ICMA

# International Capital Market Association

# European repo market survey

## Number 20 - conducted December 2010

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International Capital Market Association
Talacker 29
P.O. Box
CH-8022 Zurich
www.icmagroup.org

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## FOREWORD

By Godfried De Vidts, Chairman, ICMA European Repo Council

The very first European Repo Market survey was commissioned by the European Repo Council in 2001, shortly after the birth of the euro, in an attempt to quantify the size of the growing single European market for repo and how it operates. Over the course of 10 years the survey has gone on to become established as the authoritative source of data on the cross-border repo market in Europe, referred to by regulatory authorities and governments and by academic researchers. It is a testament to the value of the survey to the market and its individual participants that so many of the banks in the original survey have consistently committed to provide the data to every survey that has taken place.

The twice yearly repo survey is of course only a small, albeit very visible, part of the work undertaken by the European Repo Council on behalf of the repo community in Europe. The ERC is one of the most active market groupings within ICMA. The ERC continues to give guidance and support on practical issues arising in the market and to invite all repo market participants to two open meetings each year which act as forums for discussion and where regulators and market infrastructure providers are invited to present information on the latest developments, which will affect the market.

Since the crisis of 2008 the amount of work undertaken by the ERC on behalf of the market has risen sharply as we have striven to respond to the many consultations and requests for information resulting from the overhaul and reinvention of the regulatory framework for the European financial markets. In these interactions we seek always to emphasise the importance of the repo instrument as a means of achieving efficiency and liquidity in the normal daily operations of banks financing.

The sovereign debt crisis has exposed problems caused by the fragmentation of the market infrastructure of Europe, accordingly removal of the barriers to efficient clearing and settlement remain on the top of the ERC's agenda for reform at European level. The *'ERC White Paper on the Operation of the European Repo Market'* published in July 2010 and available from ICMA's website at www.icmagroup.org identified the deficiencies in interconnectivity between (I)CSDs as well as the important role of CCPs as both carry out clearing and settlement of government securities in national and international markets. The White Paper also outlined the changes necessary for the infrastructure to work efficiently. The paper has been the subject of subsequent conversations between ERC and the infrastructure providers. Some progress has been made since July and we continue to monitor and encourage changes in this area. The paper also contains a clear explanation of the role of short-selling in the normal functioning of markets and how this is facilitated by repo, which serves to counteract the view that short selling is essentially an undesirable activity carried out only by speculators. Updates to the white paper documenting the current situation are also to be found on www.icmagroup.org.

We are also applying the lessons learned by the repo market during the crisis in a major review and update of the central documentation which supports cross-border repo market transactions, the Global Master Repurchase Agreement (GMRA). The review is almost complete as this is written and the new version of the agreement will be available to all repo market participants in April 2011. The 2011 GMRA will be underpinned by updated opinions on its enforceability which now cover more than 60 jurisdictions.

While the ERC continues to play an important role in education and the development of the market in Europe, its counterpart the International Repo Council has been instrumental in sharing this knowledge and experience in other jurisdictions, where the development of a repo market is seen as a vital corollary to the development of an efficient capital market. It is immensely gratifying to see the progress that has been made in Russia in implementing the national legal framework which will support the use of documentation similar to the Global Master Repurchase Agreement in the Russian market. We are very pleased to be able to include as an annex to the 20th European repo survey the first Russian repo survey, carried out on very similar principles by the Russian National Securities Market Association.

This milestone for the survey is a good opportunity to thank the author Richard Comotto for his hard work in compiling and interpreting the survey results and also to express our appreciation to all the firms who have supported this work. Thank you also to the members of the European Repo Committee who as elected representatives of their peers in the industry have worked tremendously hard in contributing to the understanding and organisation of our market.

We continue to believe that repo market in Europe will become more important than ever as regulatory initiatives designed to ensure the stability of the financial system steer banks towards secured forms of lending. With the help of the International Capital Market Association the European Repo Survey will carry on charting its progress.

# EXECUTIVE SUMMARY

In December 2010, the European Repo Council (ERC) of the International Capital Market Association (ICMA) conducted the 20th in its series of semi-annual surveys of the repo market in Europe.

The latest survey asked a sample of financial institutions in Europe for the value of their repo contracts that were still outstanding at close of business on December 8, 2010. Replies were received from 57 offices of 55 financial groups, mainly banks. Returns were also made directly by the principal automated repo trading systems (ATS) and tri-party repo agents in Europe, and by the London-based Wholesale Market Brokers' Association (WMBA).

## Total repo business

The total value of the repo contracts outstanding on the books of the 57 institutions who participated in the latest survey was EUR 5,908 billion. This was well below the figure of EUR 6,979 recorded in June 2010 (-15.3%) but above the December 2009 total of EUR 5,582 billion (+5.8%). The sharp fall in the total mainly reflects the unwinding of the very large and somewhat specialized transactions that were recorded in the June 2010 survey. Beneath these unusual swings in activity, there is still a discernible trend towards recovery in the repo market.

## Counterparty analysis

There was a sharp fall in the share of direct trading and an equally sharp rise in the share of electronic trading, reflecting the unwinding of the exceptional transactions. Within the diminishing share of direct trading, tri-party repo made significant gains to reach 11.5%.

The strength of the recovery in the share of electronic trading to 28.3% reflected more than the unwinding of exceptional transactions. Data provided directly by the principal automatic trading systems showed that the value of their business grew by 10.3% to a record EUR 1,001 billion. Among other things, electronic trading has been boosted by the revival of the repo market in Spain as local banks regained access to money market funding by turning to electronic trading backed by new local Central Clearing Counterparty (CCP) services.

## Geographical analysis

The share of anonymous electronic trading recovered to a record 18.5%. However, according to the data provided directly by the principal European ATSs, the value of anonymous electronic trading grew by just 4.6%, while non-anonymous trading grew by 20.3%.

## Clearing and Settlement analysis

The importance of CCPs in the repo market continues to grow. While the bulk of CCP-cleared repo business continues to be executed electronically (18.5% of total repo, compared to 13.7% in June 2010), significant volumes are negotiated directly between parties or through voice-brokers and registered with CCPs after the trade (13.8% of total repo, compared with 8.7% in June 2010).

### Cash currency analysis

The dramatic surge in the share of the US dollar in June 2010 – which was driven by the exceptional transactions recorded in June 2010 – was substantially but not completely reversed by December 2010. A notable feature of the latest survey was a sharp increase in reported cross-currency business to a record 5.6% from 3.2% in June 2010.

### Collateral analysis

Just as the exceptional jump in the share of securities issued in "other OECD" countries from 10.5% to 22.8% dominated the June 2010 survey, so the (partial) retreat in the share of that collateral to 13.7% dominated the December 2010 survey. The share of government bonds within the pool of EU-originated collateral fell slightly to 76.6%.

### Contract analysis

There was an unwelcome increase in undocumented sell/buy-backs to 3.6% from 2.6%.

### Repo rate analysis

The share of floating-rate repos fell back to 7.6% from 10.1% in the main survey and to 12.8% from a record 14.3% in directly-reported electronic business.

### Maturity analysis

The unwinding of the exceptional transactions recorded in June 2010 pushed the share of forward-start repos down to 6.7% from a record 18.2% in June 2010, closer to historical levels.

### Product analysis

Securities lending conducted on repo desks grew to 18.8% from 15.4%.

### Concentration analysis

The concentration of surveyed repo business fell back, again reflecting the unwinding of the exceptional transactions recorded in June 2010, which had produced a sharp increase in the reported concentration of the market. In December 2010, the top 10 survey participants accounted for 61.7%, compared with 68.8% in June 2010.

# CHAPTER 1: THE SURVEY

On December 8, 2010, the European Repo Council (ERC) of the International Capital Market Association (ICMA) conducted the 20th in its series of semi-annual surveys of the repo market in Europe.

The ICMA survey was actively supported by the ACI – The Financial Markets Association, and has been welcomed by the European Central Bank and European Commission. The survey was managed and the results analysed on behalf of ICMA by the author at the ICMA Centre at Reading University in England, under the guidance of the ERC Steering Committee ("ERC Committee").

## 1.1 What the survey asked

The survey asked financial institutions operating in a number of European financial centres for the value of the cash side of repo and reverse repo contracts still outstanding at close of business on Wednesday, December 8, 2010.

The questionnaire also asked these institutions to analyse their business in terms of the currency, the type of counterparty, contract and repo rate, the remaining term to maturity, the method of settlement and the origin of collateral. In addition, institutions were asked about securities lending and borrowing conducted on their repo desks.

The detailed results of the survey are set out in Appendix C. An extract of the accompanying Guidance Notes is reproduced in Appendix A

Separate returns were made directly by the principal automatic repo trading systems (ATS) and tri-party repo agents in Europe, and an aggregate return was made directly by the London-based Wholesale Market Brokers' Association (WMBA).

## 1.2 The response to the survey

The latest survey was completed by 57 offices of 55 financial groups. This is the same number of institutions that participated in June 2010. Three institutions which participated in the last survey dropped out of the latest survey but three rejoined. 46 institutions were based in 14 European countries, as well as in North America (6) and Japan (5). 44 institutions were based in 13 of the 27 member states of the EU (no institutions from Finland, Portugal and Sweden, and only one former Accession State, participated in the latest survey), and 39 were based in 11 of the 17 countries in the eurozone. However, although some institutions were based in one country, much of their business was conducted in others. Many institutions provided data for their entire European repo business. Others provided separate returns for one or more (but not necessarily all) of their European offices. A list of the institutions that have participated in ICMA repo surveys is contained in Appendix B.

### 1.3 The next survey

The next survey is scheduled to take place at close of business on Wednesday, June 8, 2011.

Any financial institution wishing to participate in the next survey can download copies of the questionnaire and accompanying Guidance Notes from ICMA's web site. The latest forms will be published shortly at the following website: www.icmagroup.org/surveys/repo/participate.

Questions about the survey should be sent by e-mail to reposurvey@icmagroup.org.

Institutions who participate in the survey receive, in confidence, a list of their rankings in the various categories of the survey.

# CHAPTER 2: ANALYSIS OF SURVEY RESULTS

The aggregate results of the latest two surveys and of the surveys in each December in the three previous years (2006-2010) are set out in Appendix C. Full details for all previous surveys can be found at www.icmagroup.org.

### Total repo business (Q1)

The total value, at close of business on December 8, 2010, of repos and reverse repos outstanding on the books of the 57 institutions which participated in the latest survey fell back to **EUR 5,908** billion. This was significantly lower than the figure of EUR 6,979 billion recorded in June 2010 (-15.3%) but above the December 2009 total of EUR 5,582 billion (+5.8%) and close to the level at June 2006.

Of the sample of 57 institutions, 30 were net lenders, compared to 27 (of 57) in the last survey. Aggregate net borrowing (repo) exceeded aggregate net lending (reverse repo), but by much less than in June 2010.

### Table 2.1 – Total repo business from 2001 to 2010 (EUR billions)

| survey | total | repo | reverse repo |
|---|---|---|---|
| **2010 December** | 5,908 | 51.0% | 49.0% |
| **2010 June** | 6,885 | 53.7% | 46.3% |
| **2009 December** | 5,582 | 50.0% | 50.0% |
| **2009 June** | 4,868 | 52.2% | 47.8% |
| **2008 December** | 4,633 | 49.9% | 50.1% |
| **2008 June** | 6,504 | 48.8% | 51.2% |
| **2007 December** | 6,382 | 49.4% | 50.6% |
| **2007 June** | 6,775 | 50.8% | 49.2% |
| **2006 December** | 6,430 | 50.7% | 49.3% |
| **2006 June** | 6,019 | 51.7% | 48.3% |
| **2005 December** | 5,883 | 54.6% | 45.4% |
| **2005 June** | 5,319 | 52.4% | 47.6% |
| **2004 December** | 5,000 | 50.1% | 49.9% |
| **2004 June** | 4,561 | 50.6% | 49.4% |
| **2003 December** | 3,788 | 51.3% | 48.7% |
| **2003 June** | 4,050 | 50.0% | 50.0% |
| **2002 December** | 3,377 | 51.0% | 49.0% |
| **2002 June** | 3,305 | 50.0% | 50.0% |
| **2001 December** | 2,298 | 50.4% | 49.6% |
| **2001 June** | 1,863 | 49.6% | 50.4% |

It is important to remember that the survey measures the value of outstanding transactions at close of business on the survey date. Measuring the stock of transactions at one date, rather than the flow between two dates, permits deeper analysis but is difficult to reconcile with the flow numbers published by other sources. As the survey is a 'snapshot' of the market, it can miss peaks and troughs in business between survey dates, especially of very short-term transactions. In addition, the values measured by the survey are gross figures, which mean that they have not been adjusted for the double counting of transactions between pairs of survey participants. Nor does the survey measure the value of repos transacted with central banks, as part of official monetary policy operations. Central bank intervention has of course been massive during the recent market difficulties.

