clearing hours are 6:00 p.m. (Eastern Time) Sundays through 5:15 p.m. (Eastern Time) Fridays (5:00 p.m. Central time on Sundays through 4:15 p.m. Central Time on Fridays), with a 45-minute halt in trading each day between 5:15 p.m. ET for the current trade date and 6:00 p.m. ET for the next trade date (4:15 p.m. CT for the current trade date and 5:00 p.m. CT for the next trade date).
Valid Value Dates for Cash Settlement	Cleared only USD/CLP spot, forwards, and swaps contracts shall be cash settled for any valid value date(s) mutually agreed to by buyer and seller, and accepted by the Exchange for the applicable currency pair as a valid value date(s) for cash settlement and clearing. In general, for any currency pair, a valid value date shall be any business day that is a banking business day in the countries of issue for both currencies. "Cleared only" spot, forward and swap transactions may be submitted for clearing on any Exchange business day.
Cash Settlement OTC NDF-Style	Each USD/CLP spot contract, for the valid value date for cash settlement in two business days, is liquidated by cash settlement at a price equal to the daily Final Settlement Price for that day. The daily Final Settlement Price shall be equal to the spot exchange rate of Chilean peso per U.S. dollar, "CLP DÓLAR OBS (CLP10)," as reported for that day by Banco Central de Chile for the formal exchange market which appears on the Reuters screen "CLPOB=" at approximately 8:00 PM Santiago time and rounded to two decimal places. This rate is used widely by the interbank foreign exchange market to cash settle non-deliverable forward contracts for CLP versus USD. All open positions for that valid value date for cash settlement will be cash settled in USD based upon the difference between the Final Settlement Price for the valid value date for cash settlement and the original trade price as submitted for clearing times the notional value of the transaction in USDs divided by Final Settlement Price. In the event, this USD amount is positive, then the Clearing House shall debit the seller's clearing member account and credit the buyer's clearing member account for this amount in USD. In the event, this USD amount is negative, then the Clearing House shall debit the buyer's clearing member account and credit the seller's clearing member account for this amount in USD. For example, if the "CLP DÓLAR OBS (CLP10)" for the valid value date for cash settlement in two business days, is as follows: "Observado Value DD MM YYYY Close" is 547.10 CLP per USD, and the original trade price submitted for clearing by clearing firms of the buyer and seller was 515.25 CLP per USD for a notional amount of 100,000 USD, then the Clearing House on the business day following the valid value date for cash settlement shall credit the clearing member account for the buyer with US$5,821.60 (*i.e.*, 547.10 CLP per USD – 515.25 CLP per USD = (+31.85 CLP per USD x 100,000 USD) / 547.10 CLP per USD) = $5,821.60.). Similarly, the Clearing House on the business day following the valid value date for cash settlement shall debit the clearing member account for the seller with US$5,821.60.

Cleared Only CME Group U.S. Dollar / Chilean Peso Transactions (continued)

OTC FX NDF-Style "True Forwards" Collateralized Model

	USD / CLP Spot, Forwards and Swaps
Position Accountability & Spot Limits	For purposes of cleared only positions, the applicable position accountability level shall be in notional terms of 600 million U.S. dollars. Also, cleared only positions for expiration within the next five (5) business days shall not exceed 2 billion U.S. dollars.
Venues	Cleared only via CME ClearPort®

Appendix 2

CME GROUP OTC FX NORMALIZATION RULE

856. NORMALIZATION OF OTC FX SPOT, FORWARD, SWAP AND OPTIONS TRANSACTIONS FOR CLEARING. For over-the-counter (OTC) foreign exchange (FX) transactions submitted for clearing and any non-standard specification of the transaction as defined by the price format shall be normalized by CME Group Clearing to standard or normal specifications by the following "normalization process."

Instrument: Currency 1/Currency 2 (CCY1/CCY2)

Generically, for spot and forward OTC FX transactions…

Standard or Normal: Buy (B)/Sell (S) CCY1 notional amount at CCY2 per CCY1 rate.

Non-standard or Non-normal: B/S CCY2 notional amount at CCY2 per CCY1 rate.

To normalize:

1. Convert B to S, or S to B
2. Convert CCY2 notional to CCY1: CCY2 amount divided by CCY2 per CCY1 rate to obtain CCY1 amount.

For example, for Instrument: EUR/USD …
Standard: EUR/USD- Quote USD per EUR; notional amount in EUR
Trade comes in as SELL €15 million at 1.350000 USD per EUR →BUY $20,250,000 (€15 million x 1.350000 USD/EUR)

Non-standard: EUR/USD- Notional amount in USD, but quote still in USD per EUR.
Trade comes in as buy $20 million at 1.350000 USD per EUR →SELL €14,814,814.81 ($20 million / 1.350000 USD/EUR).

To normalize the non-standard EUR/USD transaction, CME Clearing shall:

3. Convert Buy to Sell, or Sell to Buy
4. Convert USD notional to EUR: USD amount divided by USD per EUR rate.

Example: The trade "BUY $20 million at 1.350000 ⇨SELL €14,814,814.81 ($20/1.350000) at 1.350000 USD per EUR" shall be normalized and held in CME Clearing as:

The trade "SELL €14,814,814.81 ($20/1.350000) at 1.350000 USD per EUR⇨ BUY $20 million at 1.350000."

For swap OTC FX transactions, …
Standard or Normal: Leg 1 B/S CCY1 notional amount at $CCY2_t$ per CCY1 rate.

Leg 2 S/B CCY1 notional amount at $CCY2_{t+n}$ per CCY1 rate.

Non-standard or Non-normal:

Leg 1 B/S CCY2 notional amount at $CCY2_t$ per CCY1 rate.

Leg 2 S/B CCY2 notional amount at $CCY2_{t+n}$ per CCY1 rate.

To normalize:

1. Convert B to S, or S to B
2. Convert CCY2 notional to CCY1: CCY2 amount divided by CCY2 per CCY1 rate to obtain CCY1 amount.

For example, for instrument: EUR/USD…

Standard: Leg 1 EUR/USD- Quote USD per EUR; notional amount in EUR
Leg 2 EUR/USD- Quote USD per EUR; notional amount in EUR

Trade comes in as "Leg 1 BUY €20 million at 1.305000 ⇨SELL $26,100,000 ($20 million x 1.305000) at 1.305000 USD per EUR; Leg 2 SELL €20 million at 1.315000 USD per EUR (1.3050 + 0.0100 swap points)"

Non-Standard: Leg 1 EUR/USD- Notional amount in USD, but quote still in USD per EUR.
Leg 2 EUR/USD- Notional amount in USD, but quote still in USD per EUR.

Trade comes in as "Leg 1 SELL $26.1 million at 1.305000 ⇨BUY €20 million ($26.1 million / 1.305000) at 1.305000 USD per EUR; Leg 2 BUY $26.3 million at 1.315000 USD per EUR (1.3050 + 0.0100 swap points)."

To normalize the non-standard EUR/USD transaction, CME Clearing shall:

3. Convert Buy to Sell, or Sell to Buy
4. Convert USD notional to EUR: USD amount divided by USD per EUR rate.

Example: The trade "Leg 1 SELL $26.1 million at 1.305000 ⇨BUY €20 million ($26.1 million / 1.305000) at 1.305000 USD per EUR; Leg 2 BUY $26.3 million at 1.315000 USD per EUR (1.3050 + 0.0100 swap points)" shall be normalized and held in CME Clearing as:

The trade "Leg 1 BUY €20 million at 1.305000 ⇨SELL $26,100,000 ($20 million x 1.305000) at 1.305000 USD per EUR; Leg 2 SELL €20 million at 1.315000 USD per EUR (1.3050 + 0.0100 swap points)"

For option OTC FX transactions, …

Standard or Normal: B/S CCY1/CCY2 CALL (PUT) at STRIKE PRICE in units of CCY2 per CCY1 for a notional amount of CCY1 for a premium in CCY2 (CCY1 amount x premium price in CCY2 per CCY1, that is, CCY2 pips) or % of CCY1 (CCY1 premium / CCY1 notional amount).

Non-standard or Non-normal: B/S CCY1/CCY2 CALL (PUT) at STRIKE PRICE in units of CCY2 per CCY1 for a notional amount of CCY2 for a premium in CCY1 (CCY2 amount / premium price in CCY2 per CCY1, that is, CCY1 pips) or % of CCY2 (CCY2 premium / CCY2 notional amount).

To normalize:

1. Retain B/S direction
2. Convert CCY2 Put to CCY1 Call, CCY2 Call to CCY1 Put
3. Convert CCY2 notional to CCY1: CCY2 amount divided by Strike Price expressed in CCY2 per CCY1.
4. Process original premium amount and currency.
5. Take premium amount and divide by CCY1 notional to express price in CCY1 terms for reference purposes.

For example, for Instrument: EUR/USD …

Standard: EUR/USD- Quote USD per EUR; notional amount in EUR, premium in either % of EUR notional (EUR premium) or USD pips (USD premium)

Trade comes in as BUY EUR/USD PUT at 1.350000 USD per EUR for a notional amount of €20 million with premium of $100,000 (€20 million x option price of 0.0050 USD per EUR, that is, USD pips) or 1.0% of €20 million (€200,000 premium / €20 million) → SELL EUR/USD PUT at 1.350000 USD per EUR for a notional amount of €20 million with premium of $100,000 (€20 million x option price of 0.0050 USD per EUR, that is, USD pips) or 1.0% of €20 million (€200,000 premium / €20 million).

Non-standard: EUR/USD- Notional amount in USD, but quote still in USD per EUR, premium in either % of USD notional (USD premium) or EUR pips (EUR premium).

Trade comes in as BUY EUR/USD PUT at 1.350000 USD per EUR for a notional amount of $20 million with premium of €170,100 ($20 million x option price of 0.008505 EUR per USD, that is, EUR pips) or 1.0% of $20 million ($200,000 premium / $20 million) → SELL EUR/USD PUT at 1.350000 USD per EUR for a notional amount of $20 million with premium of €170,100 ($20 million x option price of 0.008505 USD per EUR, that is, EUR pips) or 1.0% of $20 million ($200,000 premium / $20 million).

To normalize the non-standard EUR/USD transaction, CME Clearing shall:

6. Retain B/S direction
7. Convert USD Put to EUR Call, USD Call to EUR Put
8. Convert USD notional to EUR: USD amount divided by Strike Price expressed in USD per EUR.
9. Process original premium amount and currency.
10. Take premium amount and divide by EUR notional to express price in EUR terms for reference purposes.

Example: Trade comes in as BUY EUR/USD PUT at 1.350000 USD per EUR for a notional amount of $20 million with premium of €170,100 ($20 million x option price of 0.008505 EUR per USD, that is, EUR pips) or 1.0% of $20 million ($200,000 premium / $20 million) → SELL EUR/USD PUT at 1.350000 USD per EUR for a notional amount of $20 million with premium of €170,100 ($20 million x option price of 0.008505 USD per EUR, that is, EUR pips) or 1.0% of $20 million ($200,000 premium / $20 million) shall be normalized and held in CME Clearing as:

BUY EUR/USD CALL at 1.350000 USD per EUR for a notional amount of €14,814,814.81 ($20 million/1.350000 USD per EUR) with a premium of €170,100 ($20 million x option price of 0.008505 EUR per USD, that is, EUR pips) or 1.148% of €14,814,814.81 (€170,100 / €14,814,814.81).

Appendix 3

ADDITIONS TO "DEFINITIONS" SECTION OF CME RULEBOOK

CLASS B STOCKHOLDER
The registered owner of one or more Class B Shares.

CLEAR DATE OF THE FX OTC CLEARED TRANSACTION
For purposes of these rules, the "clear date of the foreign exchange (FX) over-the-counter (OTC) cleared transaction" is the date on which an original spot, forward and swap FX OTC transaction clears at CME Clearing as a substituted, cleared transaction.

CLEARING HOUSE
The department of the Exchange through which all trades on the Exchange are adjusted and cleared.

…

FORMS
All forms referred to herein; *e.g.*, "Buyer Delivery Commitment," shall be forms prescribed by the Exchange.

FORWARD FX OTC CLEARED TRANSACTION
For purposes of these rules, a "forward" foreign exchange (FX) over-the-counter (OTC) cleared transaction shall be an agreement between counterparties to exchange ("delivery") of the associated currency pairs at a maturity date greater than one or two business days in the future. A forward FX transaction may be for standard delivery maturities from the original trade date, such as TOM Next (tomorrow next or day after tomorrow), 1-week, 2-weeks, 3-weeks, 1-month, 2-months, 3-months, …, 6-months, …, 1-year, 18-months, 2-years, etc. Also, a forward FX transaction may be for broken date maturities, that is, for delivery on any good business day in both the issuing countries of the associated currency pair that is not one of the standard delivery dates.

FUTURES CONTRACT
A contract made on the Exchange for the purpose or sale of any commodity which may be satisfied by offset or delivery during such specified months pursuant to these rules.

…

ORDERS
(Note that not all order types are eligible to be entered into the GLOBEX System…

ORIGINAL TRADE DATE OF AN FX OTC TRANSACTION
For purposes of these rules, an "original trade date of a foreign exchange (FX) over-the-counter (OTC) cleared transaction," is the date on which the two counterparties agreed to the OTC transaction that is being replaced with the FX OTC cleared transaction.

PANEL
A subcommittee elected in accordance with committee procedure to adjudicate or make a particular determination. A decision of a panel shall be deemed a decision of the committee.

…

SPOT
The actual or physical commodity, also called "cash" commodity.

SPOT FX OTC CLEARED TRANSACTION
For purposes of these rules, a "spot" foreign exchange (FX) over-the-counter (OTC) cleared transaction shall be a very short-dated forward transaction with counterparties agreeing to exchange ("delivery") of the associated currency pairs in one or two business days, whichever is the standard OTC market convention for the particular currency pairs.

SPOT MONTH
The contract month of a futures contract which is also the current calendar month.

…

STRADDLE
The assumption of a long and short position on different business days in the same or related commodities for the same account.

SWAP FX OTC CLEARED TRANSACTION

For purposes of these rules, a "swap" foreign exchange (FX) over-the-counter (OTC) cleared transaction shall be an agreement between counterparties to execute the combination of a spot or forward FX OTC cleared transaction and a subsequent-dated forward FX OTC cleared transaction, where the buyer of the spot or forward currency pair becomes the seller of the subsequent-dated forward currency pair and the seller of the spot or forward currency pair becomes the buyer of the subsequent-dated forward currency pair. In other words, the counterparties are agreeing to the prices on the original trade date to exchange currency pairs for immediate (or nearby forward) delivery, and reverse the same transaction on some mutually agreed to subsequent "forward date," which according to the definition above for a "forward" may be a standard delivery date or a broken delivery date.

TIME

Except as otherwise specifically provided, any reference to time shall mean local Chicago time.

