



EUROPEAN CENTRAL BANK

EUROSYSTEM

EIGHTH SURVEY ON CORRESPONDENT BANKING IN EURO

APRIL 2013

**PAYMENT AND
SETTLEMENT
SYSTEMS COMMITTEE**



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EXECUTIVE SUMMARY

Correspondent banking relationships play an important role in the processing of payment transactions in euro. They ensure that payments flow between credit institutions, as well as allowing indirect access to payment systems, thereby representing an important link in the payment chain. Given their relevance for the smooth functioning of payment systems, correspondent banking services have been within the scope of the Eurosystem's oversight activity since the establishment of the ECB.

The Eurosystem has conducted surveys on correspondent banking business since 1999 in order to monitor its importance, size and development. Participation in the surveys has always been voluntary. In principle, those banks invited to take part have been the largest in terms of general business size (based, for example, on such indicators as the size of the balance sheet, staff numbers and the size of the branch network) and/or known to be very active in providing payment services. The most recent survey (the eighth) was conducted in March 2012 and only covered banks with a daily turnover on loro accounts of at least €1 billion (24 banks located in nine euro area countries).

Since correspondent banking business in euro is highly concentrated among the largest banks in the euro area, the surveys are likely to have covered a very high proportion of all correspondent banking business. However, it is acknowledged that nostro account turnover may have been underrepresented, as the largest banks mostly manage loro accounts in bilateral relationships.

This report presents the outcome of the eighth survey and provides some risk and policy considerations involving the regulatory framework that applies to correspondent banking. While reports on previous surveys were only distributed to the banks taking part, the Eurosystem has decided to publish this report in order to increase transparency in its oversight activities with regard to correspondent banking and to share the results of the survey with other interested market participants, as well as other authorities and the general public.

The results of the eighth correspondent banking survey confirmed that correspondent banking remains an important channel for effecting payments in euro. As in previous surveys, both the number and value of payments processed by correspondent banks were very large. For instance, the total daily turnover of euro transactions settled through correspondent banking arrangements averaged more than €1.1 trillion (the loro transactions of the banks surveyed). However, most payments originated through correspondent banking arrangements are settled through payment systems, while payments processed solely through correspondent banking arrangements represent almost 11% of the total value (and over 1% of the total volume) of payments processed by the banks surveyed.

The growth in loro turnover in 2012 follows a sharp contraction in 2010 and was primarily a result of the wholesale correspondent banking segment increasing in size. In terms of value, the wholesale correspondent banking segment is much larger than the retail correspondent banking segment. Moreover, the decrease in the volume of loro transactions in 2012 confirms the trend already witnessed in previous surveys of an outward movement of retail payments towards payment systems.

The survey has also confirmed the growing concentration in correspondent banking business. This warrants the attention of payment system overseers, as the default of one of the larger and most interconnected correspondent banks might quickly trigger a domino effect on their respective customer banks and/or service-providing banks, as well as the risk of spillover to interdependent

payment systems. Besides operational risk, liquidity and credit risks also pose a significant threat in correspondent banking business, with intraday credit exposures normally being uncollateralised.

Risks in correspondent banking are relevant for both the prudential supervision of banks and the oversight of payment systems. Although the perspective of payment system overseers is traditionally somewhat different from that of banking supervisors, their objectives are closely interrelated.

The Eurosystem has not introduced specific oversight requirements for correspondent banks so as to avoid any double regulation of banks. It has instead relied on banking supervision, working together with supervisors at various levels (European, global and national). The Eurosystem considers this cooperation between Eurosystem central banks and euro area banking supervisors to be worthwhile and therefore expects it to continue, with the aim of ensuring that risks in correspondent banking are consistently and uniformly covered in the euro area. The prospective transfer of supervision of euro area credit institutions to the ECB may further facilitate such close cooperation.