In order to gauge the year-on-year growth of the European repo market (or at least of that segment represented by the institutions which have participated in the survey), it is not valid to simply compare the total value of repos and reverse repos with the same figures in previous surveys. Some of the changes represent the entry and exit of institutions into and out of the survey, mergers between banks and the reorganization of repo books within banks. To overcome the problem caused by changes in the sample of survey participants, comparisons are made of the aggregate outstanding contracts reported only by a sub-sample of institutions which have participated in several surveys.

The repo books of the 49 institutions that participated in all of the last three surveys shrank by 16.8% over the six months from the June 2010 survey, while the surveyed business of the 53 institutions that also participated in the December 2009 survey (but not necessarily in the June 2010 survey) contracted by 15.2% year-on-year. Of the 57 institutions in the latest survey, the repo books of 25 expanded or remained unchanged, compared to 29 out of 57 in the last survey.

The sharp fall in the total value of transactions mainly reflects the unwinding of a set of very large and somewhat specialized transactions that were recorded in the June 2010 survey. In other words, much of the dramatic growth seen in the last survey and much of the retreat in the latest survey was driven by exceptional factors. Beneath these unusual swings in activity, there is still a discernible trend towards recovery in the repo market.

## Counterparty analysis (Q1.1)

### Table 2.2 – Counterparty analysis

| | December 2010 | | June 2010 | | December 2009 | |
|---|---|---|---|---|---|---|
| | users | share | users | share | users | share |
| **direct** | 57 | 51.5% | 56 | 57.2% | 58 | 54.0% |
| ***of which tri-party*** | *37* | *11.5%* | *30* | *7.9%* | *32* | *8.0%* |
| **voice-brokers** | 52 | 20.2% | 48 | 20.3% | 50 | 18.5% |
| **ATS** | 43 | 28.3% | 39 | 22.5% | 44 | 27.5% |

The sharp fall in the share of direct trading (to 51.5% from 57.2%) and the equally sharp rise in the share of electronic trading (to 28.3% from 22.5%) reflect the unwinding of the exceptional transactions recorded in the June 2010 survey. Within the diminishing share of direct trading, tri-party repo made significant gains to 11.5% (accounting for the settlement of 22.3% of directly-negotiated repo compared with 13.8% in June 2010). Although the number of survey participants reporting tri-party business jumped to 37 from 30, this did not appear to distort the survey, as the strength of tri-party repo was also confirmed by the independent data provided directly by the major tri-party agents in Europe, which showed growth of 27.6% to EUR 960 billion.

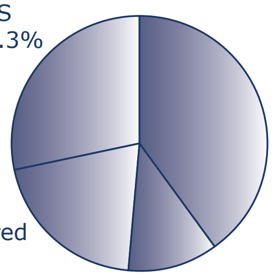
The share of voice-brokers was virtually unchanged, showing that they have been able to retain at least some of the gains in market share made during the crisis, when they benefited from the general search for liquidity. However, whether the trend decline in the share of voice-broking has been halted or just delayed is uncertain. Data provided directly by the WMBA showed a decline of 2.8% in voice-brokered business to EUR 653 billion.

The strength of the recovery in the share of electronic trading reflected the unwinding of the exceptional transactions recorded in June 2010 but also strong organic growth. Data provided directly by the principal automated trading systems (ATS) operating in Europe – BrokerTec, Eurex Repo and MTS – showed that the value of electronic trading grew by 10.3% to a record EUR 1,001 billion from EUR 904 billion in June 2010. The previous peak was EUR 961.1 billion in June 2007. Among other things, electronic trading has been boosted by the revival of the repo market in Spain, as banks there re-gained access to money market funding by turning to electronic trading backed by the new local CCP services introduced in the second half of 2010 by LCH-Clearnet Ltd and MEFF. The directly-reported share of electronic trading in Spanish collateral increased to 7.0% from 3.8%. Increasing use of electronic trading has also been reported in Italy and Portugal.

**Table 2.3 – Numbers of participants reporting particular types of business**

| | Dec-10 | Jun-10 | Dec-09 | Jun-09 | Dec-08 | Jun-08 |
|---|---|---|---|---|---|---|
| **ATS** | 43 | 40 | 44 | 46 | 48 | 47 |
| **anonymous ATS** | 37 | 34 | 37 | 33 | 38 | 33 |
| **voice-brokers** | 52 | 49 | 50 | 50 | 48 | 46 |
| **tri-party repos** | 37 | 31 | 32 | 31 | 31 | 30 |
| **total** | 57 | 57 | 58 | 61 | 61 | 61 |

**Figure 2.1 – Counterparty analysis**




## Geographical analysis (Q1.1)

**Table 2.4 – Geographical analysis**

| | December 2010 | | June 2010 | | December 2009 | |
|---|---|---|---|---|---|---|
| | share | users | share | users | share | users |
| **domestic** | 33.5% | | 29.7% | | 33.7% | |
| **cross-border** | 48.0% | | 56.6% | | 48.1% | |
| **anonymous** | 18.5% | 37 | 13.7% | 34 | 18.3% | 37 |

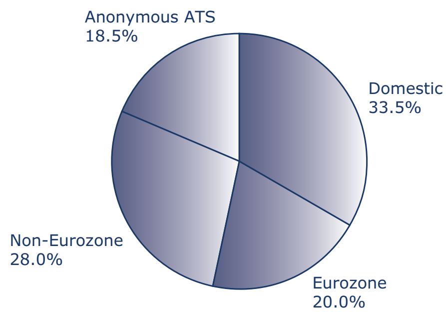
The share of anonymous electronic trading recovered to a record 18.5% from 13.7% in the last survey. However, according to the data provided directly by the principal European ATSs, anonymous electronic trading grew by just 4.6% to EUR 829 billion, while non-anonymous trading grew by 20.3% to EUR 133 billion, probably reflecting the revival of the Spanish repo market.

Domestic and intra-eurozone tri-party business expanded most rapidly (20.6% to 24.2% and 46.8% to 48.5%, respectively), largely at the expense of business into and out of the eurozone (32.6% to 27.3%). Once again, these changes may simply reflect the unwinding of the exceptional transactions recorded in the June 2010 survey, which appear to have been into the eurozone from outside.

### Table 2.5 – Geographical comparisons in December 2010

| | main survey | ATS | tri-party | WMBA |
|---|---|---|---|---|
| **domestic** | 33.5% | 35.0% | 24.2% | 43.1% |
| **cross-border** | 48.0% | 65.0% | 75.8% | 56.9% |
| **anonymous** | 18.5% | | | |

### Figure 2.2 – Geographical analysis




## Clearing and settlement analysis (Q1.2 and Q1.8)

The importance of CCPs in the repo market continues to grow (to 32.3% from 22.4%). While the bulk of CCP-cleared repo business continues to be executed electronically (18.5% of total repo reported in the survey, compared to 13.7% in June 2010), significant volumes are negotiated directly between parties or through voice-brokers and registered with CCPs after the trade (13.8% of total repo reported in the survey, compared with 8.7% in June 2010). However, the share of CCP-cleared repo business is still below the record set in December 2008, shortly after the collapse of Lehman Brothers, when as much as 33.2% of the total surveyed business was cleared through CCPs (17.6% electronically-negotiated and 15.6% directly or via voice-brokers).

**Figure 2.3 –Business cleared across CCPs**

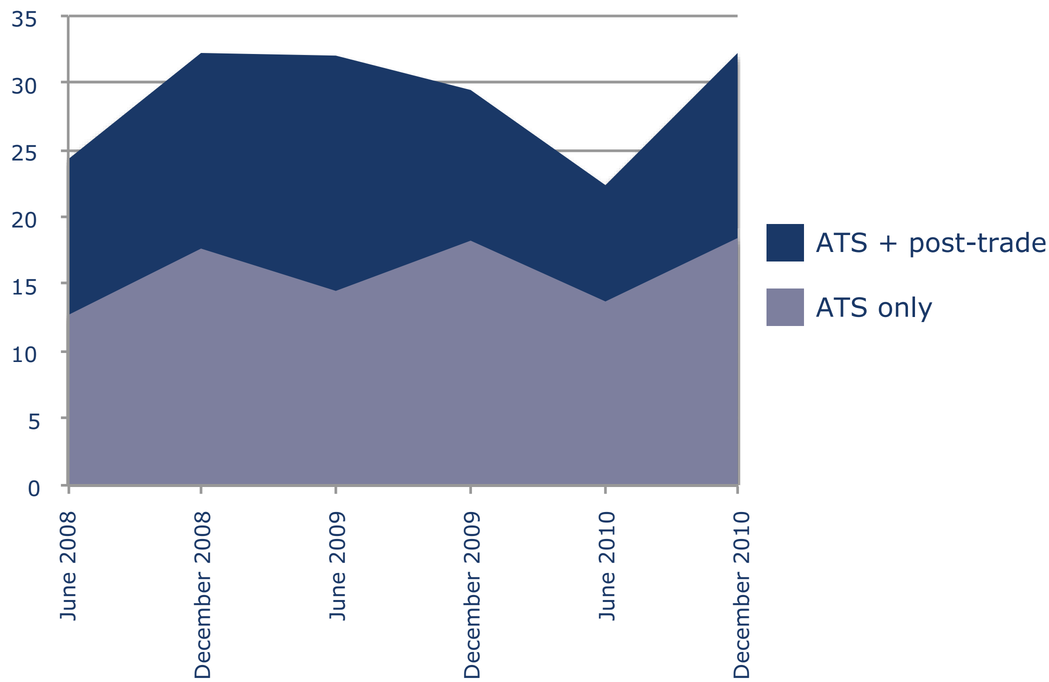



**Table 2.6 – Cash currency analysis (Q1.3 and Q1.4)**

| | December 2010 | June 2010 | December 2009 |
|---|---|---|---|
| **EUR** | 62.7% | 56.6% | 65.6% |
| **GBP** | 10.5% | 9.3% | 12.3% |
| **USD** | 20.1% | 28.3% | 15.9% |
| **DKK, SEK** | 2.0% | 2.0% | 2.4% |
| **JPY** | 3.6% | 3.0% | 2.7% |
| **CHF** | 0.2% | 0.3% | 0.5% |
| **etc** | 1.0% | 0.6% | 0.5% |
| **cross-currency** | 5.6% | 3.2% | 2.6% |

The dramatic surge in the share of the US dollar in June 2010 to 28.3% from 15.9% in December 2009 – which was driven by the exceptional transactions recorded in June 2010 – was substantially but not completely reversed by December 2010. The share of the US dollar fell back to 20.1%. Because the reversal in the share of the dollar was only partial, the shares of the euro and sterling did not recover all the ground lost in June 2010.

A notable feature of the latest survey was a sharp increase in reported cross-currency business to a record 5.6% from 3.2% in June 2010. It has been suspected in the past that cross-currency business was being under-reported (evidence included the fact that the proportion of dollar cash far exceeded the proportion of US collateral, suggesting many US dollar repos were being transacted against collateral denominated in other currencies). The recent increase in reported cross-currency repo would seem to be an indication of underlying growth rather than wider reporting.