…

TRADE DATE OF AN FX OTC CLEARED TRANSACTION

The trade date of a foreign exchange (FX) over-the-counter (OTC) cleared transaction" is the date on which counterparties to the OTC transaction submit the FX OTC transaction to clearing as a cleared contract. Although in most instances counterparties may submit an FX OTC cleared transaction for clearing on the same date as the original trade for the FX OTC spot, forward and swap transaction, there is no requirement that it is submitted on the same date. Therefore, an FX OTC cleared transaction may be submitted on any date for clearing on the exchange.

TRADING SESSION

A trading session will mean either the pit trading session (the hours designated for open outcry trading for a product) and/or the GLOBEX session (the hours on a particular trading day when a product can be traded on the GLOBEX system.

VALID VALUE DATE FOR DELIVERY OR CASH SETTLEMENT OF AN FX OTC CLEARED TRANSACTION

"Cleared only" foreign exchange (FX) over-the-counter (OTC) cleared transactions shall be delivered or cash settled for any valid value date mutually agreed to by buyer and seller, including all applicable standard valid value dates for delivery or cash settlement in futures offered for "trading and clearing." In general, for any currency pair, a valid value date shall be any business day that is a banking business day in the countries of issue for both currencies.

VOLATILITY QUOTE

An alternative means of quoting options, or combinations involving options, by bidding or offering the implied volatility. Any transactions quoted in volatility terms will be translated into price terms for clearing purposes by means of a standard options pricing model maintained and disseminated by the Exchange.
(End Definitions)

Appendix 4

5.C. POSITION LIMIT AND REPORTABLE LEVEL TABLE
POSITION LIMIT, POSITION ACCOUNTABILITY AND REPORTABLE LEVEL TABLE

CONTRACT NAME	OPTIONS	FIRST SCALE-DOWN SPOT MONTH	SECOND SCALE-DOWN SPOT MONTH	SPOT MONTH	SINGLE MONTH	ALL MONTHS COMBINED	POSITION ACCOUNT-ABILITY	REPORT-ABLE FUT LEVEL	REPORT-ABLE OPT LEVEL
CME Foreign Exchange									
Canadian Dollar/Japanese Yen							**6,000**	**25**	
U.S. Dollar Chilean Peso (Cleared OTC Equivalents)				**20,000**			**6,000**	**25**	
Chinese Renminbi/Euro FX	**Y**			**2,000**			**6,000**	**25**	**25**

Appendix 5

[Rulebook Chapters 274, 274A – F are reserved.]

[Rulebook Chapter 274.G. is reserved.]

Chapter 274H
Cleared OTC U.S. Dollar/ Chilean Peso (USD/CLP) Spot, Forwards and Swaps

274H.00. SCOPE OF CHAPTER

This chapter is limited in application to U.S. Dollar/Chilean Peso Spot, Forwards, and Swaps that are executed between two counterparties on an Over-the-Counter ("OTC") basis and subsequently novated to the CME Clearing House for purposes of clearance ("Cleared OTC Contracts"). Parties to transactions in Cleared OTC Contracts shall be limited to "eligible contract participants" as defined in Section 1a(12) of the Commodity Exchange Act. Cleared OTC Contracts are listed by CME for clearing-only. Transactions in Cleared OTC Contracts shall also be subject to the general rules of the Exchange insofar as applicable. The clearing and settlement of transactions in Cleared OTC Contracts shall also be subject to the provisions of Chapter 8-F of the CME Rulebook (Over-the-Counter Derivative Clearing). For purposes of these Rules, the minimum-fluctuations currency is the Chilean peso and the clearing-unit currency is the U.S. dollar.

274H.01. CONTRACT SPECIFICATIONS

274H.01.A. Unit of Clearing

The unit of clearing shall be 1 U.S. Dollar in any amount down to a precision of 0.01 U.S. Dollar.

274H.01.B. Hours for Clearing Entry

The Exchange shall determine the hours during which Cleared OTC Contracts may be submitted to the Clearing House. Positions shall be initiated or closed out using off-exchange transactions.

274H.01.C. Minimum Price Increments

Minimum price fluctuations shall be in multiples of 0.0001 Chilean Peso per U.S. Dollar for transactions in Cleared OTC Contracts.

274H.01.D. Valid Value Dates for Cash Settlement

Cleared OTC Contracts shall be cash settled for any valid value date(s) mutually agreed to by buyer and seller, and accepted by the Exchange for the applicable currency pair as a valid value date(s) for cash settlement and clearing. In general, for any currency pair, a valid value date shall be any business day that is a banking business day in the countries of issue for both currencies.

274H.01.E. Delivery Price and Delivery Value

Delivery for the Cleared OTC Contracts assigned pursuant to Chapter 274H shall be by cash settlement according to Rule 274H.02.

274H.01.F. Position Limits and Position Accountability

1. Authority - Position Limits and Position Accountability may be applicable, as defined by Rule 560, and as per the following.
2. Aggregation - For purposes of this Rule, where applicable:
   - futures,
   - options on futures,
   - E-mini futures,
   - E-micro futures,

- cleared only spot, forward and swaps (combinations of spot and forwards or two maturity forwards), and
- cleared only options on spot and forwards; and
- in addition, where applicable, the analogous reciprocal versions of the aforementioned contracts for the respective foreign exchange pairs,

shall be aggregated with all products utilizing that foreign exchange (FX) pair regardless of quoting conventions. The baseline for this aggregation shall be the denomination of the underlying full-size CME futures contract. Contract equivalents shall be determined through the conversion of the notional value (or contract size times the number of contracts in standardized products) to the CME base currency using the prior day's Regular Trading Hours (RTH) settlement, and dividing the result by the contract size or notional of the full-size CME futures contract.

3. Contract Equivalent - For purposes of this Rule, a contract shall be deemed to be the equivalent of 100,000 U.S. dollars in notional value.
4. Position Accountability - A person owning or controlling more than the aggregated equivalent of 6,000 contracts, or 600,000,000 U.S. dollar in notional value, net long or net short; or, 20,000 contracts which expire within the next five (5) business days, or 2,000,000,000 U.S. dollar, shall provide, in a timely fashion, upon request by the Exchange, information regarding the nature of the position, trading strategy, and hedging information if applicable.
5. Spot Position Limit – A person shall not own or control more than the equivalent of 20,000 contracts which expire within the next five (5) business days.
6. Reserved
7. Reserved

274H.01.G. Last Day of Clearing

The last day on which a Cleared OTC Contract may be submitted for clearing in respect of a specified cash settlement date shall be one valid business day prior to the cash settlement date.

274H.01.H. Liquidation and Delivery Standards

(1) At Maturity. After clearing of Cleared OTC Contracts in respect of a specified cash settlement date has ceased, in accordance with Rule 274H.01.G. of this chapter, outstanding contracts for such cash settlement date shall be liquidated by cash settlement through procedures as prescribed in Rule 274H.02 and in a manner prescribed by the Clearing House.

(2) Prior to Maturity. Standard offsets of futures and options on futures, if applicable, shall not apply to positions in Cleared OTC Contracts. Prior to the Cash Settlement Date, positions may be closed out upon the request of the clearing firm to the Clearing House, and in the manner prescribed by the Clearing House.

274H.01.I. Contract Modifications

Specifications shall be fixed as of the first day of clearing of a contract, except that all final settlements via cash settlement must conform to government regulations in force at the time of final settlement. If any national or international government agency or body issues an order, ruling, directive or law that conflicts with the requirements of these rules, such order, ruling, directive or law shall be construed to take precedence and become part of these rules and all open and new contracts shall be subject to such government orders.

274H.02. CASH SETTLEMENT

274H.02.A. Day of Cash Settlement

Each Cleared OTC Contract, for the valid value date for cash settlement in two business days, shall be liquidated by cash settlement at a price equal to the daily Final Settlement Price for that day. The daily Final Settlement Price shall be equal to the spot exchange rate of Chilean peso per U.S. dollar, "CLP DÓLAR OBS (CLP10)," as reported for that day by Banco Central de Chile for the formal exchange market which is available at approximately 8:00 PM Santiago time and rounded to four decimal places. This rate is used widely by the interbank foreign exchange market to cash settle non-deliverable forward contracts for Chilean peso versus U.S. dollars.

All open positions for that valid value date for cash settlement will be cash settled in U.S. dollars based upon the difference between the Final Settlement Price for the valid value date for cash settlement and the original trade price as submitted for clearing times the notional value of the transaction in USDs divided by Final Settlement Price. In the event, this U.S. dollar amount is positive, then the Clearing House shall debit the seller's clearing member account and credit the buyer's clearing member account for this amount in U.S. dollars. In the event, this U.S. dollar amount is negative, then the Clearing House shall debit the buyer's clearing member account and credit the seller's clearing member account for this amount in U.S. dollars.

For example, if the "CLP DÓLAR OBS (CLP10)" for the valid value date for cash settlement in two business days, is as follows: "Observado Value DD MM YYYY Close" is 547.10 Chilean pesos per U.S. dollar, and the original trade price submitted for clearing by clearing firms of the buyer and seller was 515.25 Chilean pesos per U.S. dollar for a notional amount of 100,000 U.S. dollars, then the Clearing House on the business day following the valid value date for cash settlement shall credit the clearing member account for the buyer with $5,821.60 (*i.e.*, 547.10 CLP per USD – 515.25 CLP per USD = (+31.85 CLP per USD x 100,000 USD) / 547.10 CLP per USD) = $5,821.60.). Similarly, the Clearing House on the business day following the valid value date for cash settlement shall debit the clearing member account for the seller with $5,821.60.

For example also, if the "CLP DÓLAR OBS (CLP10)" for the valid value date for cash settlement in two business days, is as follows: "Observado Value DD MM YYYY Close" is 515.25 Chilean pesos per U.S. dollar, and the original trade price submitted for clearing was 547.10 Chilean pesos per U.S. dollar for a notional amount of 100,000 U.S. dollars, then the Clearing House on the business day following the valid value date for cash settlement shall debit the buyer's clearing member account with $6,181.47 (*i.e.*, 515.25 CLP per USD – 547.10 CLP per USD = (-31.85 CLP per USD x 100,000 USD) / 515.25 CLP per USD) = -$6,181.47.). Similarly, the Clearing House on the business day following the valid value date for cash settlement shall credit the clearing member account for the seller with $6,181.47.

274H.02.B. Procedures if No Cash Settlement Price is Available

In the event that the "CLP DÓLAR OBS (CLP10)" Chilean pesos per U.S. dollar rate for a valid value date for cash settlement is not published on a given day by Banco Central de Chile, and in order to minimize basis risk between the U.S. dollar / Chilean peso cleared only contracts and the non-deliverable forward ("NDF") market, the Exchange shall determine a Final Settlement Price based on the EMTA CLP Indicative Survey Rate (CLP11), when available. The EMTA CLP Indicative Survey Rate Methodology follows this chapter in an Interpretation.)

274H.02.C. Amendments to Timings

The Exchange may amend the timings of notifications, deliveries, and transfers under this Rule 274H.02 to reflect as appropriate the adoption of daylight savings time in the relevant countries of delivery.

274H.03. DISPUTES

All disputes between interested parties may be settled by arbitration as provided in the Rules.

INTERPRETATION TO CHAPTER 274H

In order to reduce basis risk for market participants trading and/or clearing CME cleared only U.S. dollar/Chilean peso spot, forwards and swaps, over-the-counter (OTC) NDF U.S. dollar / Chilean peso transactions and CME Chilean peso/ U.S. dollar futures and options on futures contracts, if applicable, CME has also adopted procedures to settle terminated cleared only U.S. dollar/ Chilean peso spot, forward and swap contracts to the EMTA CLP Indicative Survey Rate when the Banco Central de Chile "CLP DóLAR OBS (CLP10)" Chilean pesos per U.S. dollar rate is unavailable.

I. The EMTA CLP Indicative Survey

- Commencing the Indicative Survey: (A) on any Business Day on which a Price Source Disruption has occurred or is continuing OR (B) on any Valuation Date that is NOT a Business Day (or that would have been a Business Day but for the occurrence of an Unscheduled Holiday), and in each case following the lapse of a 30 calendar day period during which

the primary settlement rate option shall have been continuously unavailable and as a consequence valuation shall have been deferred or postponed, upon receipt of a Valid Survey Request, EMTA (or a service provider EMTA shall select in its sole discretion) shall conduct a survey of financial institutions for the purpose of determining the EMTA CLP Indicative Survey Rate for that day.

- Valid Survey Request: A "Valid Survey Request" is a request received by EMTA from not less than two unaffiliated EMTA members not later than 5 business days before the contemplated start of the Survey.
- Polled Banks: For purposes of determining the EMTA CLP Indicative Survey Rate for any Valuation Date, at approximately 11:00 a.m. (Santiago time[1]), EMTA (or a service provider EMTA may select in its sole discretion) shall survey no more than 30 randomly selected financial institutions that are active participants in the Chilean Peso / U.S. Dollar market (each, a "Participating Bank").
- Survey Question: Each Participating Bank will be asked to provide its reasonable judgment of what is (or, in the case of an Unscheduled Holiday, would be) the current prevailing free market Chilean Peso spot rate (bid-offer pair) for a standard size Chilean Peso/U.S. Dollar wholesale financial transaction for same-day settlement in the Chilean marketplace on the Valuation Date. In arriving at this indicative quotation, survey participants will be directed to take such factors into consideration as they deem appropriate, which factors may (but need not) include any or all of the following: the spot rate(s) implied in the offshore non-deliverable foreign exchange market for Chilean Peso/U.S. Dollar transactions; the spot rate implied by any other financial market transactions (to the extent that such other financial markets are open for business); the spot rate used in connection with any commercial transactions for goods or services from offshore suppliers or providers; any existing rate for trade finance transactions; and any other existing unofficial rate for Chilean Peso / U.S. Dollar transactions (commercial or otherwise).

II. Calculation Methodology

- EMTA will determine the mid-point of each bid-offer pair. The arithmetic mean of the mid-points will be used to determine the CLP Indicative Survey Rate, rounded to the fourth decimal point as described below.
- If the CLP Indicative Survey results in 21 or more responses, then the 4 highest and 4 lowest mid-points will be eliminated, and the arithmetic mean of the remaining mid-points shall be computed and will constitute the CLP Indicative Survey Rate for such Valuation Date. For purposes of eliminating the 4 highest and 4 lowest mid-points, if more than 4 mid-points have the same highest value or lowest value, then only 4 such mid-points shall be eliminated.

- If the CLP Indicative Survey results in less than 21 but 12 or more responses, then the 2 highest and 2 lowest mid-points will be eliminated, and the arithmetic mean of the remaining mid-points shall be computed and will constitute the CLP Indicative Survey Rate for such Valuation Date. For purposes of eliminating the 2 highest and 2 lowest mid-points, if more than 2 mid-points have the same highest value or lowest value, then only 2 such mid-points shall be eliminated.

- If the CLP Indicative Survey results in less than 12 but 10 or more responses, then the highest and the lowest rate will be eliminated and the arithmetic mean of the remaining midpoints shall be computed and will constitute the CLP Indicative Survey Rate for such Valuation Date. For purposes of eliminating the highest and lowest mid-points, if more than 1 mid-point has the same highest value or lowest value, then only 1 such mid-point shall be eliminated.
- If the CLP Indicative Survey results in less than 10 but 8 or more responses, then no mid-point will be eliminated and the arithmetic mean of all mid-points obtained shall be computed and will constitute the CLP Indicative Survey Rate for such Valuation Date.
- Quotes shall be provided to the fourth decimal point (e.g., 10000).