INTRODUCTION

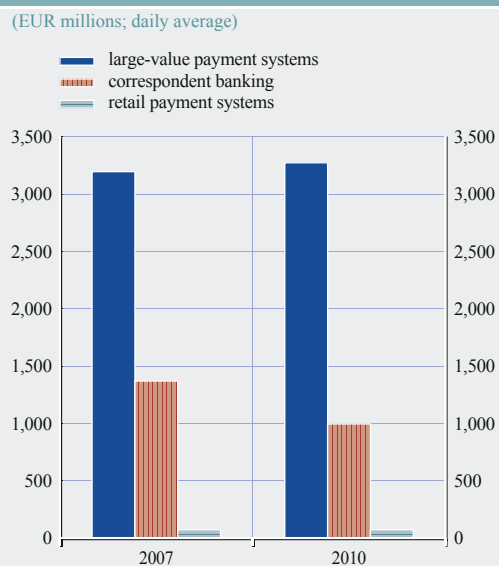
Correspondent banking arrangements are agreements or contractual relationships between banks to provide payment services for each other. Correspondent banking relationships play an important role in the processing of payment transactions in euro. They ensure payments flow between credit institutions, as well as allowing indirect access to payment systems, thereby representing an important link in the payment chain. Box 1 recalls some key concepts in correspondent banking.

The Eurosystem has conducted surveys on correspondent banking business since 1999 in order to monitor its importance, size and development. Previous surveys have confirmed that, in the euro area, the payment transactions flowing through such arrangements are significant when compared with the value of payment transactions processed by large-value payment systems and retail payment systems. In 2010, for instance, the daily average turnover of correspondent banking transactions reported by the service-providing banks that took part in the 2010 survey amounted to €995 billion, while the average daily turnover of payments in large-value payment systems and retail payment systems was €3,275 billion and €73 billion¹ respectively (see Chart 1).

Correspondent banking services have been within the scope of the Eurosystem's oversight activity since the establishment of the ECB, given their relevance for the smooth functioning of payment systems.² While reports on previous surveys were only distributed to the banks participating, the Eurosystem decided to publish this report on the eighth survey, conducted in 2012, in order to increase transparency in its oversight activities with regard to correspondent banking and to share the results of the survey with other interested market participants, as well as other authorities and the general public. As agreed with the banks participating, the current report does not disclose any individual bank's data, nor does it disclose any country-specific data, in order to ensure the anonymity of the banks reporting.

This report is structured as follows. Chapter 1 retraces the history of the Eurosystem's previous surveys on correspondent banking in euro. Chapter 2 presents the outcome of the eighth and most recent survey. Chapter 3 provides some risks and policy considerations involving the regulatory framework that applies to correspondent banking. The final section makes some concluding remarks.

Chart 1 Comparison between correspondent banking and large-value payment systems/ retail payment systems in the euro area



Source: ECB calculations (based on payment statistics in the ECB Statistical Data Warehouse and data reported by the banks surveyed).

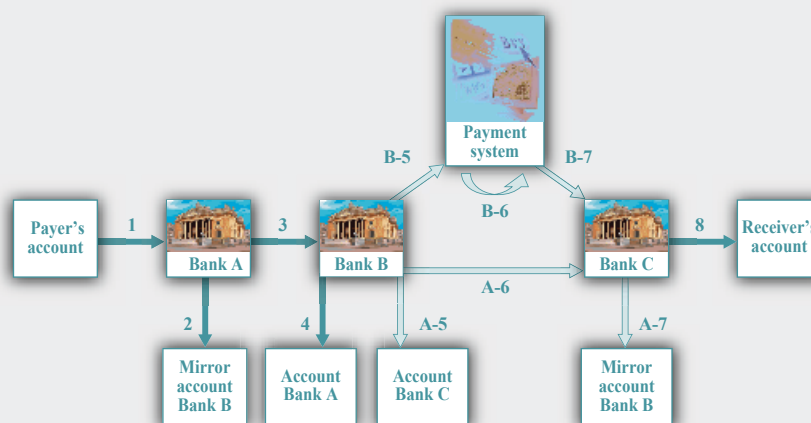
1 According to the payment statistics in the Statistical Data Warehouse, which can be accessed via the ECB's website.
2 Not only does the oversight function of the Eurosystem cover payment systems, it also covers other payment, clearing and settlement arrangements, as well as related services. The Eurosystem describes and explains its oversight function in detail in the "Eurosystem Oversight Policy Framework", ECB, 2011 (<http://www.ecb.europa.eu/pub/pdf/other/eurosystemoversightpolicyframework2011en.pdf>).