In data provided directly by the ATSs, there was a significant rebound in the share of the Swiss franc to 6.2% from a record low of 2.6%, mainly at the expense of the euro, which fell back to 89.1% from 92.9%.

In contrast, the share of the euro in tri-party repo jumped to a record 81.8% from 68.8%, largely reflecting a fall in the share of the US dollar to 12.2% from 22.6% and, to a lesser extent, sterling (down to 4.9% from 6.6%).

The euro also fell back in voice-brokered business (to 55.4% from 58.6%), as sterling, the dollar and the yen advanced (to 35.9% from 34.5%, to 5.0% from 4.0% and to 1.9% from 0.7%, respectively).

**Figure 2.4 – Currency analysis**

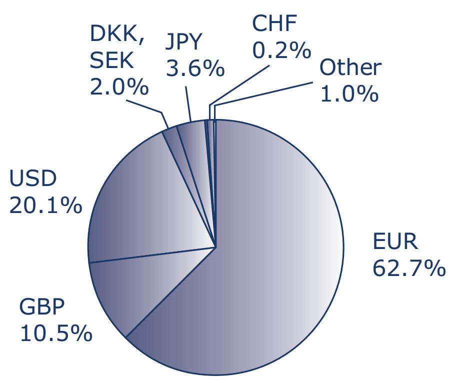



**Table 2.7 – Currency comparison in December 2010**

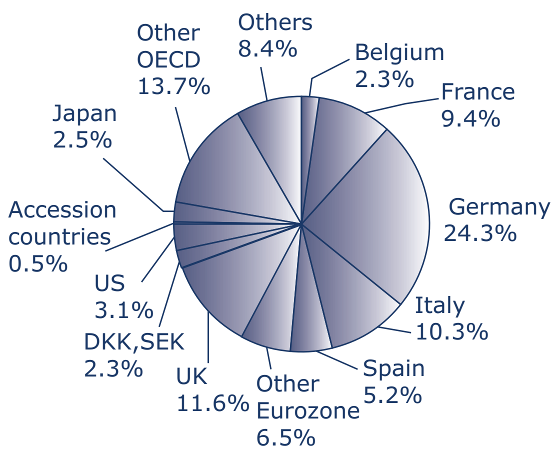
| | main survey | ATS | tri-party | WMBA |
|---|---|---|---|---|
| **EUR** | 62.7% | 89.1% | 81.8% | 55.4% |
| **GBP** | 10.5% | 3.8% | 4.9% | 35.9% |
| **USD** | 20.1% | 0.8% | 12.2% | 5.0% |
| **DKK, SEK** | 2.0% | 0.0% | 0.0% | 1.2% |
| **JPY** | 3.6% | N/A | 0.5% | 1.9% |
| **CHF** | 0.2% | 6.2% | 0.2% | 0.0% |
| **etc** | 1.0% | 0.0% | 0.5% | 0.6% |
| **cross-currency** | 5.6% | N/A | 14.5% | N/A |

## Collateral analysis (Q1.9)

### Table 2.8 – Collateral analysis

| | December 2010 | June 2010 | December 2009 |
|---|---|---|---|
| **Germany** | 24.3% | 21.3% | 26.4% |
| **Italy** | 10.3% | 9.5% | 10.9% |
| **France** | 9.4% | 8.6% | 8.7% |
| **Belgium** | 2.3% | 1.8% | 1.7% |
| **Spain** | 5.2% | 4.0% | 4.2% |
| **other eurozone** | 6.5% | 6.0% | 9.4% |
| **UK** | 11.6% | 9.9% | 12.4% |
| **DKK, SEK** | 2.3% | 2.2% | 2.2% |
| **US** | 3.1% | 3.1% | 3.1% |
| **Accession countries** | 0.5% | 0.3% | 0.4% |
| **Japan** | 2.5% | 2.0% | 2.1% |
| **other OECD** | 13.7% | 22.8% | 10.5% |
| **other** | 7.6% | 7.4% | 7.6% |
| **equity** | 0.7% | 1.0% | 0.5% |

### Figure 2.5 – Collateral analysis (main survey)

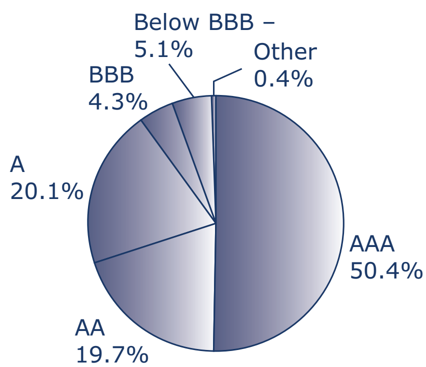



Just as the exceptional jump in the share of securities issued in "other OECD" countries from 10.5% to 22.8% dominated the June 2010 survey, so the (partial) retreat in the share of that collateral to 13.7% dominated the December 2010 survey. German, Italian, UK and "other EU" collateral in particular regained share, notably German and UK government securities. The recovery in the share of Spanish collateral (to 5.2% from 4.0%) would seem to reflect the revival of the Spanish repo market. Greek collateral remains scarce (0.5%). The growth in Japanese collateral (to 2.5% from 2.0%) matches the growth in the use of yen.

### Table 2.9 – Tri-party repo collateral analysed by credit rating

| | December 2010 | June 2010 | December 2009 |
|---|---|---|---|
| **AAA** | 46.6% | 51.4% | 47.7% |
| **AA** | 19.7% | 15.2% | 15.9% |
| **A** | 20.1% | 20.9% | 24.2% |
| **BBB** | 4.3% | 6.7% | 6.9% |
| **below BBB-** | 5.1% | 2.2% | 1.2% |
| **A1/P1** | 3.8% | 3.4% | 3.3% |
| **A2/P2** | 0.0% | 0.0% | 0.0% |
| **Non-Prime** | 0.0% | 0.0% | 0.0% |
| **unrated** | 0.4% | 0.1% | 0.9% |

### Figure 2.6 – Collateral analysis (triparty agents) by credit rating




### Table 2.10 – Tri-party repo collateral analysed by type of collateral

| | Dec 2010 | June 2010 | Dec 2009 |
|---|---|---|---|
| **government securities** | 40.6% | 44.1% | 40.7% |
| **public agencies / sub-national** | 3.4% | 3.6% | 4.9% |
| **supranational agencies** | 1.8% | 2.3% | 1.8% |
| **corporate bonds** | 25.5% | 27.8% | 28.4% |
| **covered bonds** | 6.5% | 6.3% | 6.2% |
| **residential mortgage-backed** | 0.4% | 0.4% | 1.5% |
| **commercial mortgage-backed** | 0.2% | 0.6% | 0.6% |
| **other asset-backed** | 0.8% | 0.5% | 0.5% |
| **CDO, CLN, CLO, etc** | 0.6% | 0.9% | 1.2% |
| **convertible bonds** | 0.0% | 2.1% | 1.7% |
| **equity** | 19.0% | 10.8% | 11.8% |
| **other** | 1.1% | 0.6% | 1.4% |

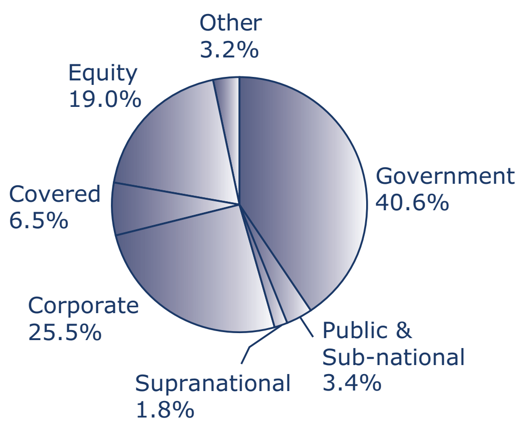
The share of government bonds within the pool of EU-originated collateral felt slightly to 76.6% from 77.6%.

The share of government bonds within the pool of EU-originated collateral also fell back in directly-reported tri-party business, touching 49.3%, down from 54.3%. There were significant increases in the use of Italian, Portuguese and Spanish collateral in tri-party repo (to 9.0%, 1.2% and 8.7% from 6.9%, 0.6% and 3.5%, respectively).

The historically low level of government securities in the main survey contrasts with the historically high levels of government securities in directly-reported tri-party repo. The contrast is paradoxical, given that the fact that the tri-party market is the traditional venue for repos of non-government collateral. The increased use of non-government collateral in bilaterally-settled repo includes collateral issued in countries unaffected by sovereign credit concerns, so does not appear to be driven by a wish to diversify out of government securities issued by countries in fiscal difficulties.

The share of Spanish collateral increased in electronic trading (to 7.0% from 3.8%), while the share of Irish collateral fell back (to 0.8% from 1.7%).

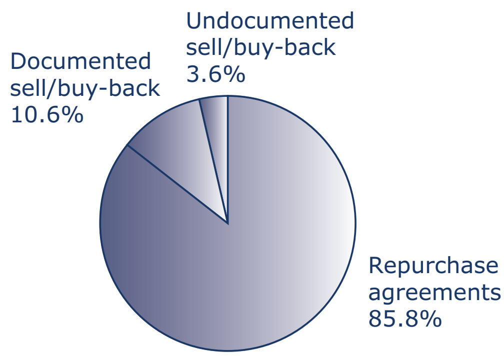
**Figure 2.7 – Collateral analysis (triparty agents) by type of security**



## Contract analysis (Q1.5)

### Figure 2.8 – Contract analysis

There was an unwelcome increase in December 2010 in undocumented sell/buy-backs to 3.6% from 2.6%.



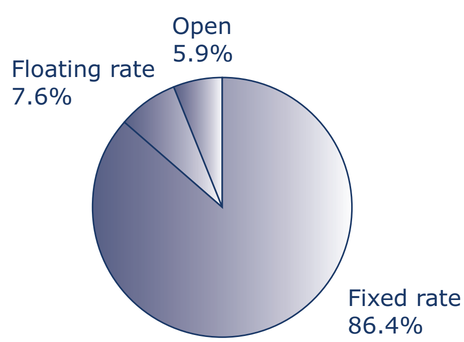

### Table 2.11 – Contract comparison in December 2010

| | main survey | ATS | tri-party |
|---|---|---|---|
| **repurchase agreements** | 85.8% | 70.2% | 100.0% |
| **documented sell/buy-backs** | 10.6% | 29.8% | 0.0% |
| **undocumented sell/buy-backs** | 3.6% | 0.0% | 0.0% |

## Repo rate analysis (Q1.6)

The share of floating-rate repos fell back to 7.6% from 10.1% in the main survey and to 12.8% from a record 14.3% in directly-reported electronic business. This may reflect growing expectations of official interest rate changes.