III. Insufficient Responses

- If the CLP Indicative Survey results in less than 8 responses from Participating Banks, no CLP Indicative Survey Rate will be available for the relevant Valuation Date.

IV. CLP Indicative Survey Rate Publication

- The CLP Indicative Survey Rate will be published on EMTA's web site (www.emta.org) (the "Publication Site") by approximately 12:00 p.m. (Santiago time), or as soon thereafter as practicable, on the Valuation Date.

---

[1] New York time is 2 hours behind Santiago time when it is Standard Time in New York and Daylight Savings Time in Santiago; New York time and Santiago Time are the same when it is Standard Time in Santiago and Daylight Savings Time in New York; New York time is 1 hour behind Santiago time when it is Standard Time in both Santiago and New York and when it is Daylight Savings time in both Santiago and New York.

- As soon as it is determined that the CLP Indicative Survey will result in Insufficient Responses, a notice that no CLP Indicative Survey is available for the Valuation Date shall be published on the Publication Site.

V. Discontinuing the CLP Indicative Survey

The CLP Indicative Survey will be discontinued (a) following the publication of a CLP DOLAR OBS Rate (CLP10) (or any successor primary settlement rate option) on any Valuation Date or (b) on the third day following polling for the CLP Indicative Survey Rate that results in less than 8 responses for more than two consecutive polling days. Notwithstanding the foregoing, nothing herein shall be construed to prevent EMTA from re-initiating the CLP Indicative Survey at an appropriate time in the future.

A notice that the CLP Indicative Survey has been discontinued will be published on the Publication Site.

VI. Amendments to the Methodology

EMTA may, in its discretion, from time to time, make such administrative, procedural or other modifications to this Methodology as are appropriate to ensure the continued operation and integrity of the CLP Indicative Survey.

VII. Disclaimer

EMTA (and any service provider EMTA may select) disclaim liability for the CLP Indicative Survey Rate, and no representation or warranty, express or implied, is made concerning the CLP Indicative Survey Rate (including, without limitation, the methodology for determining the CLP Indicative Survey Rate and its suitability for any particular use).

[Rulebook Chapter 274.I. is reserved.]

EXHIBIT D

CME Submission 12-102RR

Timothy R. Elliott
Executive Director and Associate General Counsel
Legal Department

March 30, 2012

VIA E-MAIL

Mr. David Stawick
Office of the Secretariat
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, N.W.
Washington, DC 20581

RE: Section 5c(c)(1), Rule 40.6(a) –Revisions to Certification of the Change in Performance Bond Methodology from SPAN to HVaR for Cleared OTC FX Spot, Forward and Swap Transactions.
CME Submission 12-102RR

Dear Mr. Stawick:

Chicago Mercantile Exchange Inc. hereby notifies the Commission that the Chicago Mercantile Exchange Inc. ("CME") is changing its methodology for calculation of the "cash mark-to-mark" performance bonds for Cleared Over-the-Counter ("OTC") Foreign Exchange ("FX") Spot, Forward and Swap Transactions from Standard Portfolio Analysis ("SPAN®") to Historical Value at Risk ("HVaR"). This submission includes the description supporting the implementation of this enhancement of the performance bond administration procedures, which are summarized as follows.

Please note that we are submitting 12-102RR to include revisions to the original submission. CME is requesting that this revision (12-102RR) supersede and replace all earlier submissions (12-102 and 12-102R).

CME is migrating from SPAN® to HVaR for cleared OTC FX performance bonds. This action is consistent with an analogous migration in performance bond methodology for CME Group's cleared OTC Interest Rate Swaps ("IRS") completed in Third Quarter 2011. CME currently has a total of thirty-eight ("38") OTC FX products listed for clearing (12 non-deliverable forward FX pairs & 26 CME WM/Reuters OTC Cash-Settlement Forwards FX pairs). "CME Rule 930.A. Performance Bond System" is amended to note cleared OTC FX transactions will use the HVaR Performance Bond System for margining. See Appendix A for the rule amendments with additions underlined. Appendix B is a clean copy of the amended CME Rule 930.A.

CME Special Executive Report S-6232, dated Friday, May 4, 2012 and attached as Appendix C, clarifies a phased-in implementation schedule to HVaR performance bond methodology across all 38 FX pairs for the Cleared OTC FX initiative. These 38 products include twelve ("12") cleared OTC non-deliverable forward or "NDFs," namely,

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U.S. Dollar/Brazilian Real ("USD/BRL"), U.S. Dollar/Chinese Renminbi ("USD/RMB" aka, "CNY"), U.S. Dollar/Malaysian Ringgit ("USD/MYR"), U.S. Dollar/Indonesian Rupiah ("USD/IDR"), U.S. Dollar/Indian Rupee ("USD/INR"), U.S. Dollar/Korean Won ("USD/KRW"), U.S. Dollar/ Philippine Peso ("USD/PHP"), U.S. Dollar/Taiwan Dollar ("USD/TWD"), U.S. Dollar/Chilean Peso ("USD/CLP"), U.S. Dollar/Colombian Peso ("USD/COP"), U.S. Dollar/Peruvian New Sol ("USD/PEN") and U.S. Dollar/Russian Ruble ("USD/RUB") non-deliverable forwards ("NDFs"); and twenty-six ("26") CME WM/Reuters OTC FX Cash-Settlement Forwards, namely

Australian Dollar/U.S. Dollar ("AUD/USD"), U.S. Dollar/Swiss Franc ("USD/CHF"), U.S. Dollar/Canadian Dollar ("USD/CAD"), New Zealand Dollar/U.S. Dollar ("NZD/USD"), U.S. Dollar/Norwegian Krone ("USD/NOK"), U.S. Dollar/Swedish Krona ("USD/SEK"), U.S. Dollar/Denmark Krone ("USD/DKK"), Euro /U.S. Dollar ("EUR/USD"), U.S. Dollar/Japanese Yen ("USD/JPY"), Great British Pound/U.S. Dollar ("GBP/USD"), U.S. Dollar/Mexican Peso ("USD/MXN"), U.S. Dollar/Singapore Dollar ("USD/SGD"), U.S. Dollar/Polish Zloty ("USD/PLN"), U.S. Dollar/South African Rand ("USD/ZAR"), Australian Dollar/Japanese Yen ("AUD/JPY"), Euro/Australian Dollar ("EUR/AUD"), Canadian Dollar/Japanese Yen("CAD/JPY"), Euro/Great British Pound ("EUR/GBP"), Euro/Japanese Yen ("EUR/JPY"), Euro/Swiss Franc ("EUR/CHF"), U.S. Dollar/Czech Koruna ("USD/CZK"), U.S. Dollar/Hungarian Forint ("USD/HUF"), U.S. Dollar/Turkish Lira ("USD/TRY"), U.S. Dollar/Israeli Shekel ("USD/ILS"), U.S. Dollar/Thailand Baht ("USD/THB") and U.S. Dollar/Hong Kong Dollar ("USD/HKD").

CME is publishing CME Group Special Executive Report ("SER"), S-6184, dated Tuesday, April 3, 2012, as notification to market participants about implementation of the new performance bond methodology scheduled for Monday, April 16, 2012.

CME Group has determined that the HVaR methodology more appropriately accounts for historical risk in the OTC FX market. Extended back testing ability is a primary characteristic of HVaR methodology with Exponentially Weighted Moving Average ("EWMA") volatility forecasting. This methodology has been well-researched over the years and is widely used in the industry.[1]

Consistent with best practices recommendations,[2] CME's preferred margin model covers losses over any 5-day period in a large universe of portfolios during 99% of days; it quickly reacts to changes in FX and volatility regimes; it is simple and transparent for market participants. HVaR methodology is the model of choice for the risk departments of most, if not all financial services firms and is widely considered to be a proxy for market risk. It is also well-understood and easily replicable. In the HVaR framework, past events are used for coming up with possible scenarios in the future. This approach implicitly assumes that historical data series provide rich sample sets of the possible probability distribution of the relevant financial variable. CME has arranged for receipt of FX historical data by FX pair by maturity curve from Super Derivatives. In depth analysis and stress testing of sample FX portfolios will be done upon receipt of data.

CME Clearing has found in analyzing OTC interest rate swap data that simple application of the past scenarios to current environment has to be enhanced in order to correctly capture the proper volatility regime. To achieve that, the HVaR model scales historical returns by the ratio of the forecasted volatility to the realized volatility from the time-period the shock was sampled. This allows the model to retain a rich history of data/scenarios, but remain nimble enough to react to the current volatility regime. A

[1] See for example, "Incorporating volatility updating into the historical simulation method for value at risk" by John Hull and Alan White.
[2] "Principles for financial market infrastructures," CPSS-IOSCO, March 2011 (http://www.bis.org/publ/cpss94.pdf).

simple way to understand this volatility scaling is to notice that if forecasted volatility increases, then the distribution of returns will have more dispersion than what's observed in the sampled historical period. Essentially, this assumes stationarity of the volatility-scaled returns' distribution, which is very well supported through our statistical analysis. In a highly volatile environment the model appropriately scales up the returns that were obtained during periods of lower volatility. The opposite is, of course, also true.

In the HVaR approach, each observed tenor of the forward curve has its own volatility forecast and therefore its own scaling factor. We will check that this methodology preserves, to a reasonable degree, the average observed covariance matrix between the tenors of the forward curve, so as the historical correlations between different parts of the forward curve are maintained.

The margin methodology, at a high level, follows these four steps:

1. Generate matrix of historical returns

2. Compute volatility scaling factors and apply them individually to each tenor in each scenario

3. Generate scenarios by applying the scaled return matrix to today's forward curve and compute the profit (loss) of the portfolio in each scenario.

4. Rank the scenarios by maximum loss to maximum gain and take the required percentile as a margin. In our model, we chose to take the 4th largest loss over the 5-year period, which corresponds to approximately 99.7% confidence interval.

Note that in addition to historical scenarios used to generate margins required for 99% coverage, CME will consider truly extreme events for the purpose of sizing up the Guaranty Fund. This Fund is designed to withstand large systemic shocks at the Clearing Member level (which combines portfolios from its many customers), and thus has the benefit of netting out the risks amongst its clients. These stress tests will contain both historical and theoretical scenarios to represent potential tail-risks not accounted for in the margin model much more adequately.

Business staff responsible for the proposed change and the legal department collectively reviewed the derivatives clearing organization core principles ("Core Principles") as set forth in the Commodity Exchange Act ("CEA"). During this review, the following Core Principles were identified as being relevant to this submission:

FINANCIAL RESOURCES—Demonstrate that CME (the derivative clearing organization or DCO) has adequate financial, operational, and managerial resources to discharge the responsibilities of a derivatives clearing organization.

Compliance: There are minor financial impacts associated with the enhanced performance bond administration regime, where CME Clearing is migrating from SPAN to HVaR systems for calculation of cleared FX spot, forwards and swaps margins. However, initial performance bond requirements will continue to be established at levels that are consistent with observed levels of volatility in the particular currency pairing and generally aligned with initial margin levels applied to current CME FX futures and option contracts, where applicable. These components of the clearing system are unchanged. The migration to HVaR margin calculations for cleared OTC FX will enable more tailored and responsive adjustments of performance bonds based upon market dynamics. Variation margins may be satisfied with the posting of appropriate amounts of collateral, where CME Clearing collects and pays in cash between the counterparties each day. These payments are adjusted with implementation of HVaR, which will

make the CME cleared OTC FX products more appealing to the OTC community, because of its simplicity and broad-based acceptance for risk management in the financial marketplace.

Since CME has implemented this same feature (HVaR) for cleared interest rate swaps, it can implement this enhancement in a very cost effective manner. CME's utilization of the HVaR-based "cash mark to market" system continues to provide for all open positions held by market participants to be evaluated each day and real cash payments are made by CME Clearing to appropriate parties. These payments will now result in even more alignment with typical bilateral OTC FX transactions. This system, analogous to margining for futures, is also consistent with the requirements of the CEA.

PARTICIPANT AND PRODUCT ELIGIBILITY—CME has established (i) appropriate admission and continuing eligibility standards (including appropriate minimum financial requirements) for members of and participants in the organization; and (ii) appropriate standards for determining eligibility of agreements, contracts, or transactions submitted to CME.

Compliance: Parties to transactions in these Cleared OTC Contracts continue to be limited to "eligible contract participants" as defined in Section 1a(12) of the Commodity Exchange Act and existing methods for monitoring compliance with eligibility standards are utilized by CME, so there is no change or impact there. However, CME believes the inclusion of HVaR as the performance bond calculation methodology will make the CME cleared OTC FX product more appealing to OTC FX customers, given that HVaR is the risk management standard for the OTC market.

RISK MANAGEMENT—CME has the ability to manage the risks associated with discharging the responsibilities of a derivatives clearing organization through the use of appropriate tools and procedures.

Compliance: There are other existing CME products that feature cash mark to market performance bonds derived from HVaR methodology, namely, the cleared interest rate swaps. CME Clearing will utilize existing tools, procedures and processes to discharge the responsibilities of a derivatives clearing organization with respect to this enhanced cash mark to market mechanism for the cleared OTC FX products.

SETTLEMENT PROCEDURES—CME will have the ability to (i) complete settlements on a timely basis under varying circumstances; (ii) maintain an adequate record of the flow of funds associated with each transaction that the applicant clears; and (iii) comply with the terms and conditions of any permitted netting or offset arrangements with other clearing organizations.

Compliance: CME Clearing and the Settlements Team together manage the daily requirements to evaluate appropriate daily marks to market for all CME products including the cash-settlement Cleared OTC FX Spot, Forward and Swap transactions. The cash mark to market of this suite of products is in U.S. dollars, Canadian dollars, Japanese yen, Euro and British pounds. This arrangement has long history of working smoothly. The migration to HVaR does impact the daily mark to market amounts for open position holders to a degree, given it is a different methodology. However, given that the HVaR enhancement is more conforming to the existing procedures in the OTC FX market, this added feature serves to strengthen the cleared OTC FX product as it will now be more viable for users. Also, its use is proven acceptable to the OTC marketplace in the cleared interest rate swaps products.

TREATMENT OF FUNDS—CME will have standards and procedures designed to protect and ensure the safety of member and participant funds.

Compliance: CME has standards and procedures that it applies to other existing products that feature cash mark to market with HVaR-based performance bonds that will be applied to protect and ensure safety of member and participant funds in connection with the proposed procedure change.

DEFAULT RULES AND PROCEDURES—CME has rules and procedures designed to allow for efficient, fair, and safe management of events when members or participants become insolvent or otherwise default on their obligations to the derivatives clearing organization.

Compliance: The CME's standard financial safeguards package will apply under the new, enhanced performance bond administration regime described by the proposed procedural changes.