Box | CORRESPONDENT BANKING ARRANGEMENTS - KEY CONCEPTS¹

In bilateral correspondent banking arrangements, two financial institutions handle the sorting and processing of payments themselves, without involving an intermediary.

The term “correspondent banking arrangements” typically refers to arrangements in which two financial institutions employ a third party – a separate financial institution known as a “correspondent” or “service-providing” bank. One or both institutions forward payment instructions to the service-providing bank to sort and process. The service-providing bank holds on its books an account for each bank for which it provides correspondent banking services. The service-providing bank regards this as a “vostro” or “loro” account, while the customer bank considers it a “nostro” account. Banks generally provide services to a number of financial institutions, and these relationships are governed by contracts negotiated bilaterally. Correspondent banking relationships are also a well-established means of making cross-border payments.

The chart (below) shows the settlement of a payment from Bank A to Bank C via a correspondent bank. Since Banks A and C do not hold accounts with each other, they use a third party, Bank B (the service-providing bank), which holds accounts for both Bank A and Bank C. In principle,

Payments settled via correspondent banking

- 1 Debiting of payer's account with Bank A
- 2 Crediting of Bank B's mirror account with Bank A, which is kept for accounting purposes
- 3 Payment message from Bank A to Bank B via telecommunication network
- 4 Debiting of Bank A's account with Bank B (loro account)

A Use correspondent banking only

- 5 Crediting of Bank C's account with Bank B
- 6 Payment message from Bank B to Bank C via telecommunication network
- 7 Debiting of Bank B's mirror account with Bank C, which is kept for accounting purposes
- 8 Crediting of receiver's account with Bank C

B Involvement of payment system

- 5 Payment message from Bank B to payment system
- 6 Settlement via payment system
- 7 Payment message from payment system to Bank C
- 8 Crediting of receiver's account with Bank C

Source: ECB (adapted from Danmarks Nationalbank (2005), *Payment Systems in Denmark*, Copenhagen, June).

1 *The Payment System*, ECB, 2010, pp. 38-40 (<http://www.ecb.europa.eu/pub/pdf/other/paymentsystem201009en.pdf>).

there could be further banks involved on the sending and receiving sides (as intermediaries in a correspondent banking chain).

The rules governing Bank A's account with Bank B are based on a bilateral agreement. Normally, Bank A will need to have funds available in its account with Bank B for the latter to execute payments for the former. In some cases, the service-providing bank may also extend intraday and/or longer-term credit to its customer bank – again subject to a bilateral agreement. As a rule, correspondent payments are handled on a gross basis.

Historically, correspondent banking arrangements were the most common form of settlement for non-cash interbank payments, both at the national level and across borders. The importance of correspondent banking has diminished in certain areas following the establishment of payment systems for the settlement of domestic payments, the development of integrated euro payment systems and, more recently, the setting-up of payment-versus-payment (PvP) systems for the simultaneous settlement of foreign exchange transactions. Nevertheless, correspondent banking remains a key way for institutions to access payment systems as indirect participants (i.e. with a direct participant – the service-providing bank – acting on their behalf) or to settle non-standardised transactions related to international trade financing (e.g. letters of credit) which cannot be handled within payment systems.



I THE EUROSISTEM'S SURVEYS ON CORRESPONDENT BANKING

I.1 HISTORY OF THE EUROSISTEM'S SURVEYS

The first correspondent banking survey was conducted by the ESCB back in 1999. At that time it took the form of structured personal interviews with representatives of banks. Subsequent surveys in 2000 and 2002 were refined, with an increasing focus on quantitative data. Since 2003 the survey has taken the form of a formal monitoring exercise conducted by the Eurosystem every two years (2003, 2005, 2007, 2010 and 2012). Surveys were conducted in September until 2007, but have since been conducted in March.