### Figure 2.9 – Repo rate analysis



### Table 2.12 – Repo rate comparison in December 2010

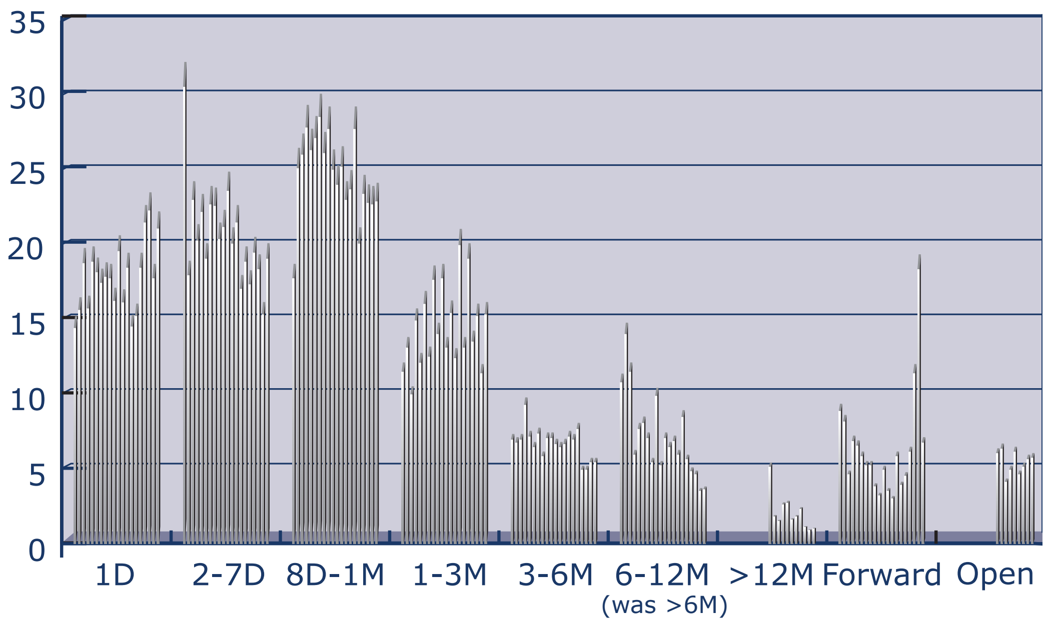
| | main survey | ATS | tri-party |
|---|---|---|---|
| **fixed rate** | 86.4% | 87.2% | 79.3% |
| **floating rate** | 7.6% | 12.8% | 0.0% |
| **open** | 5.9% | 0.0% | 20.7% |

### Maturity analysis (Q1.7)

### Table 2.13 – Maturity analysis

| | December 2010 | June 2010 | December 2009 |
|---|---|---|---|
| **1 day** | 20.9% | 17.6% | 22.1% |
| **2 days to 1 week** | 18.9% | 15.2% | 18.2% |
| **1 week to 1 month** | 22.7% | 22.5% | 22.6% |
| **>1 month to 3 months** | 15.2% | 11.3% | 15.1% |
| **>3 months to 6 months** | 5.4% | 5.4% | 4.9% |
| **>6 months to 12 months** | 3.6% | 3.5% | 4.6% |
| **>12 months** | 1.0% | 0.9% | 1.1% |
| **forward-start** | 6.7% | 18.2% | 11.3% |
| **open** | 5.7% | 5.6% | 5.1% |

### Figure 2.10 – Maturity analysis (main survey)



Anecdotal reports of increasing volumes of long-term repos by banks seeking to lock in liquidity, in part, to meet regulatory requirements, are not reflected in the survey data.

The unwinding of the exceptional transactions recorded in June 2010 pushed the share of forward-start repos down to 6.7% from a record 18.2% in June 2010, closer to historical levels. The main beneficiaries of this fall in forward-start transactions were very short-dated (1-day to 1-week) and 1 to 3-month transactions (all short dates increased to 62.5% from 55.3% and 1 to 3-month transactions to 15.2% from 11.3%).

Short-dated transactions also grew in voice-brokered business, to 31.6% from 26.9%.

**Figure 2.11 – Maturity analysis (ATS)**

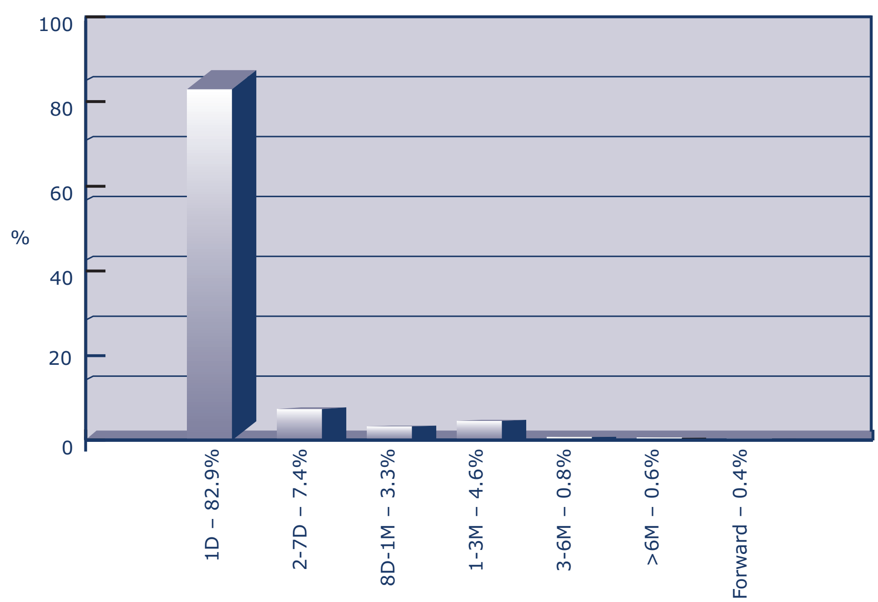
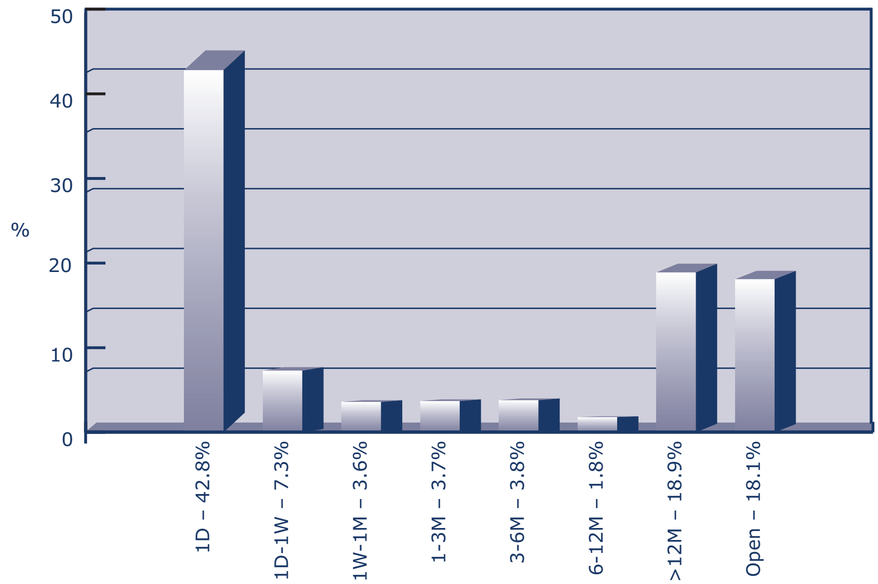


**Figure 2.12 – Maturity analysis (triparty agents)**




It should be noted that the sharp increase in long-term tri-party repo shown in the data contributed directly by tri-party agents (to 18.9% from 1.1%) was the result of an improvement in reporting by one tri-party agent rather than a shift in the market. Otherwise, it can be seen that tri-party business is dominated by one-day and open repos.

**Figure 2.13 – Maturity analysis (voice-brokers)**

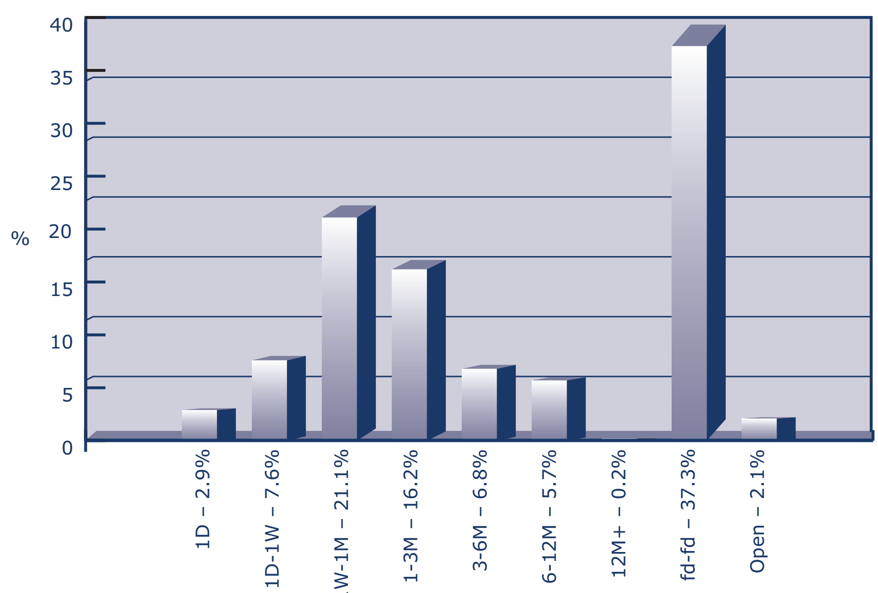


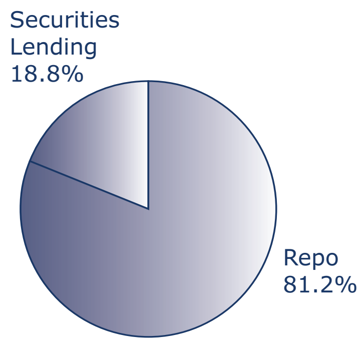
**Table 2.14 – Maturity comparison in December 2010**

| | main survey | ATS | tri-party | WMBA |
|---|---|---|---|---|
| **1 day** | 20.9% | 82.9% | 42.8% | 2.9% |
| **2 days to 1 week** | 18.9% | 7.4% | 7.3% | 7.6% |
| **1 week to 1 month** | 22.7% | 3.3% | 3.6% | 21.1% |
| **>1 month to 3 months** | 15.2% | 4.6% | 3.7% | 16.2% |
| **>3 months to 6 months** | 5.4% | 0.8% | 3.8% | 6.8% |
| **>6 months to 12 months** | 3.6% | 0.6% | 1.8% | 5.7% |
| **>12 months** | 1.0% | 0.0% | 18.9% | 0.2% |
| **forward-start** | 6.7% | 0.4% | N/A | 37.3% |
| **Open** | 5.7% | N/A | 18.1% | 2.2% |

## Product analysis (Q2)

Securities lending conducted on repo desks grew to 18.8% from 15.4%.

**Figure 2.14 – Product analysis**

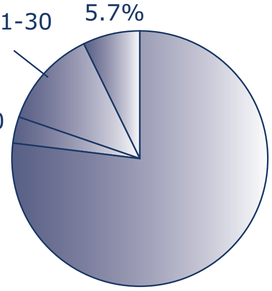



## Concentration analysis

**Table 2.15 – Concentration analysis**

| | December 2010 | June 2010 | December 2009 |
|---|---|---|---|
| **top 10** | 61.7% | 68.8% | 61.1% |
| **top 20** | 84.4% | 88.1% | 82.3% |
| **top 30** | 94.3% | 95.8% | 93.9% |
| **other** | 5.7% | 4.2% | 6.1% |

**Figure 2.15 – Concentration analysis**




There was a reduction in the concentration of surveyed repo business, again reflecting the unwinding of the exceptional transactions recorded in June 2010, which had produced a sharp increase in the reported concentration of the market. Thus, the top 10 survey participants accounted for 61.7% of total surveyed business in December 2010, compared with 68.8% in June 2009. In terms of the Herfindahl Index, market concentration in December 2010 had fallen back to 0.064 from 0.108 in June 2010. However, this is still well above the 0.041 recorded in June 2007, prior to the crisis.[1] The competitive advantage gained as a result of the crisis by institutions with strong balance sheets, which are able to exploit the weakness or disappearance of competitors, would therefore appear to have persisted.

[1] The Herfindhal Index is the sum of the squares of market shares divided by the square of the sum of market shares. The higher the index, the lower the degree of competition. If the index is higher, the more a single institution has a dominant market share and/or the more insignificant the market shares of all other institutions. A market in which several institutions have very large market shares can therefore have a relatively low index.