SYSTEM SAFEGUARDS—CME demonstrates that it (i) has established and will maintain a program of oversight and risk analysis to ensure that the automated systems of the applicant function properly and have adequate capacity and security; and (ii) has established and will maintain emergency procedures and a plan for disaster recovery, and will periodically test backup facilities sufficient to ensure daily processing, clearing, and settlement of transactions.

Compliance: CME's standard oversight, risk analysis and emergency systems apply to all CME products, including the newly enhanced cash mark to market performance bonds with HVaR for the cleared OTC FX spot, forward and swaps.

The Exchange certifies that these rule amendments and procedures comply with the Act and the rules thereunder and that there were no substantive opposing views to this proposal. The Exchange certifies that this submission has been concurrently posted on the Exchange's website at http://www.cmegroup.com/market-regulation/rule-filings.html.

Members/shareholders will be notified of the information contained herein in CME Group Special Executive Report, S-6184, dated Tuesday, April 3, 2012.

If you require any additional information regarding this action, please do not hesitate to contact me or Steve Youngren, at 312-930-4583 or via e-mail at Steve.Youngren@cmegroup.com or me. Please reference our CME Submission No. 12-102RR in any related correspondence.

Sincerely,

/s/ Tim Elliott
Executive Director and Associate General Counsel

Attachments: Appendix A
Appendix B
Appendix C

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Appendix A

Proposed Rule Amendments: Rule additions are underlined.

930.A. Performance Bond System

The Standard Portfolio Analysis of Risk ("SPAN®") Performance Bond System is the performance bond system adopted by the Exchange. SPAN-generated performance bond requirements shall constitute Exchange performance bond requirements. All references to performance bond within the rules of the Exchange shall relate to those computed by the SPAN system, except for cleared over-the-counter ("OTC") foreign exchange ("FX") and interest rate swap ("IRS") transactions, where the Historical Value at Risk ("HVaR") Performance Bond System is used for cleared OTC FX and IRS transaction performance bonds.

Performance bond systems other than the SPAN system may be used to meet Exchange performance bond requirements if the clearing member can demonstrate that its system will always produce a performance bond requirement equal to or greater than the SPAN performance bond requirements.

Appendix B

Proposed Rule Amendments: Clean copy of amended Rule 930.A.

930.A. Performance Bond System

The Standard Portfolio Analysis of Risk ("SPAN®") Performance Bond System is the performance bond system adopted by the Exchange. SPAN-generated performance bond requirements shall constitute Exchange performance bond requirements. All references to performance bond within the rules of the Exchange shall relate to those computed by the SPAN system, except for cleared over-the-counter ("OTC") foreign exchange ("FX") and interest rate swap ("IRS") transactions, where the Historical Value at Risk ("HVaR") Performance Bond System is used for cleared OTC FX and IRS transaction performance bonds.

Performance bond systems other than the SPAN system may be used to meet Exchange performance bond requirements if the clearing member can demonstrate that its system will always produce a performance bond requirement equal to or greater than the SPAN performance bond requirements.

Appendix C

CME Group

Special Executive Report

S-6232 **May 4, 2012**

Clarification of HVaR Performance Bond Methodology Implementation for Cleared OTC FX Spot, Forward and Swap Transactions

As you were previously notified in CME Group Special Executive Report, S-6184, dated Tuesday, April 3, 2012, CME is changing its methodology for calculation of the performance bond requirements for Cleared Over-the-Counter ("OTC") Foreign Exchange ("FX") Spot, Forward and Swap Transactions from Standard Portfolio Analysis ("SPAN®") to Historical Value at Risk ("HVaR"). CME is clarifying the implementation schedule as follows:

Release 1: As of Monday, April 16, 2012, the HVaR performance bond methodology was implemented for Cleared OTC U.S. Dollar (USD)/Brazilian Real (BRL), USD/Philippines Peso (PHP), USD/Malaysian Ringgit (MYR), USD/Indian Rupee (INR), USD/Korean Won (KRW), USD/Chinese Renminbi (CNY), USD/Indonesian Rupiah (IDR) spot, forward and swap transactions.

Release 2: As of Monday, May 7, 2012, the HVaR performance bond methodology will be implemented for Cleared OTC USD/Taiwan Dollar (TWD), USD/Chilean Peso (CLP), USD/Colombian Peso (COP), USD/Peruvian New Sol (PEN), USD/Russian Ruble (RUB), Euro (EUR)/USD spot, forward and swap transactions.

Release 3: As of Monday, May 28, 2012, the HVaR performance bond methodology will be implemented for Cleared USD/Japanese Yen (JPY), British Pound (GBP)/USD, USD/Canadian Dollar (CAD), USD/Swiss Franc (CHF), Australian Dollar (AUD)/USD, USD/Swedish Krona (SEK) spot, forward and swap transactions.

Release 4: As of Monday, June 18, 2012, the HVaR performance bond methodology will be implemented for Cleared USD/Norwegian Krone (NOK), USD/Danish Krone (DKK), New Zealand Dollar (NZD)/USD, EUR/JPY, EUR/GBP, AUD/JPY spot, forward and swap transactions.

Release 5: As of Monday, July 9, 2012, the HVaR performance bond methodology will be implemented for Cleared EUR/CHF, CAD/JPY, EUR/AUD, USD/Hong Kong Dollar (HKD), USD/Hungarian Forint (HUF), USD/Israeli Shekel (ILS) spot, forward and swap transactions.

Release 6: As of Monday, July 30, 2012, the HVaR performance bond methodology will be implemented for Cleared USD/Czech Koruna (CZK), USD/Mexican Peso (MXN), USD/Polish Zloty (PLN), USD/Singapore Dollar (SGD), USD/Thailand Baht (THB), USD/Turkish Lira (TRY), USD/South African Rand (ZAR) spot, forward and swap transactions.

These contracts will be enabled to be cleared on CME ClearPort according to the release schedule described above.

If you have any questions, please contact Craig LeVeille (email: Craig.LeVeille@cmegroup.com or ph. 312-454-5301) or Marco Ossanna (email: Marco.Ossanna@cmegroup.com or ph: (212) 299-2129) or Ian Nikolov (email: Ivaylo.Nikolov@cmegroup.com or ph. 312-466-4427) or Steve Youngren (email: Steve.Youngren@cmegroup.com or ph: 312-930-4583)

EXHIBIT E

Fee Schedule for the Cleared FX Swaps

Fees for Clearing OTC FX

Effective as of January 1, 2013

All Fees Waived Through June 30, 2013

Transaction Fees – Cleared OTC CME FX

Maturity	All Fees Waived Through June 30, 2013	Regular Fee Schedule		
		Equity Member[1]	*Non-Equity Member*[2]	*Non-Member*[3]
T+2 – 3M		$3.00	$ 4.00	$ 8.00
3M – 1YR		$5.00	$ 6.00	$10.00
1YR – 2 YR		$8.00	$10.00	$16.00

About the Fee Schedule

- Fees are priced for $1,000,000
- Fees inclusive of cash settlement
- Other processing fees: No initial fees for position adjustments, give-ups or other non-trade fees

About Cleared OTC FX

CME Group has worked closely with buy side and sell side participants to build a multi-asset class, market leading OTC clearing solution, which includes Cleared OTC FX. Our Cleared OTC FX solution provides a post-execution clearing and settlement service, through CME ClearPort, which is designed to meet the risk-mitigation needs of OTC currency traders around the world. Cleared OTC FX offers you the ability to retain the flexibility of OTC products and use any established OTC execution method, while addressing counterparty credit risk concerns.

Our current product coverage is focused on 12 Non Deliverable Forwards (NDFs) and 26 Cash-Settled Forwards (CSFs), with plans to expand to a full OTC FX product suite, including FX options, spot, swaps and forwards.

For more information visit cmegroup.com/fxclearing or contact

Steve Reich
Steve.Reich@cmegroup.com
+1 212 299 2711

1. Equity Members/Clearing Members/Corporate Equity Members/Rule 106.I and Rule 106.S Member Approved Funds
2. Lessees (106.D / 106.F), Electronic Corporate Member (Holding Member & Volume Incentive), Rule 106.H/N Firms,
3. Asian Incentive (AIP), International Incentive (IIP), Latin American Bank Incentive (LABIP) and Latin American Fund Manager (FMIP),.Latin American Commercial Incentive (LACIP), CBOE Members and Customers of Member Firms

The contracts in this piece are listed with, and subject to, the rules and regulations of CME.

Swaps trading is not suitable for all investors, involves the risk of loss and should only be undertaken by investors who are eligible contract participants (ECPs) within the meaning of section 1(a)18 of the Commodity Exchange Act. Swaps are a leveraged investment, and because only a percentage of a contract's value is required to trade, it is possible to lose more than the amount of money deposited for a swaps position. Therefore, traders should only use funds that they can afford to lose without affecting their lifestyles. And only a portion of those funds should be devoted to any one trade because they cannot expect to profit on every trade. CME Group is a trademark of CME Group Inc. The Globe logo, E-mini, E-micro, Globex, CME and Chicago Mercantile Exchange are trademarks of Chicago Mercantile Exchange Inc. The information within this brochure has been compiled by CME Group for general purposes only. CME Group assumes no responsibility for any errors or omissions. Additionally, all examples in this brochure are hypothetical situations, used for explanation purposes only, and should not be considered investment advice or the results of actual market experience. All matters pertaining to rules and specifi cations herein are made subject to and are superseded by official CME, CBOT and CME Group rules. Current rules should be consulted in all cases concerning contract specifi cations.

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EXHIBIT F

CME Handbook for OTC Clearing Membership

CME

Over-The-Counter Derivatives Clearing Membership (OTC Clearing Membership)

Handbook

May 2012

OTC Clearing Membership
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Disclaimer

This handbook is designed to familiarize applicants with the requirements for Chicago Mercantile Exchange Inc. ("CME") Over-the-Counter ("OTC") Derivatives Clearing Membership and to assist them in becoming OTC Clearing Members.

The handbook supplements and clarifies the rules for CME OTC Clearing Members as adopted in CME's Rulebook. This handbook is compiled for the convenience of the user and is furnished without responsibility for any errors or omissions contained herein. In the event of a conflict between this Handbook and CME's Rules, CME's Rules shall control.

OTC Clearing Membership
Introduction

Over-the-Counter ("OTC") Derivatives Clearing Membership is a privilege granted by the Clearing House Risk Committee of Chicago Mercantile Exchange Inc.® ("CME"), the Interest Rate Swap Risk Committee for Interest Rate Swap ("IRS") products and/or the Credit Default Swaps Risk Committee for Credit Default Swap ("CDS") products. OTC Clearing Members assume full financial and performance responsibility for all OTC transactions submitted by them for and accepted for clearing by CME's Clearing House ("CME Clearing").

CME, The Board of Trade of the City of Chicago, Inc. ("CBOT"), New York Mercantile Exchange, Inc. ("NYMEX"), and Commodity Exchange, Inc. ("COMEX") Clearing Members and OTC Clearing Members are eligible to clear OTC derivative products directly with CME Clearing if all requirements for the clearance of particular OTC derivative contracts are met. A firm may become a clearing member of one or more Exchanges and have privileges to clear exchange-traded futures and/or options on futures ("futures/options") on that Exchange. Depending upon the clearing membership privileges held, these clearing members may be eligible to clear OTC derivatives products (i.e. cleared swaps and forwards) if additional requirements, including additional financial and operational requirements, are met. For example, CME clearing members are eligible to clear CDS and IRS, CBOT clearing members are eligible to clear ethanol and grain swaps, NYMEX clearing members are eligible to clear energy OTC products and COMEX clearing members are eligible to clear metal forwards. A CBOT-only, NYMEX-only or COMEX-only clearing member is not eligible to clear CDS or IRS.

If a firm wants to clear both CDS and IRS as well as CME and CBOT futures/options (e.g. CME Eurodollar and/or CBOT Treasury products), it should consider applying for CME and CBOT clearing membership.

A firm may also become an OTC Derivatives Clearing Member if it desires to clear only OTC derivative products, including CDS and IRS, and not clear any Exchange-traded futures/options activity. An OTC Derivatives Clearing Member is a member in CME Clearing and it is afforded full rights and privileges to clear for its own account, and on behalf of customers if it is properly registered, transactions in OTC derivative products. OTC Clearing Members are not entitled to clear products other than OTC derivative products. CME Clearing is a division of CME, a derivatives clearing organization registered with the U.S. Commodity Futures Trading Commission ("CFTC"), through which all OTC derivative products are confirmed, matched, settled, collateralized and/or marked-to-the-market.

Clearing members that will clear exchange-traded futures/options and/or OTC derivatives for customers must be registered with the U.S. CFTC as a Futures Commission Merchant ("FCM"). FCMs are subject to CFTC rules and regulated pertaining to regulatory capital, monthly financial reporting, required notifications and customer protection. More detailed information concerning FCM registration can be found on the CFTC's web site at www.cftc.gov.

The general requirements of clearing membership are stated in Chapter 9 of CME's Rulebook. The additional requirements for clearing OTC derivative products, including FX, are stated in Chapter

8F of CME's Rulebook, for IRS are stated in Chapter 8G of CME's Rulebook and for CDS are stated in Chapter 8H of CME's Rulebook. The rules of the respective Exchanges are on CME Group's web site at: http://www.cmegroup.com/market-regulation/rulebook/index.html. In addition, a Clearing House Manual of Operations may be adopted for certain OTC products (e.g. IRS and CDS). The Manual contains information and directions for preparing trade data, completing prescribed memoranda and meeting other Clearing House requirements for certain products. The Manual shall constitute part of the Rules.

CME Clearing may impose additional requirements upon the clearing member that may be specific to the products cleared by the clearing member. Below is a summary of the significant requirements.

For a more detailed account of clearing membership requirements for Exchange traded futures/options and OTC derivatives, please review the Clearing Membership Handbook on CME Group's web site at: http://www.cmegroup.com/company/membership/files/clearmemberhandbook.pdf.

CME, CME Clearing, the Clearing House and the Exchange are used interchangeably throughout this handbook. References to rules refer to CME Rules unless otherwise noted. CME's Rulebook is located on CME Group's Web Site at: http://www.cmegroup.com/market-regulation/rulebook/index.html.

OTC Clearing Membership
Introduction

OTC Clearing Membership Application Process

OTC Clearing Member applicants must complete the CME Group's OTC Clearing Membership Application and Agreement for Membership.

CME Rule 105.A. (Application for Membership) and Rule 911 (Screening Procedures) requires the CME membership community to be notified of all applicants for clearing membership for a 20-day period (i.e. the "20-day posting period"). OTC Clearing Membership applicants are posted to the membership community in CME's Weekly Special Executive Report on the Monday following receipt of a completed clearing membership application. During this 20-day period, an investigation of the applicant's qualifications for membership is conducted.

Once all requirements of membership have been met, the OTC Clearing Member applicant is presented to CME's Clearing House Risk Committee, the IRS Risk Committee for IRS products, the CDS Risk Committee for CDS products, as applicable, for approval. If approved by the respective Risk Committee, and all applicable requirements have been met, the approval of the OTC Clearing Member may become effective.

To be effective as a clearing member, all conditions and requirements of membership must be satisfied and the 20-day posting period must have expired.

OTC Clearing Membership
General Requirements

CME Rule 901. (General Requirements and Obligations) and Rule 8F04. (OTC Clearing Member Obligations and Qualifications) state the requirements which must be satisfied to become an OTC Clearing Member. Specific OTC clearing membership requirements are outlined in other sections of this handbook.

The general requirements for OTC clearing membership are outlined below.

1. An OTC Clearing Member must be a corporation (including a C Corporation, Subchapter S Corporation or Limited Liability Company), partnership (including a Limited Partnership or General Partnership) or cooperative association.

2. An OTC Clearing Member must have an authorized representative (i.e., officer, principal or partner) to represent the OTC Clearing Member before CME Clearing and its committees.

3. An OTC Clearing Member shall be qualified to do business in the State of Illinois or the State of New York or have an agency agreement in place with an entity already qualified in the State of Illinois or the State of New York. Such agency agreement must be in the Exchange approved format. Refer to Exhibit A.

   This requirement provides a place for service of process and other communications in connection with the business of the OTC Clearing Member.

4. An OTC Clearing Member shall be engaged in or demonstrate immediate capacity to engage in the conduct of the business of an OTC Clearing Member. An OTC Clearing Member that will clear CDS or IRS must have appropriate risk management capabilities, operational infrastructure and experience to support their CDS and/or IRS clearing activity, as prescribed by CME Clearing.

5. An OTC Clearing Member shall ensure that any and all necessary approvals have been received from regulatory authorities, including, but not limited to, the United States Federal Reserve and other foreign banking regulators to allow the firm to conduct the business of an OTC Clearing Member.

6. An OTC Clearing Member shall demonstrate such fiscal and moral integrity as would justify CME Clearing's assumption of the risks inherent in clearing its trades.

7. An OTC Clearing Member shall agree to guarantee and assume responsibility for all trading activity routed through any electronic trading system, if applicable, to CME Clearing for clearing of such OTC derivative transactions and which are guaranteed to CME Clearing by the clearing member via any connection, terminal, link, telecommunications hub or handheld unit provided by a clearing member to a third party as well as any applicable electronic trading systems and terminals that the clearing member provides to a third party, including an eligible customer, to enter orders.

8. The OTC Clearing Member shall agree to guarantee and assume responsibility for all OTC derivatives trading activity executed via outside means and submitted for clearing to and accepted by CME Clearing by any customer, broker or affiliate authorized by the OTC Clearing Member.

9. A clearing member shall comply with all credit control policies developed by the Exchange for customer and proprietary transactions. Such credit control policies may include, but not be limited to, registration of credit control administrators with the Exchange, definition of credit control limits, and maintenance of written procedures verifying compliance with Exchange credit control requirements. Any "GC2" credit control functionality required by the Exchange shall be in addition to a clearing member's initial risk monitoring and credit control procedures.

10. An OTC Clearing Member shall agree to abide by all CME Rules and to cooperate in their enforcement.

11. An OTC Clearing Member shall be responsible, even after it has withdrawn as a clearing member, for any violations of CME Rules committed by it while it was a clearing member.

12. An OTC Clearing Member must be in "good standing" under each applicable regulatory regime to which it is subject to and must maintain its good standing status while it is an OTC Clearing Member.

13. An OTC Clearing Member must continue to meet all requirements of clearing members, including financial requirements, provided by CME's Rules.

<u>Legal Requirements and Rules</u>

All clearing members, including those that are incorporated/domiciled in non-U.S. jurisdictions, must be subject to a legal and insolvency regime acceptable to the Clearing House. Clearing members from non-U.S. jurisdictions must use the U.S. branch of the Clearing House's settlement banks for performance bond deposits and variation margin.

The rules of the Exchange shall be governed by and construed in accordance with the laws of the State of Illinois in the U.S. Any action, claim, dispute or litigation of any kind between the clearing member and the Exchanges shall be adjudicated in a federal or state court in Chicago, Illinois. Clearing members must consent to the jurisdiction of such court and to service of process by any means authorized by Illinois or U.S. federal law, and waive the right to transfer the venue of such litigation. In addition, clearing members irrevocably waive any grounds of sovereign immunity in any legal action with the Exchanges. Refer to Rule 905. (Choice of Law)

An OTC Clearing Member shall have no rights or privileges to clear products other than OTC derivative products. If it wishes to clear CME, CBOT, NYMEX or COMEX futures/options products,

it must apply for, meet all requirements, including Exchange memberships, and be approved for those exchange membership privileges.

OTC Clearing Membership is a privilege granted by the Clearing House Risk Committee and/or the IRS Risk Committee for IRS products and/or the CDS Risk Committee. Such clearing membership privileges may be withdrawn for cause at any time.

OTC Clearing Members who are Facilities Managed

An OTC Clearing Member may determine that it is not cost-effective to establish a back office operation. OTC Clearing Members may enter into "facilities management" agreements with other clearing members to reduce their costs associated with clearing OTC derivative products with CME Clearing. Under such an agreement, the OTC Clearing Member clears its trades with CME Clearing; however, another clearing member (facilitator) performs trade processing and/or manages the back office functions.

A facilities management agreement may be entered into between two clearing members for the purpose of doing some or all of the OTC Clearing Member's back office/clearing operations. For example, if an OTC Clearing Member's trade processing is conducted through another firm's back office, the OTC Clearing Member defrays the cost of setting up a back office and hiring personnel to perform trade processing. The terms of the arrangement are private. However, CME Clearing will always look to the OTC Clearing Member responsible for clearing the trades in the event there are problems associated with the trade processing. An OTC Clearing Member may not contract out its responsibility to guarantee its trades or follow correct processing procedures.

An OTC Clearing Member may not contract out functions related to its banking operations to a clearing member who is not affiliated with, or related to, the OTC Clearing Member.

If an OTC Clearing Member enters into a facilities management agreement, it must always have a senior officer, director, or partner of the OTC Clearing Member available to represent the OTC Clearing Member before CME Clearing and its committees.

OTC Clearing Membership
Membership, Capital and Financial Requirements

Membership Requirements

OTC Clearing Members are required to maintain a membership deposit of at least $5,000,000 with CME Clearing. The membership deposit is available to CME Clearing in the event of a default to CME Clearing by the OTC Clearing Member. The membership deposit is in lieu of any Exchange memberships (i.e. trading rights) that must be maintained by CME, CBOT, NYMEX or COMEX clearing members and is available to CME Clearing in the event of a default by OTC Clearing Members.

The Clearing House Risk Committee, the IRS Risk Committee for IRS products, the CDS Risk Committee for CDS products or CME Clearing may prescribe additional financial, including membership deposit, requirements.

During the application process, the OTC Clearing Member applicant may deposit U.S. Dollars, U.S. Treasuries, U.S. Agencies and stock of CME Group as collateral to meet its membership deposit requirements. Interest is not paid on U.S. Dollar deposits. If U.S. treasury or agency securities are deposited, the market value of such securities, less any applicable haircut, must be at least the minimum requirement. For example, U.S. T-Bonds maturing in less than 5 years with a par value of $6,000,000, market value of $5,500,000 and a 2% CME Clearing haircut may be used to meet a membership deposit requirement of $5,000,000 as the CME Clearing collateral value is $5,390,000.

Once approved as an OTC Clearing Member, the OTC Clearing Member may also invest in various collateral management programs such as CME's IEF2 or IEF5 programs. These investments may be used to meet the clearing member's membership deposit requirements.

Information on the types of collateral that may be accepted by CME Clearing, its various collateral management programs and the CME Clearing haircut may be found on CME Group's Web Site at: http://www.cmegroup.com/clearing/financial-and-collateral-management/collateral-types-accepted.html.

During the clearing membership approval process, the membership deposit must be wired into the account of CME Clearing prior to the respective Risk Committee meetings where the applicant will be presented. CME Clearing should be informed prior to any funds or securities being wired to CME Clearing.

Guaranty Fund Requirements

The guaranty fund requirements of CME Clearing are stated in Rule 816. (Guaranty Fund Deposit), for OTC Clearing Members in Rule 8F07. (Guaranty Fund Deposit), for OTC Clearing Members which will clear IRS in Rule 8G07 (IRS Financial Safeguards and Guaranty Fund Deposit) and for OTC Clearing Members which will clear CDS in Rule 8H07 (CDS Financial Safeguards and Guaranty Fund Deposit).

OTC Clearing Membership
Membership, Capital and Financial Requirements

All clearing members must deposit with the Clearing House a guaranty fund deposit for their obligations to the Clearing House. The minimum guarantee fund deposit for an OTC Clearing Member which will clear:

- Exchange-traded futures and options and OTC (including FX but excluding CDS and IRS) is $2,500,000 or its proportionate share of the Aggregate Guaranty Fund Deposit. The Aggregate Guaranty Fund Deposit is an amount determined quarterly by the Clearing House Risk Committee and is set at a percentage of the average aggregated performance bond requirements, volume and settlements of the Clearing House (for CME, CBOT, NYMEX, COMEX exchange-traded products and OTC derivative products excluding CDS and IRS) for the preceding three months.
- CDS is the greater of $50,000,000 or the clearing member's proportionate share of the two largest CDS Clearing Member's losses as outlined in CME Rule 8H07; and
- IRS is the greater of $50,000,000 or the clearing member's proportionate share of the two largest IRS Clearing Member's losses as outlined in CME Rule 8G07.

If an OTC Clearing Member clears CDS, IRS and other OTC products, its minimum guaranty fund requirement will be $102,500,000. Guaranty fund minimums may be increased from time to time, depending on the mix of OTC asset classes for which the Clearing House provides clearing services.

The minimum guaranty fund deposit of an OTC Clearing Member which clears IRS products and has an affiliated clearing member which also clears IRS products is $25,000,000 for each affiliated IRS clearing member. In these instances, one affiliated IRS Clearing Member provides primary clearing services for customers as a FCM (with any proprietary business of such FCM only incidental to providing such clearing service for customers) and the other affiliated clearing member only provides IRS clearing services through its proprietary account for itself and/or its affiliates.

Only U.S. Dollars, U.S. Treasuries and U.S. Agencies may be deposited by a clearing member applicant during the application approval process. Interest is not paid on U.S. Dollar deposits. If U.S. treasury or agency securities are deposited, the market value of such securities, less any applicable haircut, must be at least the minimum requirement. For example, U.S. T-Bonds maturing in less than 5 years with a par value of $2,600,000, market value of $2,575,000 and a 2% CME Clearing haircut may be used to meet a minimum guaranty fund deposit requirement of $2,500,000 as the CME Clearing collateral value is $2,523,500.

In addition to U.S. Dollars, U.S. Treasuries and U.S. Agencies, once approved for clearing membership, a clearing member may also invest in various collateral management programs such as CME's IEF2 or IEF5 programs. These investments may be used to meet the clearing member's guaranty fund deposit requirements.

Information on the types of collateral that may be accepted by CME Clearing, its various collateral management programs and the CME Clearing haircut may be found on CME Group's

OTC Clearing Membership
Membership, Capital and Financial Requirements

Web Site at: http://www.cmegroup.com/clearing/financial-and-collateral-management/collateral-types-accepted.html.

During the clearing membership approval process, the minimum guaranty fund deposit must be wired into the account of CME Clearing prior to the respective Risk Committees' meetings where the applicant will be presented. CME Clearing should be informed prior to any funds or securities being wired to CME Clearing.

The Clearing House Risk Committee, the IRS Risk Committee for IRS products, the CDS Risk Committee for CDS products or CME Clearing may prescribe additional financial, including guaranty fund deposit, requirements.

Capital Requirements

The exchange capital requirement for an OTC Derivatives Clearing member is the greater of (a) $50,000,000 (minimum capital requirement) or (b) the CFTC or SEC capital requirement or (c) twenty percent of the aggregate performance bond requirement for CME-cleared CDS and IRS for customer and house accounts. For non-Bank clearing members, capital is defined as Adjusted Net Capital as computed in accordance with CFTC Regulation 1.17. For bank clearing members, capital is calculated pursuant to the rules and regulations of its primary banking regulator and is defined as Tier I capital computed according to the capital adequacy requirements that it is subject to (i.e. Basel Capital Accord of 1988 (Basel I) or, if adopted, the Revised Basel Capital Framework (Basel II)).

For additional information on capital requirements, refer to Rule 970 for Exchange-traded futures/options, CME Rule 8F04 for OTC derivatives, CME Rule 8H04 for CDS and CME Rule 8G04 for IRS.

The Clearing House Risk Committee, the IRS Risk Committee for IRS products, the CDS Risk Committee for CDS products or CME Clearing may prescribe additional financial, including capital, requirements.

Settlement and Performance Bond Banks

OTC Clearing Members must maintain cash and securities safekeeping accounts at one or more CME Clearing approved banks for purposes of posting cash and securities to meet mark-to-market variation, performance bond and guaranty fund deposit requirements on their OTC derivative products. It is the clearing member's responsibility to establish these banking relationships.

Currently, the approved settlement, performance bond and guaranty fund deposit banks are:

- Bank of America, NA

- Brown Brothers Harriman & Co.
- BMO Harris Bank NA
- JPMorgan Chase Bank, NA
- The Bank of New York Mellon
- Fifth Third Bank, NA

If the OTC Clearing Member is registered as an FCM and will clear customer activity, it must also maintain Customer Segregated, if applicable, and Customer Cleared Swaps cash and securities safekeeping accounts for its customer futures/options and cleared OTC derivatives, respectively, activity.

All clearing members grant a first priority and unencumbered lien, as security for all its obligations to CME Clearing, against all property and collateral deposited with CME Clearing by the clearing member which is the property of the clearing member. All clearing members are required to execute any documents required by CME Clearing to create and enforce such lien. Refer to CME Rule 819.

CME Clearing must have information on all bank and safekeeping accounts established by OTC Clearing Members for settlements and performance bond. Further, CME Clearing requires debit authorization over these OTC Clearing Member bank accounts

Financial Responsibilities in the Event of a Default

In the event any clearing member (CME, CBOT, NYMEX, COMEX or OTC Derivatives Clearing Member) fails to promptly discharge any obligation to CME Clearing, its guaranty fund deposit, its available performance bond on deposit with CME Clearing, its membership requirement on deposit with CME Clearing (for OTC Clearing Members), the proceeds of the sale of any memberships assigned for clearing membership privileges (for CME, CBOT, NYMEX or COMEX Clearing Members), and any of its other assets held by, pledged to or otherwise available to CME Clearing shall be applied by CME Clearing to discharge the obligation.

A clearing member's financial responsibilities in the event of a default for exchange-traded products and OTC excluding IRS and CDS are stated in Rule 802. (Protection of Clearing House).

The Clearing House has established separate guaranty funds for IRS and CDS which are separate and distinct from the guaranty fund for each and all other products. The IRS default management procedures may be found in CME Rule 8G802 (Protection of Clearing House) and CDS default management procedures may be found in CME Rule 8H802 (Protection of Clearing House).