# CHAPTER 3: CONCLUSION

The December 2010 survey was dominated by the unwinding of most (but not all) of the exceptional transactions reported in the June 2010 survey. These transactions propelled the headline number of the survey by over 20% to EUR 6,885 billion in June 2010 and, being concentrated in forward-start repos of US dollar cash against "other OECD" collateral, had depressed the market shares of other types of transaction. But with most of these transactions apparently running off by December 2010, the pattern of business in the repo market swung back towards that of December 2009 (although the increases in the shares of the dollar and "other OECD" collateral have only been partially reversed).

Adjusting for the unwinding of exceptional transactions, it would appear that the market has resumed a more modest (and sustainable) path towards recovery. Thus, the headline number in December 2010, although more than 15% below June 2010, was about 6% above the December 2009 total of EUR 5,582 billion and close to that of June 2006.

It is now easier to discern once again the major trends within the market. These are the continuing growth of electronic trading, the shift towards greater use of CCPs (accessed not only through electronic trading but also by post-trade registration) and a recovery in tri-party repo. The growing use of CCPs and tri-party repo reflect the continued greater sensitivity to risk following the recent crisis.

## NSMA SURVEY OF THE RUSSIAN REPO MARKET

In 2010, the National Securities Market Association (NSMA) and the Russian Repo Council launched a regular semi-annual survey of the Russian repo market, as part of the NSMA's Russian Repo Market Development Project. The survey was inspired and informed by the ICMA's semi-annual survey of the European repo market and provides a valuable complementary source of data. (For more information see: www.nsma.ru)

The first NSMA survey asked for the outstanding value of repo contracts at June 1 2009, and turnover between December 1 2009, and May 31 2010.

The survey had 68 participants (of which 62 were banks) and is believed to encompass over 70% of the Russian repo market. In addition, data was provided directly by MICEX, which is the stock exchange on which the bulk of domestic repo is traded.

### Total repo business

Total turnover for the 6-month period to end-May 2010 was RUR 38,889 billion, of which RUR 19,992 billion (51.4%) was repo and RUR 18,897 billion (48.6%) was reverse repo. The total number of transactions over the period was 320,089 (120,700 repos and 199,389 reverse repos). The average deal size in repo was therefore RUR 165.6 million and in reverse repo was RUR 94.8 million.

The value of outstanding repos on June 1 2010 was RUR 713.7 million (about EUR 18 million), of which, RUR 332.3 million were repos and RUR 381.4 million were reverse repos.

### Counterparty analysis

86.1% of repo turnover was in transactions by parties acting as principals: the rest were through agents, of which, 13.7% were brokers and 0.2% asset managers. However, over 30% of own-account transactions were for clients under brokerage contracts.

Most repos in the survey were domestic transactions (82.6%, of which, 72.5% was with banks and 0.9% with individuals). Cross-border repos accounted for 12.4% and central bank repos for 5.0%. Central bank repos accounted for 12.5% of MICEX turnover, but the importance of central repo has been declining since late 2009.

### Cash currency analysis

The vast majority of repos were in roubles (95%). Only 4.8% were in US dollars and just 0.2% in euros.

### Collateral analysis

The survey revealed that most repos were against non-government bonds. In terms of individual transactions, equities were the second most common type of collateral. However, in terms of turnover over the period and outstanding value at end-period, government bonds were second (illustrating the smaller deal size of equity repo).

Non-government bonds were largely composed of corporate or sub-national issues, with a few Russian Federation and corporate Eurobonds and municipal bonds.

**Chart 1: collateral analysis of survey by number of trades**

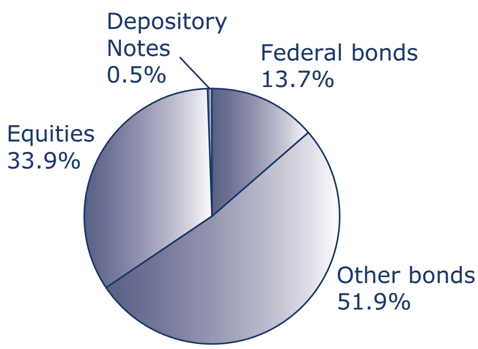



**Chart 2: collateral analysis of survey by turnover of collateral**

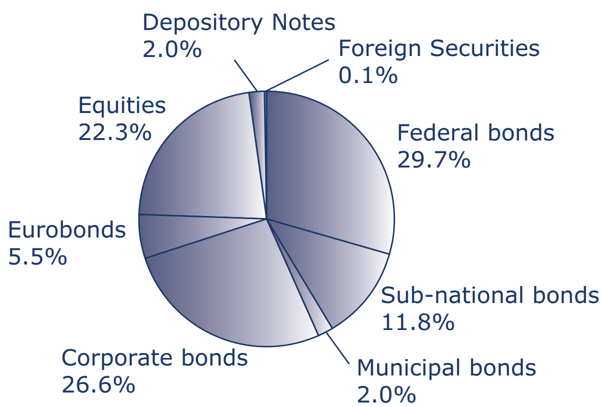
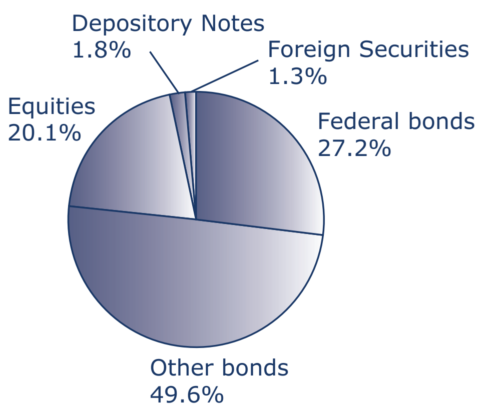
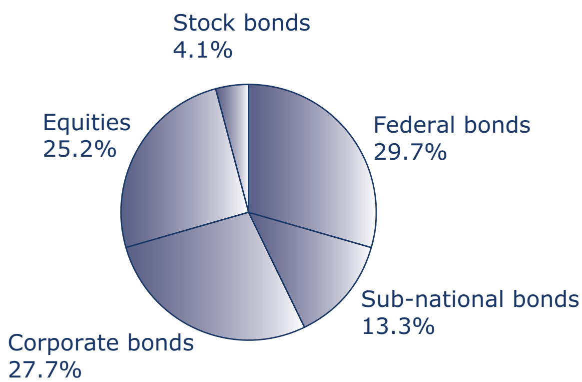



**Chart 3: collateral analysis of survey by value at end-period**



On MICEX, government bonds, corporate bonds and equity were the main types of collateral and accounted for not too dissimilar proportions.

**Chart 4: collateral analysis of MICEX business by turnover of collateral**




Over the survey period, the proportion of government bond collateral in the survey increased from 24.6% to 29.7%, sub-national bonds from 12.1% to 13.3% and "stock bonds" from 1.5% to 4.1%, while equities fell from 26.7% to 25.2% and corporate bonds from 35.1% to 27.7%.

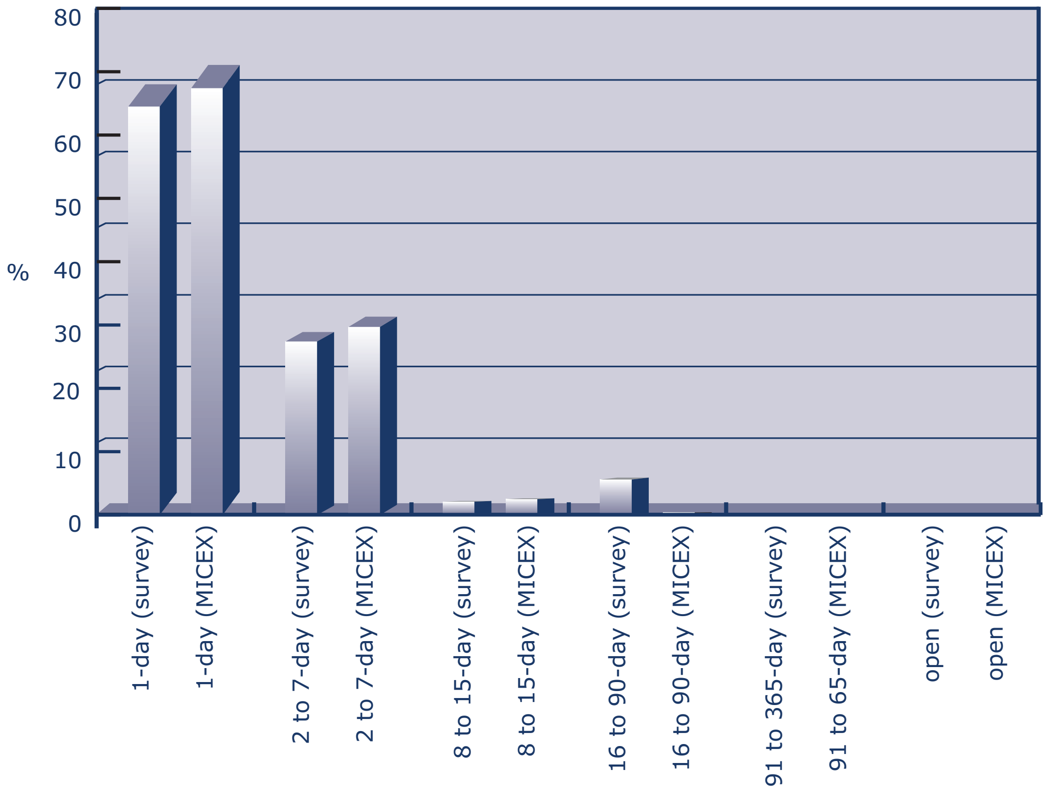
## Contract analysis

Most repos were transacted under MICEX rules but without written legal agreements (83.9%). Of the remainder, 5.9% were under NSMA standards but without written legal agreements and 3% were under RTS standards but also without written legal agreements, while 6.6% used proprietary legal agreements based on NSMA standards and 3.3% used the GMRA.

## Maturity analysis

Repos were predominantly for one day (64.5%) or 2-7 days (27.4%). The maturity distribution of MICEX business is not dissimilar, in that 67.4% of MICEX business was for one day and 29.7% for 2-7 days. However, the maturity distribution of the survey extended further than that of MICEX, having 5.6% of business in the 16 to 90-day bucket and small amounts in 91 to 365 days and in open repos (0.2% each), whereas MICEX saw only 0.4% in the 16 to 90-day bucket and nothing significant beyond 90 days.

**Chart 5: maturity analysis**




## Concentration analysis

The top 10 participants in the survey accounted for about 70% of the market.

For the NSMA survey English version please see ICMA's website. The full version of the survey is available at: www.nfa.ru

## ABOUT THE AUTHOR

This report was compiled by Richard Comotto, who is a Senior Visiting Fellow at the ICMA Centre at the University of Reading in England, where he is responsible for the FX and money markets module of the Centre's postgraduate finance programme. He is also Course Director of the ICMA Professional Repo Market Course conducted in Europe and Asia in co-operation with the ACI and SIFMA, and of the ICMA-ISLA GMRA-GMSLA Workshop.

The author acts as an independent consultant providing research, advice and training on the international money, securities and derivatives markets to professional market associations, government agencies, regulatory authorities, banks, brokers and financial information services.

The author has written a number of books and articles on a range of financial topics, including the foreign exchange and money markets, swaps and electronic trading systems. He takes particular interest in the impact of 'electronic brokers' on the foreign exchange market and in the more recent introduction of electronic trading systems into the bond and repo markets. In July 2010, he produced a 'White Paper on the Operation of the European Repo Market, the Role of Short-Selling, the Problem of Settlement Failures and the Need for Reform of the Market Infrastructure' for ICMA's European Repo Council.

The author served for ten years at the Bank of England, within its Foreign Exchange Division and on secondment to the International Monetary Fund in Washington DC.

# APPENDIX A: SURVEY GUIDANCE NOTES

The following extract is based on the Guidance notes issued to participants in conjunction with the survey that took place on December 8, 2010

The data required by this survey are: the total value of the repos and reverse repos booked by your repo desk that are still outstanding at close of business on Wednesday, December 8, 2010, and various breakdowns of these amounts.