To minimize the possibility of clearing member defaults and to provide our customers and the market with the finest protection, CME Clearing has adopted and rigorously enforces an integrated package of financial surveillance and risk management procedures. These are

described in CME Group publication, Financial Safeguards of CME, which may be found on CME Group's Web Site at: http://www.cmegroup.com/clearing/files/financialsafeguards.pdf.

Withdrawal from OTC Derivatives Clearing Membership

If an OTC Clearing Member wishes to withdrawal from clearing membership, it must provide written notice to the Exchange. Once all positions have been closed out or transferred to other clearing members and all other conditions or requirements of withdrawal have been met, the withdrawal of the OTC Clearing Member will be posted to the membership community in CME's Weekly Special Executive Report. The date of the posting in the CME Weekly Special Executive Report is the effective date of the clearing member's withdrawal and the beginning of the 60-day posting period (i.e. the "60-day posting period").

Exchange rules provide that a clearing member's guaranty fund deposit, memberships (for CME, CBOT, NYMEX and COMEX Clearing Membership), membership deposit (for OTC Clearing Members), and any other deposits required by the Exchange may not be released until the expiration of the 60-day posting period. During the 60-day posting period, the Exchange ensures that all obligations to the Exchange, other members and customers have been met or otherwise provided for. Upon the expiration of the 60-day posting period and a determination that there are no claims pending, the clearing member's assets may be released.

Refer to Rule 913 (Withdrawal from Clearing Membership), Rule 8G913 (Withdrawal from IRS Clearing Membership) for IRS products and Rule 8H913 (Withdrawal from CDS Clearing Membership) for CDS products.

OTC Clearing Membership
Financial Reporting, Notification and Other Requirements

Financial Reporting Requirements

Monthly Financial Statement Filings – Non-Banks

OTC Clearing Members which are not Banks are subject to monthly financial statement reporting requirements. These OTC Clearing Members must submit to CME Group's Audit Department monthly CFTC Form 1-FRs or SEC FOCUS reports (if a U.S. registered broker-dealer). Such monthly reporting includes the submission of an unaudited monthly report as of the clearing member's fiscal year-end.

These financial reports:

- Must demonstrate compliance with the CME minimum capital requirements (see above).
- Must be stated in English (or a translation provided).
- Need not be prepared according to U.S. GAAP.
- Must be stated in United States Dollars (i.e. converted from the native currency).
- Must include the Exchange Supplemental Information which includes disclosure as to capital to be withdrawn within 6 months; subordinated debt maturing within 6 months; and subordinated debt due to mature within 6 months that will be renewed.
- Must be filed within seventeen (17) business days of month-end.

All monthly financial statements must be submitted through the WinJammer system, a CME Group electronic filing system. In order to file the statements using the WinJammer system, authorized signors are granted a Personal Identification Number ("PIN"). In order to obtain a PIN, you may visit the WinJammer web site at http://wjammer.com/newweb/home.asp#. The PIN information is located under Documentation – Getting Started – Importing PINs.

It is the responsibility of the OTC Clearing Member to ensure it can adequately demonstrate capital compliance at all times.

Clearing members which are not Banks must comply with the requirements set forth in CFTC Regulations 1.10, 1.12, 1.17 and 1.18 unless an exemption is granted by the Clearing House. All clearing members, including clearing members which are not registered as an FCM, shall make available to the CFTC, upon the CFTC's request, copies of financial reports required to be submitted to the Audit Department. The financial reporting requirements of clearing members are stated in CME Rule 970. (Financial Requirements).

Quarterly Financial Statement Filings – Banks

Banks which are OTC Clearing Members must provide CME Group's Audit Department with its regulatory banking capital information and any and all financial statements and capital adequacy reports that are required to be filed with its primary banking regulator. However, such financial statements and capital adequacy reports must be filed on, at least, a quarterly basis including as

of the OTC Clearing Member's fiscal year-end, if such filing of an unaudited fiscal year-end financial statement is required by the clearing member's primary banking regulator.

OTC Clearing Members which are Banks must submit to CME Group's Audit Department quarterly Form "CME Financial Forms – Banks" through the WinJammer™ system, a CME Group electronic financial statement filing system. The OTC Clearing Member must attach all financial statements and capital adequacy reports filed with their primary banking regulator to the WinJammer filing. Such quarterly reporting includes the submission of an unaudited quarterly financial and capital adequacy report as of the clearing member's fiscal year-end, if such filing is also required by the Clearing Member's primary banking regulator.

These financial reports:

- Must demonstrate compliance with the CME minimum capital requirements (see above).
- Must be stated in English (or a translation provided).
- Need not be prepared according to U.S. GAAP.
- May be stated in the native currency of the Bank OTC Clearing Member.
- Must be filed within five (5) calendar days after such statements are provided to the Bank OTC Clearing Member's primary banking regulator.

All quarterly financial statements and capital adequacy reports must be submitted through the WinJammer system. In order to file the statements using the WinJammer system, authorized signors are granted a Personal Identification Number ("PIN"). In order to obtain a PIN, you may visit the WinJammer web site at http://wjammer.com/newweb/home.asp#. The PIN information is located under Documentation – Getting Started – Importing PINs.

It is the responsibility of the OTC Clearing Member to ensure it can adequately demonstrate capital compliance at all times.

OTC Clearing Members which are Banks are granted an exemption from provisions of CME Rule 970 as they relate to the filing of a Form 1-FR or FOCUS on a monthly basis (i.e. Rule 970.A.2., 970.B. and 970.C.). However, all clearing members, including bank clearing members and those not registered as FCMs, shall make available to the CFTC, upon the CFTC's request, copies of financial reports required to be submitted to the Audit Department. Refer to CME Rule 970.

Certified Financial Statement Filings

OTC Clearing Members which are not Banks must also submit a certified financial statement as of the OTC Clearing Member's fiscal year-end. These annual financial reports:

- Must demonstrate compliance with the CME minimum capital requirements.
- Must be stated in English (or a translation provided)

- Need not be prepared according to U.S. GAAP.
- May be stated in the native currency of the OTC clearing member.
- Must be filed within ninety (90) calendar days of the OTC Clearing Member's fiscal year-end.

The certified financial statements of OTC Clearing Members which are not a Bank must include at a minimum the following:

- Public Accountant's Opinion Letter
- Statement of Financial Condition
- Statement of Income (Loss)
- Statement of Cash Flows (if applicable)
- Statement of Changes in Ownership Equity (if applicable)
- Appropriate Footnote Disclosures

OTC Clearing Members which are Banks must also submit certified financial statements as of its fiscal year-end. These annual financial reports:

- Must demonstrate compliance with the CME minimum capital requirements
- Must be stated in English (or a translation provided)
- Need not be prepared according to U.S. GAAP.
- May be stated in the native currency of the Bank OTC Clearing Member.
- Must be filed within five (5) calendar days after such statements are provided to the Bank OTC Clearing Member's primary banking regulator.

The certified financial statements of OTC Clearing Members which are a Bank must include at a minimum the following:

- Public Accountant's Opinion Letter
- Statement of Financial Condition
- Statement of Income (Loss)
- Appropriate Footnote Disclosures

All annual certified financial reports must be submitted to CME Group's Audit Department.

<u>Financial Statement Filings - More Frequent Financial Reporting</u>

Any OTC Clearing Members may be placed on more frequent reporting at the discretion of CME Clearing, the IRS Risk Committee for IRS products, the CDS Risk Committee for CDS products or the Clearing House Risk Committee.

Notification Requirements

Financial Notifications

OTC Clearing Members must provide written notice to CME Group's Audit Department whenever the OTC Clearing Member:

- Fails to maintain the minimum capital as required by CME Clearing or its primary regulator.
- Fails to maintain current books and records.
- Fails to comply with additional accounting, reporting, financial and/or operational requirements as prescribed by CME Clearing.
- Changes its fiscal year.

In addition, all clearing members are required to provide written notice to the Audit Department of any substantial reduction in its capital as compared to the most recently filed financial or capital adequacy report. Refer to CME Rule 972 (Reductions in Capital).

Other Notifications

1. Significant Business Transaction or Change in Operations. All clearing members are required to provide notice to CME Clearing prior to any significant business transaction. The purpose of such notification is to enable CME Clearing to better identify and monitor risks presented by significant business transactions. The notification requirements are contained in Rule 901.H. (General Requirements and Obligations) and are as follows:

   All clearing members must notify the Audit Department prior to any significant business transaction or significant change in operations including:

   - The merger, combination, or consolidation between the clearing member and another person or entity;
   - The assumption or guarantee by the clearing member of all or substantially all of the liabilities of another in connection with a direct or indirect acquisition of all or substantially all of that person's or entity's assets;
   - The sale of a significant part of the clearing member's business and/or assets to another person or entity; and
   - A change in the direct or indirect beneficial ownership of 20% or more of the clearing member.

   Such transactions may be subject to review and approval by the Clearing House Risk Committee and/or CME Clearing.

2. Firm Personnel Contact Information. Maintaining up-to-date personnel contact information is critical in order to continue communications with our clearing members during normal,

as well as crisis, situations. Therefore, clearing members are required to immediately update their firm personnel contact information via the CME portal when changes occur. In any event, firm personnel are required to review the firm personnel listing twice a year and signoff that all information is current and accurate. Refer to CME Rule 983.B.

Other Requirements

Anti-Money Laundering

All clearing members are required to have a written anti-money laundering compliance program approved by its senior management which is reasonably designed to achieve and monitor the clearing member's compliance with all applicable requirements under the Bank Secrecy Act, the International Emergency Economic Powers Act, the Trading with the Enemy Act and the Executive Orders and regulations issued pursuant thereto, including the regulations issued by the U.S. Department of Treasury and, as applicable, the CFTC.

Refer to Rule 981 (Anti-Money Laundering).

Risk Management

All clearing members must have written risk management policies and procedures in place to ensure they are able to perform certain basic risk and operational functions at all times. Depending on the firm's size and its business and product mix, clearing members must have procedures in place to allow them to monitor the risks associated with proprietary trading, use appropriate tools to limit the impact of significant market moves and set automated credit controls or position limits in order entry systems.

OTC Clearing Members will be subject to risk management and monitoring practices by CME relating to transactions submitted to the Clearing House. OTC Clearing Members shall promptly provide all information requested by Clearing House staff, including, without limitation, information respecting risk, settlement, liquidity, and operational issues. OTC Clearing Members shall make information and documents regarding their risk management policies, procedures and practices available to the CFTC upon the CFTC's request.

An OTC Clearing Member that will clear CDS, IRS and/or FX activity must have sufficient risk management and operational procedures in place for its CDS and/or IRS activity. These risk management and operational procedures include procedures for settlement and default management.

Refer to Rule 982 (Risk Management), Rule 8F10 (Risk Management) as to OTC and IRS and Rule 8H10 (Risk Management) as to CDS.

Disaster Recovery and Business Continuity

All clearing members must have written disaster recovery and business continuity policies and procedures in place to ensure they are able to perform certain basic operational functions in the event of a significant internal or external interruption to their operations. Depending on the firm's size and its business and product mix, clearing members must have procedures in place to allow them to continue to operate during periods of stress or to transfer accounts to another fully operational clearing member with minimal disruption to CME Clearing. Clearing members must perform periodic testing of disaster recovery and business continuity plans, have duplication of critical systems at back up sites and periodically back-up critical information.

Refer to Rule 983 (Disaster Recovery and Business Continuity).

Required Records and Reports

The books and records of a clearing member shall be made promptly available for inspection upon request by the Exchange.

Refer to Rule 980 (Required Records and Reports), CME Rule 8F04.9 (OTC Clearing Member Obligations and Qualifications) and CME Rule 8H04.7 (CDS Clearing Member Obligations and Qualifications).

Clearing of Customer Activity

If the OTC Clearing Member will clear OTC derivative products for customers, it must be properly registered or authorized for such activity by its primary regulator and it must be registered as an FCM with the CFTC and NFA. FCMs are subject to CFTC rules and regulations including rules and regulations pertaining to regulatory capital, financial reporting and customer protection.

Information on FCM registration can be obtained from the National Futures Association (www.nfa.futures.org or 312.781.1401). CFTC rules and regulations can be found on their Web Site at www.cftc.gov.

OTC derivatives submitted to clearing for the account of a customer will be assigned and held in a Customer Cleared Swaps Account unless the CFTC has issued an order permitting particular OTC derivatives products to be included in customer segregated accounts. Refer to CME Rule 8F03 (Classification of Positions) and CME Rule 8H03 (Classification of Positions).

All Clearing Members which clear OTC derivatives for customers are required to:

- Maintain sufficient funds in cleared swaps accounts;
- Compute, record and report daily cleared swaps Statements;

- Obtain satisfactory cleared swaps acknowledgement letters;
- Provide immediate written notice to CME Group's Audit Department of a failure to maintain sufficient funds in cleared swaps accounts.

Refer to CME Rules 8F120 through 8F132 regarding cleared swaps customer protection requirements,

In addition, all clearing members must ensure that its customers meet any eligibility requirements established for trading certain OTC derivatives products.

Hedge Fund OTC Clearing Members

OTC Clearing Members which are hedge funds are subject to additional clearing membership requirements including:

- Establishing separate clearing accounts for each fund whose activity is being cleared by the Hedge Fund OTC Clearing Member.
- Additional reporting of risk exposures and liquidity resources of the Hedge Fund OTC Clearing Member and all affiliated funds for which it clears OTC derivatives products.

In addition, if the Hedge Fund OTC Clearing Member will clear OTC derivative products for related funds, it must be registered as an FCM unless the related funds qualify as noncustomer or proprietary accounts as defined in CFTC Regulation 1.3(y).

Product Specific Requirements

The Clearing House Risk Committee, the IRS Risk Committee for IRS products, the CDS Risk Committee for CDS products or CME Clearing may establish product-specific requirements or require specific agreements for certain OTC derivative products. In addition, other clearing, system access or customer agreements or addendums may be required depending upon the OTC derivative product(s) the OTC Clearing Member intends to clear.

Examinations

All clearing members are subject to on-site examinations and on-going oversight by the appropriate Clearing House Risk Committee. Documents requested during an examination must be provided to Exchange staff in a in a timely manner and in the requested format.

Additional Documentation

OTC Clearing members must execute any additional documentation and agreements, including any clearing agreements, license agreements, or debit authorizations, which the Exchange will required to clear OTC derivative transactions.

OTC Clearing Membership
Parent Guarantee and Cross-Guarantee

Parent Guarantee

The parent guarantee requirements are stated in Rule 901.L. (General Requirements and Obligations). Unless an exemption is granted, all clearing members must submit to the Exchange a written guarantee, on a form provided by the Exchange, from each person or entity owning 5% or more of the equity securities of the clearing member.

A parent guarantee shall guarantee all obligations of the clearing member to the Exchange arising out of noncustomer and proprietary accounts cleared by the clearing member. These accounts are classified and carried in the house (i.e. noncustomer) origin of the clearing member at CME Clearing and are defined in CFTC Regulation 1.3(y).

Rule 8F03 (Classification of Positions) provides that all OTC derivative positions submitted for clearing by an OTC Clearing Member for its proprietary account, are assigned to and held in a house account of the OTC Clearing Member. Generally, affiliates of the OTC Clearing Member are not considered "customers" under CFTC regulations. The OTC derivative positions of these noncustomers are also assigned to and held in the house account of OTC Clearing Member. A parent guarantee shall guarantee all obligations of the OTC Clearing Member to the Exchange arising out of noncustomer and proprietary accounts.

Such noncustomer and proprietary obligations covered under the parent guarantee include performance bond and settlement for noncustomer and proprietary positions held and cleared, noncustomer and proprietary trades executed by traders qualified by the clearing member until accepted for clearing by another clearing firm, and noncustomer and proprietary trades executed and processed through the Give-Up Payment System ("GPS") by the clearing member until accepted for clearing by another clearing firm.

A parent guarantee shall not apply to any obligations of the clearing member to pay an assessment to the Exchange pursuant to Rule 802.B. (Protection of Clearing House - Satisfaction of Clearing House Obligations). Note: Rule 802.B. sets forth a clearing member's financial responsibilities in the event of a default of another clearing member.

Ownership Information and Structure

All clearing members must submit and maintain with the Audit Department a current list of every person or entity that directly or indirectly through intermediaries, is the beneficial owner of 5% or more of any class of equity security of the clearing member. If such person or entity owns the clearing member indirectly through intermediaries, all intermediaries must be listed, including, if a corporation, all shareholders who own 5% or more of any class of equity security, or, if a partnership, all general and any limited or special partners who have contributed 5% or more of the partnership's capital. If the intermediary's shareholders or partners are not individuals, the clearing member must include the chain of ownership of 5% shareholders, general partners and 5% limited or special partners until individuals or a publicly traded company is listed.

For purposes of parent guarantee requirements, the term "equity security" shall include any stock, partnership interest or similar security; or any security convertible, with or without consideration, into such a security, or carrying any warrant or right to subscribe to or purchase such a security; or any such warrant or right; or any other security which the Audit Department shall deem to be of similar nature and consider necessary or appropriate to treat as an equity security.

Application of Parent Guarantee Requirements

A clearing member's ultimate parent should provide a parent guarantee unless an intermediate company providing a guarantee has capital greater than or equal to $300,000,000. Note: If the parent company is a regulated entity, capital shall be defined as adjusted net capital. If the parent company is a non-regulated entity, capital shall be defined as assets less liabilities plus acceptable subordinated debt.

All parent guarantees must be submitted on Exchange-approved forms. There are two acceptable forms described below and contained in Exhibits B and C.

Full Parent Guarantee

An individual or an entity is required to execute a full guarantee if the individual or entity owns, directly or indirectly, 50% or more of the clearing member. Refer to Exhibit B.

If the parent guarantee is not executed on behalf of an individual, such guarantee shall be signed by an authorized officer for a corporation, an authorized member or manager for a limited liability company, a general partner of a partnership or the trustee (not the beneficiary) of a trust. In addition, the guarantor must submit a Board of Director's resolution or similar written documentation stating the guarantor's decision to guarantee the clearing member's obligations to the Exchange under Rule 901.L. (General Requirements and Obligations) and granting such officer, member, manager or partner authority to sign the guarantee. Refer to Exhibit D.

Partial Parent Guarantee

A partial guarantee is required for individuals or entities owning, directly or indirectly, 5% or more but less than 50% of the clearing member. The individual or entity need only provide a guarantee to the extent of their ownership. Refer to Exhibit C.

If the partial parent guarantee is not executed on behalf of an individual, such guarantee shall be signed by an authorized officer for a corporation, an authorized member or manager for a limited liability company, a general partner of a partnership or the trustee (not the beneficiary) of a trust. In addition, the guarantor must submit a Board of Director's resolution or similar written documentation stating the guarantor's decision to guarantee the clearing member's obligations to

the Exchange under Rule 901.L. (General Requirements and Obligations) and granting such officer, member, manager or partner authority to sign the guarantee. Refer to Exhibit D.

Parent Guarantee Exemptions

An OTC clearing member may request an exemption from the parent guarantee requirements due to one of the following:

- The clearing member maintains $300,000,000 or more in adjusted net capital or Tier 1 capital.
- The clearing member does not clear, execute and give-up, or qualify individual traders who execute non-customer or proprietary trades.
- The clearing member has minimal activity in their house origin.

A clearing member is determined to have minimal activity in the house origin if the average house performance bond requirement is less than 1% of the firm's excess adjusted net capital up to a maximum house performance bond requirement of $500,000. The average house performance bond requirement is recalculated and reviewed quarterly by CME Clearing. In addition, clearing members receiving this exemption are monitored to ensure that all execution-only business or other significant volume is not part of their house activity. If an OTC clearing member exceeds these thresholds, it is allowed 2 weeks to either scale down the activity, move the positions to another clearing firm or provide the appropriate guarantee(s).

The exemption request must be in writing and submitted to the Audit Department. The request will be reviewed during the membership approval process.

Cross-Guarantee Agreement

Rule 901.G. (General Requirements and Obligations) states that if any person directly or indirectly controls, owns 10% or more of, or has the right to 10% or more of the profits of two or more clearing members, then each clearing member shall guarantee the obligations of the other clearing members to CME Clearing. This rule is applicable if any OTC Clearing Member and a CME, CBOT, NYMEX or COMEX Clearing Member have common ownership and an exemption has not been provided.

Each clearing member shall execute a written guarantee to CME Clearing on an approved form. Refer to Exhibit E.

The cross-guarantee shall be signed by an authorized officer for a corporation, an authorized member or manager for a limited liability company, or a general partner of a partnership. In addition, each clearing member shall submit a Board of Director's resolution or similar written documentation stating the clearing member's decision to execute such Cross-Guarantee Agreement and granting such officer, member, manager or partner authority to sign the guarantee.

OTC Clearing Membership
Parent Guarantee and Cross-Guarantee

Unless a cross guarantee is provided, affiliated clearing members may not both clear IRS or CDS products within the house origin. That is, only one affiliated clearing member may clear house IRS and/or CDS activity. The other affiliated clearing member may clear customer IRS and/or CDS activity (if it is properly registered as an FCM).

Exchange staff may grant exemptions from the cross-guarantee requirements.

OTC Clearing Membership
Contact Listing

Contact Listing

Kim Taylor	President, CME Clearing	(312) 930-3156	Kim.Taylor@cmegroup.com
Tim Doar	Managing Director and Chief Risk Officer, Clearing House Risk	(312) 930-3162	Tim.Doar@cmegroup.com
Anne Bagan	Managing Director, Audits	(312) 930-3140	Anne.Bagan@cmegroup.com
Dale Michaels	Managing Director, Credit and Market Risk Management, Clearing House Risk	(312) 930-3062	Dale.Michaels@cmegroup.com
Sasha Rozenberg	Managing Director, OTC Risk Management, Clearing House Risk	(212) 299-2106	Sasha.Rozenberg@cmegroup.com

Legal Department

Lisa Dunsky	Executive Director and Associate General Counsel	(312) 338-2483	Lisa.dunsky@cmegroup.com
Jason Silverstein	Executive Director and Associate General Counsel	(212) 299-2228	Jason.silverstein@cmegroup.com

Audit Department

Debbie Kokal	Executive Director, Audits	(312) 930-3235	Debbie.Kokal@cmegroup.com
Cathy Downs	Senior Director, Audis	(312) 648-3802	Cathleen.Downs@cmegroup.com
Laurie Egan	Director, Audits	(312) 338-2405	Laurie.Egan@cmegroup.com

Clearing House

Steve Staszak	Executive Director, Clearing House Operations	(312) 930-3189	Steve.Staszak@cmegroup.com
Michael Kobida	Executive Director, Collateral Services Program, Clearing House Financial	(312) 454-8961	Michael.Kobida@cmegroup.com

OTC Clearing Membership
Application Checklist

The application process of OTC Clearing Members requires the submission of numerous documents, the establishment of various relationships, and approval by the Clearing House Risk Committee, the IRS Risk Committee for IRS products and the CDS Risk Committee for CDS products. To assist OTC Clearing Member applicants, the following checklist has been established to provide guidance. Note: Not all items on the checklist will apply to every OTC Clearing Member. Likewise, items not included on the checklist may be required for OTC Clearing Membership approval dependent upon the unique circumstances of the applicant.

All OTC Clearing Member applicants must execute and submit the following documents unless otherwise indicated:

1. OTC Clearing Membership Application including:
   - Articles of Incorporation, Operating Agreement, or Partnership Agreement (including all sub-agreements)
   - Certificate of banking license or authorization, or equivalent, from the organization's primary regulator (with an English language translation), if applicable _____
   - List of Officers, Managing Members of an LLC, or Partners, including titles, direct telephone and fax numbers and e-mail addresses _____ _____
   - Authorization to do business in the State of Illinois or New York, as applicable, or executed Agency Agreement _____
   - Resolution authorizing the person signing the application to represent the organization _____
   - Corporate Structure (including percentages of ownership and business form) of all significant entities in the corporate structure _____ _____
   - Most current examination report from the organization's primary regulator, if applicable _____
   - IRS Form W-9 or W-8BEN, as applicable

2. The organization's most recent certified financial statement (in the English language) _____

3. The organization's most recent monthly/quarterly, as applicable, financial statement (in the English language) filed with its primary regulator, if applicable, including the calculation of capital. Also, if applicable, a summary of the capital and financial reporting requirements imposed the organization by its primary regulator. _____

4. Parent Guarantee(s), if applicable _____

5 Cross-Guarantee, if applicable _____

OTC Clearing Membership
Application Checklist

6. Deposit of Minimum Guaranty fund deposit prior to the CME Clearing House Risk Committee and/or IRS Risk Committee or CDS Risk Committee meeting _____

7. Deposit of Membership Requirement prior to the CME Clearing House Risk Committee or IRS Risk Committee or CDS Risk Committee meeting _____

8. Other Documentation, as applicable _____

9. Other Requirements _____

A CME/Chicago Board of Trade/NYMEX Company

AGENCY AGREEMENT

WHEREAS, _____ ("**Member**") with offices located at

_____ is a clearing member of Chicago Mercantile Exchange Inc. ("CME"), Chicago Board of Trade, Inc. ("CBOT"), New York Mercantile Exchange, Inc. ("NYMEX"), and/or Commodity Exchange, Inc. ("COMEX"), (collectively, "Exchanges"), as applicable, and such other exchange as may become a member of CME Group Inc. ("CME Group");

WHEREAS, the **Member** hereby appoints _____ ("**Agent**") as its agent for service of process and other communications in connection with the above-referenced business; and

WHEREAS, the **Agent** accepts such appointment to act as agent for service of process and other communications;

NOW THEREFORE, the parties agree as follows:

1. Services. The **Member** appoints the **Agent** as its agent for service of process and other communications in connection with its activities related to clearing membership. The **Agent** shall accept service of process and other communications on behalf of the **Member** and shall transmit such communications to the **Member**. Such communications shall be transmitted to the address set forth above or by electronic or telephonic means.

2. Termination of Agreement. This Agency Agreement ("Agreement") may be terminated by agreement of the parties provided that the **Member** first provides to the Exchanges an Agreement appointing an agent for service of process that is acceptable to the Exchange(s).

3. No Assignment. This Agreement shall not be assigned by either party without the written consent of Exchange staff.

4. Applicable Law. This Agreement shall be governed by and construed in accordance with the laws of the State of _____ (Illinois or New York), United States of America.

5. Choice of Forum and Consent to Jurisdiction. Each party consents to the personal jurisdiction of the courts (check one):

   ____ of Illinois and the United States District Court for the Northern District of Illinois over any action at law, suit in equity, or judicial proceeding under or which may otherwise arise out of the **Member** activities as a clearing member or this Agreement and

agrees not to contest venue for any such proceeding in Cook County, State of Illinois. The **Member** agrees that any action at law, suit in equity, or judicial proceeding under or which may otherwise arise out of the **Member**'s activities as a clearing member or this Agreement shall be instituted by the **Member** only in the Courts of the State of Illinois or the United States District Court for the Northern District of Illinois.

____ New York and the United States District Court for the Southern District of New York over any action at law, suit in equity, or judicial proceeding under or which may otherwise arise out of the **Member**'s activities as a clearing member or this Agreement and agrees not to contest venue for any such proceeding in Kings County, State of New York. The **Member** agrees that any action at law, suit in equity, or judicial proceeding under or which may otherwise arise out of the **Member**'s activities as a clearing member or this Agreement shall be instituted by the **Member** only in the Courts of the State of New York or the United States District Court for the Southern District of New York

6. Severability. If any provision of this Agreement is held by any Court of competent jurisdiction to be invalid, illegal or unenforceable for any reason, the remaining provisions of this Agreement shall not be affected and this Agreement shall be construed and enforced as if this Agreement did not contain the provision which is held to be invalid, illegal, or unenforceable.

7. Heirs, Successors, and Assigns. This Agreement shall be binding on and shall inure to the benefit of the heirs, executors, administrators, successors, and assigns of the parties. Nothing in this paragraph shall be construed as a consent by either party to any assignment of this Agreement except as provided in Paragraph 3 of this Agreement.

8. Notices. Except as provided in Paragraph 1, all notices or communications required by or given under this Agreement shall be deemed given as of the date of receipt or, if earlier, as of the date five days after such notices or communications are deposited in the United States mail, airmail postage prepaid, or in the mails of any other country, airmail postage prepaid, or delivered to any generally recognized international air carrier.

All notices to the **Agent** shall be addressed as follows:

_____

_____

_____

All notices to the **Member** shall be addressed to the address set forth at the beginning of this Agreement.

Executed on _____, 20____, at

_____ _____ _____
(City) (State, Province, etc.) (Country)

_____
(Signature)

_____
(Printed Name)

_____
(Title)

Approved and accepted by the **Agent** on _____, 20____,

_____ _____ _____
(City) (State, Province, etc.) (Country)

AGENT

By: _____
(Signature)

_____
(Printed Name)

_____
(Title)

A CME/Chicago Board of Trade/NYMEX Company

FULL GUARANTEE

GUARANTEE AGREEMENT

In consideration of Chicago Mercantile Exchange Inc. ("CME"), Chicago Board of Trade, Inc. ("CBOT"), New York Mercantile Exchange, Inc. ("NYMEX"), Commodity Exchange, Inc. ("COMEX") and such other exchange as may become a member of CME Group Inc. (collectively, "Exchanges"), as applicable, accepting/retaining _____ (Clearing Member) as a clearing member, _____ (Guarantor), which is an owner or part owner of Clearing Member, hereby guarantees to Exchanges the due and punctual performance of all obligations to Exchanges arising out of accounts cleared by Clearing Member that are:

1. non-customer accounts, including proprietary accounts as defined by Commodity Futures Trading Commission (CFTC) Regulation 1.3(y); and
2. accounts carried by another futures commission merchant if such accounts would be considered non-customer accounts, including proprietary accounts as defined by CFTC Regulation 1.3(y), of Clearing Member, if carried directly by Clearing Member.