Branches of your bank in other countries in Europe may be asked to complete separate returns. If your repo transactions are booked at another branch, please forward the survey form to that branch. If branches of your bank in other countries run their own repo books, please copy the survey form to these branches, so that they can also participate in the survey. Please feel free to copy the survey form to other banks, if you discover that they have not received it directly.

## General guidance

a) Please fill in as much of the form as possible. For each question that you answer, you will receive back your ranking in that category.

b) If your institution does not transact a certain type of repo business, please enter 'N/A' in the relevant fields. On the other hand, if your institution does that type of business but is not providing the data requested by the survey, please do not enter anything into the relevant field. If your institution does that type of business but has no transactions outstanding, please enter zero into the relevant field.

c) You only need to give figures to the *nearest million*. However, if you give figures with *decimal points*, please use full stops as the symbols for the decimal points, *not* commas. For *nil returns*, please use zeros, not dashes or text.

d) Please do not re-format the survey form, ie change its lay-out, and do not leave formulae in the cells of the underlying spreadsheet.

e) Include all repurchase agreements (classic repos), sell/buy-backs and similar types of transaction (e.g. pensions livrées). There is a separate question (see question 2) on securities lending and borrowing transactions (including securities lending and borrowing against cash collateral).

f) Exclude repo transactions undertaken with central banks as part of their official money market operations. Other repo transactions with central banks, e.g. as part of their reserve management operations, should be included.

g) Give the value of the cash which is due to be repaid on all repo and reverse repo contracts (*not* the market value or nominal value of the collateral) that are still *outstanding* at *close of business on*

*Wednesday, December 8, 2010*. This means the value of transactions at their repurchase prices.

h) "Outstanding" means repos and reverse repos with a repurchase date or which will roll over on or after Thursday, December 9, 2010. You should include all *open repos and reverse repos* that have been rolled over from Wednesday, December 8, 2010 to a later date and all *forward-forward repos and reverse repos* that are still outstanding at close on Wednesday, December 8, 2010.

i) Give separate totals for (a) repos plus sell/buy-backs and (b) reverse repos plus buy/sell-backs.

j) The survey seeks to measure the value of repos and reverse repos on a *transaction date basis*, rather than a purchase date basis. This means that you should include all repo and reverse repo contracts that have been agreed **before** close of business on Wednesday, December 8, 2010, even if their purchase dates are later.

k) Give *gross* figures, i.e. do *not* net opposite transactions with the same counterparty. If this is not possible, please indicate that your figures are net.

l) In the case of equity repo, for synthetic structures, please give the value of the cash payment.

## Guidance on specific questions in the survey form

1.1 Transactions (1.1.1) direct with counterparties or (1.1.2) through voice-brokers should *exclude* all repos transacted over an ATS (see below). These should be recorded under (1.1.3).

(1.1.2) Transactions through voice-brokers should be broken down in terms of the location of the counterparties, rather than the location of the voice-brokers.

(1.1.3) "ATSs" are automatic trading systems (e.g. BrokerTec, Eurex Repo and MTS, but not voice-assisted electronic systems such as e-speed and GFInet). Transactions through voice-assisted systems should be included in (1.1.2). Anonymous transactions through an ATS with a central counterparty (e.g. CC&G, LIFFE-Clearnet, MEFF and Eurex Clearing) should be recorded in (1.1.3.4).

1.2 This item includes all the transactions recorded in (1.1.3) **plus** any transactions executed directly with counterparties and via voice-brokers which are then registered with and cleared through a central counterparty.

1.6 "Repurchase agreements" (also known as "classic repos") include transactions documented under the Global Master Repurchase Agreement (GMRA) 1995 and Global Master Repurchase Agreement (GMRA) 2000 *without* reference to the Buy/Sell-Back Annexes, and transactions documented under other master agreements. "Sell/buy-backs" are therefore taken to include all transactions that are not documented. Repurchase agreements include pensions livrées. Repurchase agreements are characterised by the immediate payment by the buyer to the seller of a manufactured or substitute payment upon receipt by the buyer of a coupon on the collateral held by the buyer. If a coupon is paid on collateral during the term of a sell/buy-back, the buyer does not make an immediate manufactured or substitute payment to the seller, but reinvests the coupon until the repurchase date of the sell/buy-back and deducts the manufactured or substitute payment (plus reinvestment income) from the repurchase price due to be received from the seller. Sell/buy-backs may be quoted in terms of a forward price rather than a repo rate. Where sell/buy-backs are documented (e.g. under the Buy/Sell-Back Annexes to the GMRA 1995 and GMRA 2000), periodic adjustments to the relative amounts of collateral or cash - which, for a repurchase agreement, would be performed by margin maintenance transfers or payments - are likely to be made by early termination and adjustment or re-pricing. All open repos are likely to be repurchase agreements.

1.7 This section asks for the *remaining* term to maturity (not the original term to maturity) of repos to be broken down as follows:

(1.7.1.1) 1 day – this means:

- all contracts transacted prior to Wednesday, December 8, 2010, with a repurchase date on Thursday, June 10, 2010;
- overnight, tom/next, spot/next and corporate/next contracts transacted on Wednesday, December 8, 2010.

(1.7.1.2) 2–7 days – this means:

- all contracts transacted prior to Wednesday, December 8, 2010, with a repurchase date on Friday, December 10, 2010, or any day thereafter up to and including Wednesday, December 15, 2010;
- contracts transacted on Wednesday, December 8, 2010, with an original repurchase date no later than Wednesday, December 15, 2010 (irrespective of the purchase date, which will vary).

(1.7.1.3) More than 7 days but no more than 1 month – this means:

- all contracts transacted prior to Wednesday, December 8, 2010, with a repurchase date on Thursday, December 16, 2010, or any day thereafter up to and including Monday, January 10, 2011;
- contracts transacted on Wednesday, December 8, 2010, with an original repurchase date no later than Monday, January 10,

2011 (irrespective of the purchase date, which will vary).

(1.7.1.4) More than 1 month but no more than 3 months – this means:

- all contracts transacted prior to Wednesday, December 8, 2010, with a repurchase date on Tuesday, January 11, 2011, or any day thereafter up to and including Tuesday, March 8, 2011;
- contracts transacted on Wednesday, December 8, 2010, with an original repurchase date no later than Tuesday, March 8, 2011 (irrespective of the purchase date, which will vary).

(1.7.1.5) More than 3 months but no more than 6 months – this means:

- all contracts transacted prior to Wednesday, December 8, 2010, with a repurchase date on Wednesday, March 9, 2011, or any day thereafter up to and including Wednesday, June 8, 2011;
- contracts transacted on Wednesday, December 8, 2010, with an original repurchase date no later than Wednesday, June 8, 2011 (irrespective of the purchase date, which will vary).

(1.7.1.6) More than 6 months but no more than 12 months – this means;

- all contracts transacted prior to Wednesday, December 8, 2010, with a repurchase date on Thursday, June 9, 2011, or any day thereafter up to and including Thursday, December 8, 2011;
- contracts transacted on Wednesday, December 8, 2010, with an original repurchase date no later than Thursday, December 8, 2011 (irrespective of the purchase date, which will vary).

(1.7.1.7) More than 12 months – this means;

- all contracts transacted prior to Wednesday, December 8, 2010, with a repurchase date on Friday, December 9, 2011, or any day thereafter;
- contracts transacted on Wednesday, December 8, 2010, with an original repurchase date on or after Friday, December 9, 2011 (irrespective of the purchase date, which will vary).

(1.7.2) Forward-forward repos are defined for the purposes of this survey as contracts with a purchase date of Monday, December 13, 2010, or later. There is therefore an overlap with corporate/next transactions. If the latter cannot be identified separately, it is accepted that they will be recorded as forward-forward repos.

(1.7.3) Open repos are defined for the purposes of this survey as contracts that have no fixed repurchase date when negotiated but are terminable on demand by either counterparty. This item should be equal to item (1.6.3).

1.8 Please confirm whether the transactions recorded in the various questions in (1.7) include your tri-party repo business. Some institutions do not consolidate their tri-party repo transactions with their direct or voice-brokered business because of delays in receiving reports from tri-party agents or the complexity of their tri-party business.

1.9 Eurobonds should be included as fixed income securities issued "by other issuers" in the countries in which the bonds are issued. This will typically be Luxembourg (1.9.10) and the UK (1.9.15). Equity collateral should be recorded in (1.9.34).

(1.9.28) "US in the form of fixed income securities but settled across Euroclear or Clearstream" means only domestic and Yankee bonds. This includes Reg.144a bonds, but *excludes* Eurodollar and US dollar global bonds, which should be treated as bonds issued "by other issuers" in the countries in which the bonds were issued.

This will typically be Luxembourg (1.9.10) and the UK (1.9.15).

(1.9.30) Other OECD countries" are Australia, Canada, Chile, Iceland, Korea, Mexico, New Zealand, Norway, Switzerland, Turkey and the US. In the case of collateral issued in the US, only collateral settled across the domestic US settlement system should be included in (1.9.30). US collateral settled across Euroclear and Clearstream Luxembourg should be recorded in (1.9.28).

(1.9.34) "Equity" includes ordinary shares, preference shares and equity-linked debt such as convertible bonds.

2 "Total value of securities loaned and borrowed by your repo desk" includes the lending and borrowing of securities with either cash or securities collateral. Exclude any securities lending and borrowing done by desks other than your repo desk. If your repo desk does not do any securities lending and borrowing, this line will be a nil return.

3 "Active" means about once a week or more often.

## For further help and information

If, having read the Guidance Notes, you have any further queries, please e-mail the ICMA Centre at reposurvey@icmagroup.org or contact one of the following members of the ERC Steering Committee:

*German speakers*
**Eduard Cia,** HVB,
eduard.cia@unicreditgroup.de,
+49 89 378 14172

*Italian speakers*
**Stefano Bellani,** JP Morgan,
stefano.bellani@jpmorgan.com,
+44 20 7779 2399

*English speakers*
**Edward Mcaleer,** Morgan Stanley,
edward.mcaleer@morganstanley.com,
+44 20 7677 9595

*French speakers*
**Godfried de Vidts,** ICAP,
godfried.devidts@icap.com,
+44 20 7000 5803

*Spanish speakers*
**Herminio Crespo Urena,**
Caja Madrid,
hcrespou@cajamadrid.es,
+34 91 423 92 85

This survey is being conducted by the ICMA Centre, University of Reading, UK, at the request of ICMA's European Repo Council (ERC).