Notwithstanding anything herein to the contrary, this guarantee shall not apply to any obligations of Clearing Member to pay an assessment to CME pursuant to Rule 802.B., nor shall it apply to any obligations arising out of non-customer accounts if such obligations arose solely because Exchanges took margin from such non-customer accounts and applied it to a default of a customer account.

Guarantor unconditionally guarantees and promises payment of all indebtedness which Clearing Member may now or in the future owe with respect to obligations covered by this guarantee including, but not limited to, the posting and payment of margins and premiums pursuant to Exchange Rules. Exchanges will attempt to notify Guarantor by telephone of any default by Clearing Member in the performance of an obligation covered by this guarantee, and will thereafter confirm such notice in writing, but the liability of Guarantor to Exchanges pursuant to this agreement shall become due and payable immediately upon any such default by Clearing Member.

Guarantor's liability may be enforced without notice to Guarantor and without first proceeding against Clearing Member or resorting to any collateral, security or other guarantors or obligors, if any, or pursuing any other remedy. Any collateral, security or obligations of any other guarantors or obligors, if any, may be sold, released, surrendered, exchanged, settled, compromised, waived, subordinated or modified, in each case without consideration and on any terms or conditions, without notice to or further assent from Guarantor. Guarantor's liability is several and independent of any other guarantees in effect with respect to any part of the above obligations and may be enforced regardless of the existence of any other guarantees.

Notwithstanding any other provision in this agreement, this guarantee shall continue in effect or shall be reinstated if at any time payment or other performance, or any part thereof, by

Clearing Member to Exchanges with respect to any of the above obligations is rescinded, or must otherwise be repaid by Exchanges as a result of bankruptcy or reorganization of Clearing Member.

No payment or other performance by Guarantor shall entitle Guarantor, by subrogation or otherwise, to any right against Clearing Member, including any payment by Clearing Member or out of property of Clearing Member, except after the full performance, payment and discharge of all of the above obligations. All remedies, rights, powers and privileges granted to Exchanges pursuant to this agreement are cumulative and not alternative. The exercise of any or all such rights by Exchanges shall not reduce, limit, impair, discharge, terminate or otherwise affect the liability of Guarantor. No failure or delay by Exchanges in exercising any remedy, right, power or privilege pursuant to this agreement shall operate as a waiver, and any such remedy, right, power, or privilege may be exercised by Exchanges at any time. No partial exercise of any such rights shall preclude further exercise or the exercise of any other remedy, right, power or privilege.

No modification of this guarantee or waiver shall be valid unless in writing and signed by Exchanges and then only to the extent specifically set forth in such writing. No notice or demand by Exchanges upon Guarantor or any other guarantor of the above obligations shall preclude Exchanges from taking further action without notice or demand.

This guarantee shall remain in full force until Exchanges receives and accepts written notification of termination. Such acceptance of termination shall not be unreasonably withheld. Guarantor acknowledges that this guarantee applies to all obligations covered by this guarantee arising prior to Exchanges' acceptance of such termination.

This guarantee shall bind the heirs, personal representatives, successors and assigns of Guarantor and shall inure to the benefit of Exchanges, its successors and assigns. Guarantor hereby waives notice of any such assignment by Exchanges.

This guarantee shall be governed by, and construed in accordance with, the laws of the State of Illinois. Any action or litigation of any kind initiated by Guarantor, Clearing Member or Exchanges in connection with this guarantee shall be adjudicated in the appropriate courts located in Chicago, Illinois. Guarantor, Clearing Member and Exchanges hereby consent to the jurisdiction of such courts and to service of process by any means authorized by Illinois or federal law, and hereby waive the right to transfer the venue of any such litigation.

Name of Guarantor:_____ Date: _____

Signed: _____

Printed Name:_____

If Guarantor is a Firm:

By: _____

Title: _____

A CME/Chicago Board of Trade/NYMEX Company

PARTIAL GUARANTEE

GUARANTEE AGREEMENT

In consideration of Chicago Mercantile Exchange Inc. ("CME"), Chicago Board of Trade, Inc. ("CBOT'), New York Mercantile Exchange, Inc. ("NYMEX"), Commodity Exchange, Inc. ("COMEX") (collectively, "Exchanges") and such other exchange as may become a member of CME Group Inc. as applicable, accepting/retaining _____ (Clearing Member) as a clearing member, _____ (Guarantor), which is an owner or part owner of Clearing Member, hereby guarantees to Exchanges the due and punctual performance of all obligations to Exchanges arising out of accounts cleared by Clearing Member that are:

1. non-customer accounts, including proprietary accounts as defined by Commodity Futures Trading Commission (CFTC) Regulation 1.3(y); and
2. accounts carried by another futures commission merchant if such accounts would be considered non-customer accounts, including proprietary accounts as defined by CFTC Regulation 1.3(y), of Clearing Member, if carried directly by Clearing Member.

Guarantor's liability under this agreement is limited to _____ percent of the above obligations.

Notwithstanding anything herein to the contrary, this guarantee shall not apply to any obligations of Clearing Member to pay an assessment to CME pursuant to Rule 802.B., nor shall it apply to any obligations arising out of non-customer accounts if such obligations arose solely because Exchanges took margin from such non-customer accounts and applied it to a default of a customer account.

Guarantor unconditionally guarantees and promises payment of all indebtedness which Clearing Member may now or in the future owe with respect to obligations covered by this guarantee including, but not limited to, the posting and payment of margins and premiums pursuant to Exchange Rules. Exchanges will attempt to notify Guarantor by telephone of any default by Clearing Member in the performance of an obligation covered by this guarantee, and will thereafter confirm such notice in writing, but the liability of Guarantor to Exchanges pursuant to this agreement shall become due and payable immediately upon any such default by Clearing Member.

Guarantor's liability may be enforced without notice to Guarantor and without first proceeding against Clearing Member or resorting to any collateral, security or other guarantors or obligors, if any, or pursuing any other remedy. Any collateral, security or obligations of any other guarantors or obligors, if any, may be sold, released, surrendered, exchanged, settled, compromised, waived, subordinated or modified, in each case without consideration and on any terms or conditions, without notice to or further assent from Guarantor. Guarantor's liability is several and independent of any other guarantees in effect with respect to any part of the above obligations and may be enforced regardless of the existence of any other guarantees.

Notwithstanding any other provision in this agreement, this guarantee shall continue in effect or shall be reinstated if at any time payment or other performance, or any part thereof, by Clearing Member to Exchanges with respect to any of the above obligations is rescinded, or must otherwise be repaid by Exchanges as a result of bankruptcy or reorganization of Clearing Member.

No payment or other performance by Guarantor shall entitle Guarantor, by subrogation or otherwise, to any right against Clearing Member, including any payment by Clearing Member or out of property of Clearing Member, except after the full performance, payment and discharge of all of the above obligations. All remedies, rights, powers and privileges granted to Exchanges pursuant to this agreement are cumulative and not alternative. The exercise of any or all such rights by Exchanges shall not reduce, limit, impair, discharge, terminate or otherwise affect the liability of Guarantor. No failure or delay by Exchanges in exercising any remedy, right, power or privilege pursuant to this agreement shall operate as a waiver, and any such remedy, right, power, or privilege may be exercised by Exchanges at any time. No partial exercise of any such rights shall preclude further exercise or the exercise of any other remedy, right, power or privilege.

No modification of this guarantee or waiver shall be valid unless in writing and signed by Exchanges and then only to the extent specifically set forth in such writing. No notice or demand by Exchanges upon Guarantor or any other guarantor of the above obligations shall preclude Exchanges from taking further action without notice or demand.

This guarantee shall remain in full force until Exchanges receives and accepts written notification of termination. Such acceptance of termination shall not be unreasonably withheld. Guarantor acknowledges that this guarantee applies to all obligations covered by this guarantee arising prior to Exchanges' acceptance of such termination.

This guarantee shall bind the heirs, personal representatives, successors and assigns of Guarantor and shall inure to the benefit of Exchanges, its successors and assigns. Guarantor hereby waives notice of any such assignment by Exchanges.

This guarantee shall be governed by, and construed in accordance with, the laws of the State of Illinois. Any action or litigation of any kind initiated by Guarantor, Clearing Member or Exchanges in connection with this guarantee shall be adjudicated in the appropriate courts located in Chicago, Illinois. Guarantor, Clearing Member and Exchanges hereby consent to the jurisdiction of such courts and to service of process by any means authorized by Illinois or federal law, and hereby waive the right to transfer the venue of any such litigation.

Name of Guarantor:_____ Date: _____

Signed: _____

Printed Name:_____

If Guarantor is a Firm:

By: _____

Title: _____

CORPORATE RESOLUTION AUTHORIZING
GUARANTEE TO CHICAGO MERCANTILE EXCHANGE INC.

I, _____, do hereby certify that I am the duly elected, qualified and acting Secretary and keeper of the records of _____ (the "Corporation"), organized and existing under the laws of _____; that the following resolutions were duly adopted as of _____, 20___ in accordance with the by-laws of the Corporation, by the unanimous written consent of, or at a duly-convened meeting of, the Board of Directors of the Corporation; and that such resolutions are now in full force and effect and are not in contravention of or in conflict with the by-laws or the charter or the articles of incorporation of the Corporation:

RESOLVED, that the Corporation guarantee to Chicago Mercantile Exchange Inc. ("Exchange") the obligations of _____("Clearing Member") to the Exchange arising out of accounts cleared by Clearing Member to the extent required under Rule 901.L. of the Exchange; and

FURTHER RESOLVED, that the following named individuals, each of whom is a properly elected or appointed officer of the Corporation, be and hereby are authorized and directed to execute a written guarantee to the above effect in the form provided by the Exchange:

Name/Title _____
Name/Title _____
Name/Title _____

IN WITNESS WHEREOF, I have hereunto subscribed my name on this ____ day of _____, 20___.

Corporate Seal*

_____
Secretary

*If required by the laws of the Corporation's place of incorporation or the Corporation's by-laws

CME Group

A CME/Chicago Board of Trade/NYMEX Company

CROSS-GUARANTEE AGREEMENT

In consideration of Chicago Mercantile Exchange Inc. ("CME"), Board of Trade of the City of Chicago, Inc. ("CBOT"), New York Mercantile Exchange, Inc. ("NYMEX"), and Commodity Exchange Inc. ("COMEX") (collectively, "Exchanges"), accepting/retaining as Clearing Members _____ and _____ (each hereinafter referred to individually as a "Guaranteeing Member" and collectively as "Guaranteeing Members"), which share common ownership, control or profits as set forth in the Exchanges' Rule 901.G., each Guaranteeing Member hereby:

1. Unconditionally guarantees and promises payment of any and all indebtedness or other obligations which the other Guaranteeing Member may now or hereafter owe to the Exchanges. The Exchanges will attempt to notify the Guaranteeing Member by telephone of any default by the other Guaranteeing Member and will thereafter confirm such notice in writing; however, the liability of the Guaranteeing Member to the Exchanges for such default pursuant to this Cross-Guarantee Agreement shall become due and payable immediately upon such default;

2. Agrees that such Guaranteeing Member's liability hereunder may be enforced without notice to it and without first proceeding against the defaulting Guaranteeing Member or resorting to any collateral, security or other guarantors or obligors, if any, or pursuing any other remedy. Any collateral, security or obligations of any other guarantors or obligors, if any, may be sold, released, surrendered, exchanged, settled, compromised, waived, subordinated or modified, in each case without consideration and on any terms and conditions, without notice to or further assent from either Guaranteeing Member. Each Guaranteeing Member's liability is several and independent of any other guarantees in effect with respect to any part of the above obligations and may be enforced regardless of the existence of any other guarantees;

3. Agrees that notwithstanding any other provision in this Cross-Guarantee Agreement, this guarantee shall continue in effect or shall be reinstated if any time, payment or other performance, or any part thereof, by either Guaranteeing Member to the Exchanges with respect to any of the above obligations is rescinded, or must otherwise be repaid by the Exchanges as result of bankruptcy or reorganization of either Guaranteeing Member;

4. Agrees that no payment or other performance by either Guaranteeing Member shall entitle it, by subrogation or otherwise, to any right against the defaulting Guaranteeing Member, including any payment by the defaulting Guaranteeing Member or out of property of the defaulting Guaranteeing Member, except after the full performance, payment and discharge of all of the above obligations. All remedies, rights, powers and privileges granted to the Exchanges pursuant to this Cross-Guarantee Agreement are cumulative and not alternative. The exercise of any or all such rights by the Exchanges shall not reduce, limit, impair, discharge, terminate or otherwise affect the liability of either

Guaranteeing Member. No failure or delay by the Exchanges in exercising any remedy, right, power or privilege pursuant to this Cross Guarantee Agreement shall operate as waiver thereof and any such remedy, right, power or privilege may be exercised by the Exchanges at any time. No partial exercise of any such rights shall preclude further exercise or the exercise of any other remedy, right, power or privilege by the Exchanges;

5. Agrees that no modification of this Cross-Guarantee Agreement or waiver of any portion hereof shall be valid unless in writing and signed by the Exchanges and then only to the extent specifically set forth in such writing. No notice or demand by the Exchanges upon either Guaranteeing Member or any other guarantor of the above obligations shall preclude the Exchanges from taking further action without notice or demand;

6. Agrees that this Cross-Guarantee Agreement is binding upon its respective heirs, personal representatives, successors and assigns, and shall inure to the benefit of and be enforceable by the Exchanges and its transferees, successors and assigns. Each Guaranteeing Member hereby waives notice of any such assignment by the Exchanges;

7. Agrees that this Cross-Guarantee Agreement and all rights, obligations and liabilities arising hereunder shall be governed by the laws of the State of Illinois in all respects, including but not limited to matters of construction, validity and performance;

8. Agrees that any action or litigation of any kind whatsoever initiated by the Guaranteeing Members or the Exchanges in connection with this Cross-Guarantee Agreement, shall be adjudicated in a court of competent jurisdiction located in Chicago, Illinois. The Guaranteeing Members and the Exchanges hereby consent to the jurisdiction of such courts and to service of process by any means authorized by Illinois or Federal law and hereby waive the right to transfer the venue of any such litigation or action; and

9. Agrees that if (1) one of the Guaranteeing Members ceases to be a clearing member of the Exchanges or (2) the Guaranteeing Members provide the Exchanges with written notice that they no longer share common ownership, control or profits as set forth in Rule 901.G., this Cross-Guarantee Agreement shall remain in effect until the Clearing House Risk Committee of the CME Clearing House determines that any and all indebtedness and other obligations owing to the Exchanges from each Guaranteeing Member have been satisfied in full.

_____	_____
(Guaranteeing Member)	(Guaranteeing Member)
By: _____	By: _____
(Signature of General Partner or Authorized Officer)	(Signature of General Partner or Authorized Officer)
_____	_____
(Printed Name / Title)	(Printed Name / Title)
_____	_____
(Date)	(Date)