## APPENDIX B: SURVEY PARTICIPANTS

The participants in all 20 repo surveys are listed below. Company names provided here are as supplied by those involved in producing the survey. Names of ICMA member firms may not, therefore, precisely reflect the manner in which they are published in ICMA's Members' Register.

| List of respondents | Jun -01 | Dec -01 | Jun -02 | Dec -02 | Jun -03 | Dec -03 | Jun -04 | Dec -04 | Jun -05 | Dec -05 | Jun -06 | Dec -06 | Jun -07 | Dec -07 | Jun -08 | Dec -08 | Jun -09 | Dec -09 | Jun -10 | Dec -10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ABN Amro Bank | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | | |
| Algemeine Hypothekenbank Rheinboden | | x | | x | | | | | | | | | | | | | | | | |
| Allied Irish Banks | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| Alpha Bank | | | | x | x | | | | | | | | | | | | | | | |
| Arab Banking Corporation (Italy) | | | | | x | | | | | | | | | | | | | | | |
| AXA Bank Belgium | | | x | x | x | x | x | x | x | x | x | x | x | x | | | x | | x | x |
| Banca Cassa di Risparmio di Asti | | | | | x | | | | | | | | | | | | | | | |
| Banca d'Intermediazione Mobiliare (IMI) | | x | x | x | x | x | | | | | | | | | | | | | | |
| Banca Monte dei Paschi di Siena | | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Banco Nazional del Lavoro | | x | | x | x | x | x | x | x | x | x | | | | | | | | | |
| Banco Pastor | | x | | | | | | | | | | | | | | | | | | |
| Banco Popular Espanol | | | | x | | x | x | | | | | | | | | | | | | |
| Banco Santander | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Banco Urquijo | | x | | | | x | x | x | | | | | | | | | | | | |
| Bank Austria | | | x | x | x | x | x | | | x | x | x | x | x | | x | | x | | |
| Bank fuer Arbeit und Wirtschaft AG (BAWAG) | | | x | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Bank od Aland | x | | | | | | | | | | | | | | | | | | | |
| Bank of America | | | | | | | | | | | x | x | x | | | | | | | |
| "Bank of Cyprus, Greece" | | | | | x | | | | | | | | | | | | | | | |
| Bank of Ireland | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | | x | x |
| Bank Przemyslowo-Handlowy PBK | | | | | x | x | x | x | x | | x | x | x | x | | x | | | x | |
| Landesbank Berlin | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Banque de Luxembourg | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Banque et Caisse d'Epargne de l'Etat | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |

| List of respondents | Jun -01 | Dec -01 | Jun -02 | Dec -02 | Jun -03 | Dec -03 | Jun -04 | Dec -04 | Jun -05 | Dec -05 | Jun -06 | Dec -06 | Jun -07 | Dec -07 | Jun -08 | Dec -08 | Jun -09 | Dec -09 | Jun -10 | Dec -10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Barclays Capital | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Bayerische Landesbank | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| BBVA | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| BHF-Bank | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| BHF-Bank Luxembourg | | | | | | | x | | | x | x | | x | x | x | x | x | x | x | x |
| BNP Paribas | x | x | x | x | x | x | x | x | x | x | x | x | x | | x | x | x | x | x | x |
| Bundesrepublik Deutschland Finanzagentur | | | x | x | x | x | x | | x | | x | x | x | x | x | x | | x | x | x |
| BW-Bank | | x | | | | | | | | | | | | | | | | | | |
| Caixa d'Estalvis de Catalunya | | | | | x | | | | x | | | | x | x | x | x | x | x | | x |
| Caixa Geral de Depositos | | | x | x | | | | | | | | | | | | | | | | |
| Caja de Ahorros y Monte de Piedad de Madrid (Caja Madrid) | | | x | x | x | x | | | x | x | x | x | x | x | x | x | x | x | x | x |
| CA-CIB (formerly Calyon) | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Capitalia | | | x | | | | x | x | x | x | x | | | | | | | | | |
| NATIXIS Zweigniederlassung Deutschland | | | x | x | x | x | x | x | x | | x | | x | x | x | x | | | | |
| Citigroup Global Markets Ltd | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Commerzbank | x | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Canadian Imperial Bank of Commerce and Credit (CIBC) | | | | | | | | | | | | | | | | | | | x | x |
| Confederación Española de Cajas de Ahorros (CECA) | x | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Credito Valtellinese | | | | | x | | | | | | | | | | | | | | | |
| Croatian National Bank | | x | | | x | | | | | | | | | | | | | | | |
| Credit Suisse Securities (Europe) Ltd | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Danske Bank | | | | | | | | | x | x | | | x | x | x | x | x | x | x | x |
| Daiwa Securities SMBC Europe | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Dekabank Deutsche Girozentrale | x | x | x | x | | | | | x | x | | | | | | | | | | |
| Delta Lloyd Securities | | | | | x | | | | | | | | | | | | | | | |

| List of respondents | Jun -01 | Dec -01 | Jun -02 | Dec -02 | Jun -03 | Dec -03 | Jun -04 | Dec -04 | Jun -05 | Dec -05 | Jun -06 | Dec -06 | Jun -07 | Dec -07 | Jun -08 | Dec -08 | Jun -09 | Dec -09 | Jun -10 | Dec -10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DePfa ACS | | | | x | x | x | x | x | x | x | x | x | x | x | | | | | | |
| DePfa Bank | | | | x | x | x | x | x | x | | | | | | | | | | | |
| Deutsche Bank | x | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Deutsche Postbank | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Dexia | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Dexia BIL | | | | | | x | | | | x | x | x | | x | | | | | | |
| Dexia Kommunal Bank Deutschland | x | x | | | | | | | x | x | x | x | x | x | x | x | x | x | x | |
| Dresdner Bank | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | | | |
| DZ Bank | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| EFG Eurobank Ergasias | | | x | x | | | x | | x | x | x | x | x | x | x | x | x | x | | x |
| Egnatia Bank | | | | | x | | x | | | | | | | | | | | | | |
| Erste Bank der Oesterreichischen Sparkassen | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Euroclear Bank | | | | x | x | | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Eurohypo | | | | | | x | | x | x | x | x | x | | | | | | | | |
| Eurohypo Europäische Hypothekenbank | | | | | | | | | | | | x | x | x | x | x | x | x | x | x |
| European Investment Bank | | | x | | | | x | x | | | | | | | | | | | | |
| Fortis Bank | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| General Bank of Greece | | | x | x | | | | | | | | | | | | | | | | |
| Goldman Sachs | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Halifax Bank of Scotland | x | x | x | x | x | x | x | x | x | x | x | | | | | | | | | |
| HSBC | | | | | | | | | | | | | | x | | x | x | x | x | x |
| HSBC Athens | | | x | | | | | | | | | | | | | | | | | |
| HSBC France | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | |
| HSH Nordbank | x | x | x | x | x | x | x | x | x | | | | | | | | | | | |
| Bayerische Hypo-und-Vereinsbank | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| IIB Bank | | | | | x | | | | | | | | | | | | | | | |
| ING Bank | | | | | x | x | | x | x | x | x | x | x | x | x | x | x | x | | x |
| ING Belgium | x | | x | x | x | x | | | | x | x | x | | | | | | | | |
| Intesa SanPaolo | x | x | x | x | x | x | x | x | x | x | x | x | | x | x | x | x | x | x | x |
| JP Morgan | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| KBC | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | x | | x | x |
| KfW | | | | | | | x | x | x | | x | x | x | x | x | | | | | |
| Kingdom of Belgium Federal Public Service Debt Agency | | | | | x | | x | | x | x | x | x | x | x | x | x | x | x | x | x |
| "Landesbank Baden-Württemberg, Stuttgart" | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |

| **List of respondents** | **Jun -01** | **Dec -01** | **Jun -02** | **Dec -02** | **Jun -03** | **Dec -03** | **Jun -04** | **Dec -04** | **Jun -05** | **Dec -05** | **Jun -06** | **Dec -06** | **Jun -07** | **Dec -07** | **Jun -08** | **Dec -08** | **Jun -09** | **Dec -09** | **Jun -10** | **Dec -10** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Landesbank Hessen-Thüringen -Girozentrale (Helaba) | | | | | x | x | x | x | x | x | x | x | x | x | x | | x | x | x | x |
| Landesbank Rheinland Pfalz | x | x | x | x | x | x | x | x | x | x | x | x | x | | | | | | | |
| Landesbank Sachsen Girozentrale | x | x | x | x | x | x | x | x | x | x | x | x | x | | | | | | | |
| Lehman Brothers | | x | x | x | x | | x | x | x | x | x | x | x | x | x | | | | | |
| Maple Bank | x | x | x | | | | | | | | | | | | | | | | | |
| Merrill Lynch | x | x | x | x | x | x | x | x | x | x | x | | x | x | x | x | x | x | x | x |
| Mitsubishi Securities International | | x | x | x | x | x | x | x | x | x | | | | | | x | x | x | x | x |
| Mizuho International | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Morgan Stanley | x | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Natexis Banques Populaires | | x | x | x | | x | | | | | | | | | | | | | | |
| National Bank of Greece | x | x | x | x | x | x | x | x | x | x | x | x | x | | | x | x | | | |
| Nomura International | x | x | x | x | x | | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Norddeutsche Landesbank Girozentrale | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | | | |
| Nordea Markets | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Norinchukin Bank | | | | | | x | x | x | x | x | x | x | x | | | | x | x | x | x |
| Nova Ljubljanska Banka d.d. | | | | | | | x | | | | | | x | x | | | x | x | | x |
| Omega Bank | | | x | x | | | | | | | | | | | | | | | | |
| Piraeus Bank | | | x | | | | | | | | | | | | | | | | | |
| Rabobank | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Royal Bank of Scotland | | | x | x | x | x | x | x | x | x | x | x | x | x | x | | x | x | x | x |
| RZB | x | x | x | | x | | x | x | x | x | x | x | x | | | x | x | x | x | |
| Sal. Oppenheim Jr. | x | x | x | | | x | x | x | | | | | x | | | | | | | |
| Sampo Bank | | | x | x | | | | | x | x | | x | | | | | | | | |
| SEB | | x | | x | | | | | | | | | | | | | | | | |
| Société Générale | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Toronto Dominion Bank | | | | | x | x | | | | | | | | | | | | | | |
| UBS | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Ulster Bank | | | x | x | | | x | x | x | x | | x | | | | | | | | |
| Unicredit/Bayerische Hypo-un-Vereinsbank Milano Branch | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Unicredito Italiano Bank (Ireland) | | | | | x | | | | | | | | | | | | | | | |
| Vereins und Westbank | | | x | x | x | x | x | | | | | | | | | | | | | |
| Westdeutsche Immobilien Bank | | x | x | | | | | | | | | | | | | | | | | |

| List of respondents | Jun -01 | Dec -01 | Jun -02 | Dec -02 | Jun -03 | Dec -03 | Jun -04 | Dec -04 | Jun -05 | Dec -05 | Jun -06 | Dec -06 | Jun -07 | Dec -07 | Jun -08 | Dec -08 | Jun -09 | Dec -09 | Jun -10 | Dec -10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Westdeutsche Landesbank Girozentrale | x | | x | | | x | x | | | x | x | x | x | x | x | | x | | | |
| Zagrabacka Banka | | | | x | | | | x | | x | x | | x | | | | | | | |

# APPENDIX C: SUMMARY OF SURVEY RESULTS

| | | | | | | |
|---|---|---|---|---|---|---|
| Q1 What are the total gross values of cash due to be repaid by you and repaid to you on repo transactions maturing after Dec 8, 2010? (figures in EUR billions) | 6,430 | 6,382 | 4,633 | 5,758 | 6,885 | 5,908 |
| Of the amounts given in response to question (1) above: | | | | | | |
| | **Dec-06** | **Dec-07** | **Dec-08** | **Dec-09** | **Jun-10** | **Dec-10** |
| 1.1 How much was transacted: | | | | | | |
| **direct** with counterparties • in **the same country** as you | 20.2% | 19.4% | 17.6% | 19.7% | 14.4% | 18.6% |
| • cross-border in (other) **eurozone countries** | 15.4% | 14.9% | 14.7% | 14.5% | 12.4% | 12.7% |
| • cross-border in **non-eurozone countries** | 20.6% | 19.8% | 19.3% | 19.8% | 30.4% | 20.3% |
| through **voice-brokers** | | | | | | |
| • in the **same country** as you | 8.7% | 11.3% | 10.4% | 9.8% | 10.9% | 11.0% |
| • cross-border in (other) **eurozone countries** | 7.6% | 8.1% | 5.5% | 5.0% | 4.7% | 4.5% |
| • cross-border in **non-eurozone** countries | 3.9% | 5.5% | 4.3% | 3.8% | 4.7% | 4.8% |
| on **ATSs** with counterparties | | | | | | |
| • in the **same country** as you | 4.1% | 4.1% | 3.3% | 4.2% | 4.5% | 4.0% |
| • cross-border in (other) **eurozone** countries | 2.4% | 3.2% | 3.9% | 2.4% | 2.2% | 2.9% |
| • cross border-border in **non-eurozone** countries | 1.8% | 3.2% | 3.4% | 2.6% | 2.1% | 2.9% |
| • anonymously through a central clearing counterparty | 15.2% | 10.5% | 17.6% | 18.3% | 13.7% | 18.5% |
| • total through a central clearing counterparty | | | 33.2% | 29.4% | 22.4% | 32.3% |
| 1.2 How much of the cash is denominated in: | | | | | | |
| • EUR | 64.7% | 64.8% | 70.6% | 65.6% | 56.6% | 62.7% |
| • GBP | 13.1% | 15.5% | 13.0% | 12.3% | 9.3% | 10.5% |
| • USD | 14.6% | 11.7% | 9.6% | 15.9% | 28.3% | 20.1% |
| • "SEK, DKK" | 1.8% | 2.4% | 2.4% | 2.4% | 2.0% | 2.0% |
| • JPY | 3.2% | 3.7% | 3.1% | 2.7% | 3.0% | 3.6% |
| • CHF | 0.1% | 0.2% | 0.6% | 0.5% | 0.3% | 0.2% |
| • other currencies | 2.4% | 1.7% | 0.8% | 0.5% | 0.6% | 1.0% |
| 1.3 How much is cross-currency? | 1.2% | 2.3% | 0.6% | 2.6% | 3.2% | 5.6% |

| | Dec-06 | Dec-07 | Dec-08 | Dec-09 | Jun-10 | Dec-10 |
|---|---|---|---|---|---|---|
| 1.4 How much is: | | | | | | |
| • classic repo | 83.4% | 84.6% | 84.7% | 86.2% | 87.4% | 85.8% |
| • documented sell/buy-backs | 11.2% | 10.3% | 11.1% | 10.9% | 10.0% | 10.6% |
| • undocumented sell/buy-backs | 5.4% | 5.0% | 4.1% | 2.9% | 2.6% | 3.6% |
| 1.5 How much is: | | | | | | |
| • fixed rate | 78.7% | 82.2% | 85.6% | 88.9% | 83.8% | 86.4% |
| • floating rate | 10.2% | 13.3% | 9.3% | 7.0% | 10.1% | 7.6% |
| • open | 11.1% | 4.5% | 5.1% | 4.1% | 6.1% | 5.9% |
| **1.6 How much fixed and floating rate repo is (1.6.1) for value before December 12, 2010 and has a remaining term to maturity of:** | | | | | | |
| • **1 day** | 16.0% | 14.4% | 18.3% | 22.1% | 17.6% | 20.9% |
| • **2-7days** | 19.9% | 16.9% | 17.2% | 18.2% | 15.2% | 18.9% |
| • more than **7 days** but no more than **1 month** | 25.0% | 23.5% | 19.9% | 22.6% | 22.5% | 22.7% |
| • more than **1 month** but no more than **3 months** | 15.3% | 19.8% | 18.9% | 15.1% | 11.3% | 15.2% |
| • more than **3 months** but no more than **6 months** | 6.4% | 7.1% | 7.6% | 4.9% | 5.4% | 5.4% |
| • more than **6 months** | 6.4% | 5.9% | 5.6% | 4.6% | 3.5% | 3.6% |
| • more than **12 months** | 1.5% | 2.7% | 1.8% | 1.1% | 0.9% | 1.0% |
| • **forward-forward repos** | 3.5% | 5.8% | 4.5% | 11.3% | 18.2% | 6.7% |
| • **open** | 6.0% | 4.1% | 6.1% | 5.1% | 5.6% | 5.7% |
| 1.7 How much is tri-party repo: | 8.8% | 9.1% | 89.3% | 88.5% | 92.2% | 89.5% |
| • for **fixed terms to maturity** | 85.4% | 96.7% | 10.7% | 11.5% | 7.8% | 10.5% |
| • on an **open** basis | 14.60% | 5.0% | 9.4% | 8.0% | 7.9% | 11.6% |
| 1.8 How much is against collateral issued in: | | | | | | |
| Austria | | | | | | |
| • by the central government | 0.9% | 1.1% | 1.0% | 0.8% | 0.8% | 1.0% |
| • by other issuers | 0.1% | 0.2% | 0.1% | 0.2% | 0.2% | 0.2% |
| Belgium | | | | | | |
| • by the central government | 2.5% | 2.8% | 2.6% | 1.6% | 1.7% | 2.2% |
| • by other issuers | 0.3% | 0.1% | 0.1% | 0.1% | 0.2% | 0.1% |
| Denmark | | | | | | |
| • by the central government | 0.4% | 0.1% | 0.2% | 0.2% | 0.4% | 0.4% |
| • by other issuers | 0.3% | 0.2% | 0.3% | 0.4% | 0.7% | 0.6% |
| Finland | | | | | | |
| • by the central government | 0.2% | 0.2% | 0.3% | 0.3% | 0.2% | 0.3% |
| by other issuers | 0.1% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% |
| France | | | | | | |
| • by the central government | 9.1% | 8.7% | 8.4% | 6.5% | 6.7% | 7.3% |
| • by other issuers | 1.2% | 1.0% | 1.7% | 2.2% | 2.0% | 2.1% |

| | Dec-06 | Dec-07 | Dec-08 | Dec-09 | Jun-10 | Dec-10 |
|---|---|---|---|---|---|---|
| Germany | | | | | | |
| • by the central government | 18.7% | 19.4% | 23.8% | 20.9% | 17.0% | 18.7% |
| • pfandbrief | 1.6% | 1.5% | 1.5% | 1.3% | 1.7% | 1.3% |
| • by other issuers | 3.7% | 4.2% | 4.3% | 4.3% | 2.6% | 4.3% |
| Greece | | | | | | |
| • by the central government | 1.9% | 2.0% | 2.3% | 2.0% | 0.4% | 0.5% |
| • by other issuers | 0.0% | 0.0% | 0.0% | 0.2% | 0.0% | 0.0% |
| Ireland | | | | | | |
| • by the central government | 0.3% | 0.1% | 0.3% | 0.6% | 0.7% | 0.3% |
| • by other issuers | 0.3% | 0.5% | 0.4% | 0.9% | 0.4% | 0.5% |
| Italy | | | | | | |
| • by the central government | 13.5% | 12.7% | 11.8% | 10.3% | 9.0% | 9.8% |
| • by other issuers | 0.6% | 0.8% | 0.4% | 0.6% | 0.6% | 0.5% |
| Luxembourg | | | | | | |
| • by the central government | 0.1% | 0.0% | 0.2% | 0.2% | 0.1% | 0.1% |
| • by other issuers | 0.0% | 0.8% | 0.4% | 0.5% | 0.3% | 0.4% |
| Netherlands | | | | | | |
| • by the central government | 1.4% | 1.7% | 2.2% | 1.7% | 1.4% | 1.7% |
| • by other issuers | 0.6% | 0.7% | 0.4% | 0.6% | 0.4% | 0.6% |
| Portugal | | | | | | |
| • by the central government | 0.7% | 0.8% | 1.1% | 0.9% | 0.8% | 0.8% |
| • by other issuers | 0.0% | 0.0% | 0.1% | 0.4% | 0.1% | 0.1% |
| Spain | | | | | | |
| • by the central government | 3.6% | 3.7% | 3.6% | 3.2% | 3.1% | 3.9% |
| • by other issuers | 0.9% | 1.1% | 1.3% | 1.0% | 0.9% | 1.2% |
| Sweden | | | | | | |
| • by the central government | 1.1% | 0.7% | 0.5% | 0.6% | 0.7% | 0.8% |
| • by other issuers | 0.3% | 0.4% | 0.4% | 1.0% | 0.5% | 0.5% |
| UK | | | | | | |
| • by the central government | 11.5% | 12.2% | 10.6% | 7.7% | 6.3% | 8.0% |
| • by other issuers | 2.1% | 3.7% | 2.2% | 4.7% | 3.6% | 3.6% |
| US but settled across EOC/CS | 0.0% | 2.3% | 2.9% | 3.1% | 3.1% | 3.1% |
| other countries | | | | | | |
| Bulgaria | | | | | | |
| • by the central government | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| • by other issuers | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Cyprus | | | | | | |
| • by the central government | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| • by other issuers | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Czech Republic | | | | | | |
| • by the central government | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| • by other issuers | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Estonia | | | | | | |
| • by the central government | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| • by other issuers | 1.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |

| | Dec-06 | Dec-07 | Dec-08 | Dec-09 | Jun-10 | Dec-10 |
|---|---|---|---|---|---|---|
| Hungary | | | | | | |
| • by the central government | 0.0% | 0.2% | 0.1% | 0.1% | 0.1% | 0.1% |
| • by other issuers | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Latvia | | | | | | |
| • by the central government | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| • by other issuers | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Lithuania | | | | | | |
| • by the central government | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| • by other issuers | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Malta | | | | | | |
| • by the central government | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| • by other issuers | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Poland | | | | | | |
| • by the central government | 0.0% | 0.2% | 0.1% | 0.2% | 0.2% | 0.2% |
| • by other issuers | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Romania | | | | | | |
| • by the central government | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| • by other issuers | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Slovak Republic | | | | | | |
| • by the central government | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% |
| • by other issuers | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Slovenia | | | | | | |
| • by the central government | 0.0% | 0.0% | 0.0% | 0.2% | 0.0% | 0.0% |
| • by other issuers | 3.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Japan | 2.8% | 2.3% | 2.9% | 2.1% | 2.0% | 2.6% |
| other OECD | 9.7% | 7.4% | 7.3% | 10.5% | 22.8% | 13.7% |
| non-OECD EMEA | 0.7% | 0.7% | 0.5% | 0.5% | 0.5% | 0.6% |
| non-OECD Asian & Pacific | 0.3% | 0.4% | 0.3% | 0.1% | 0.2% | 0.3% |
| non-OECD Latin America | 0.6% | 0.5% | 0.3% | 0.2% | 0.2% | 0.4% |
| equity | 1.0% | 1.3% | 1.1% | 0.5% | 1.0% | 0.7% |
| collateral of unknown origin | 1.5% | 2.1% | 2.1% | 6.8% | 6.5% | 6.3% |
| Q2 What is the total value of securities loaned and borrowed *by your repo* desk: to/from counterparties | | | | | | |
| in the **same country** as you | | | | | | |
| • in fixed income | 37.7% | 35.4% | 35.0% | 38.4% | 42.2% | 46.8% |
| • in equity | 3.7% | 4.6% | 6.3% | 1.9% | 2.1% | 1.7% |
| cross-border in (other) **eurozone** countries | | | | | | |
| • in fixed income | 25.0% | 31.8% | 17.5% | 20.9% | 17.0% | 16.8% |
| • in equity | 5.6% | 5.1% | 6.8% | 3.5% | 3.0% | 3.6% |
| cross-border in **non-eurozone** countries | | | | | | |
| • in fixed income | 26.7% | 20.3% | 33.2% | 35.4% | 33.5% | 30.3% |
| • in equity | 1.2% | 2.7% | 1.3% | 1.4% | 2.3% | 0.8% |
| for which the term to maturity is | | | | | | |
| • fixed | 52.4% | 61.5% | 65.1% | 74.9% | 66.2% | 75.3% |
| • open | 47.6% | 38.5% | 34.9% | 25.1% | 33.8% | 24.7% |

## APPENDIX D: THE ICMA EUROPEAN REPO COUNCIL

The ICMA European Repo Council (ERC) is the forum where the repo dealer community meets and forges consensus solutions to the practical problems of a rapidly evolving marketplace. In this role, it has been consolidating and codifying best market practice. The contact and dialogue that takes place at the ERC underpins the strong sense of community and common interest that characterises the professional repo market in Europe.

The ERC was established in December 1999 by the International Capital Market Association (ICMA, which was then called the International Securities Market Association or ISMA) as a body operating under ICMA auspices.

Membership of the ERC is open to any ICMA member who has commenced, or has undertaken to commence, a dedicated repo activity, is willing to abide by the rules applicable to its and has sufficient professional expertise, financial standing and technical resources to meet its obligations as a member.

The ERC meets twice a year (usually in February/March and September) at different financial centres across Europe. The Steering Committee now comprises 19 members elected annually and meets four times a year.

More information about the ERC is available on www.icmagroup.org.