Participation in the surveys has always been voluntary. On each occasion, national central banks (NCBs) have decided which banks in their jurisdiction were to be invited to participate in the surveys. In principle, NCBs have invited the largest banks in their jurisdiction in terms of general business size (based on such indicators as the size of the balance sheet, staff numbers and the size of the branch network) and/or banks that were known to be very active in providing payment services.³ In practice, the surveys have been conducted in a decentralised manner. Responses to the questionnaires were received by NCBs and, upon validation, transmitted to the ECB for aggregation and further analysis. At the request of the participants, the data were anonymised before being transmitted to the ECB.

The surveys have covered both business conducted internationally (traditional correspondent banking) and domestically. As correspondent banking business in euro is highly concentrated among the largest banks in the euro area, the surveys are likely to have covered a very high proportion of all correspondent banking business. However, it is acknowledged that nostro account turnover may have been underrepresented, as the largest banks mostly manage loro accounts in bilateral relationships.

The surveys have been conducted on the basis of two questionnaires: i) a general questionnaire for all banks participating, asking for quantitative and qualitative information about their correspondent banking business in euro (e.g. number of account relationships, volume and value of transactions); ii) an additional questionnaire for very active survey participants (with an average daily turnover of more than €10 billion on their loro accounts), including additional qualitative questions, e.g. on the management of intraday and overnight credit exposures.⁴ Since 2003 both questionnaires have remained largely unchanged in order to build up time series of the data collected.

I.2 THE EIGHTH SURVEY ON CORRESPONDENT BANKING

The eighth survey was conducted in March 2012 and covered all correspondent banking transactions in euro that were booked on participating banks' accounts between 1 and 31 March 2012. For data not related to the daily turnover (e.g. number of customers and accounts managed), figures as at 31 March 2012 were reported.

The eighth survey saw the introduction of a major change in the general survey framework in that only banks with a daily turnover on loro accounts of at least €1 billion participated. This threshold

³ An overview of the number of banks participating in the surveys is provided in Annex 1.

⁴ The general and additional questionnaires for the 2012 survey are enclosed in this report as Annex 2.

was introduced in order to increase the efficiency of the overall survey. The seventh survey showed that the 30 most active banks accounted for 99% of the overall turnover of the 83 participating banks' loro accounts in terms of value. The Eurosystem therefore decided to focus only on the largest correspondent banks by setting a threshold for a minimum turnover on loro accounts at an average daily value of €1 billion⁵.

As a result, 24 banks located in nine euro area countries participated in the eighth survey,⁶ ten of which also replied to the additional questionnaire.⁷

Some changes to the survey questionnaires were also introduced, as agreed with the participants before the launch of the eighth survey.⁸ In particular, banks were, for the first time, asked to voluntarily disclose their names to the ECB in order to allow the Eurosystem to use the survey data in the context of its analysis of institution-based interdependencies in the area of payments and securities clearing and settlement systems. In the end, half of all participating banks disclosed their names to the ECB.

5 Nevertheless, NCBs willing to receive a broader picture of the correspondent banking activities of their domestic bank(s) could still invite credit institutions that did not meet the turnover threshold to respond to the questionnaire. However, data on such banks were not included or analysed by the ECB, nor were they reflected in this report.

6 27 banks answered the 2012 questionnaires but, as two banks did not reach the turnover threshold of €1 billion, their answers were excluded from the survey. A third bank's answer was also excluded from the 2012 (and previous) surveys, as it did not comply with the survey methodology.

7 The 11th bank eligible to respond to the additional questionnaire did not submit a response.

8 For instance, the questions on the median size of different kinds of transactions were made optional, as many banks were unable to report any data on this in the seventh survey. Moreover, banks were also asked to indicate the payment systems used in connection with correspondent banking transactions and their respective share.

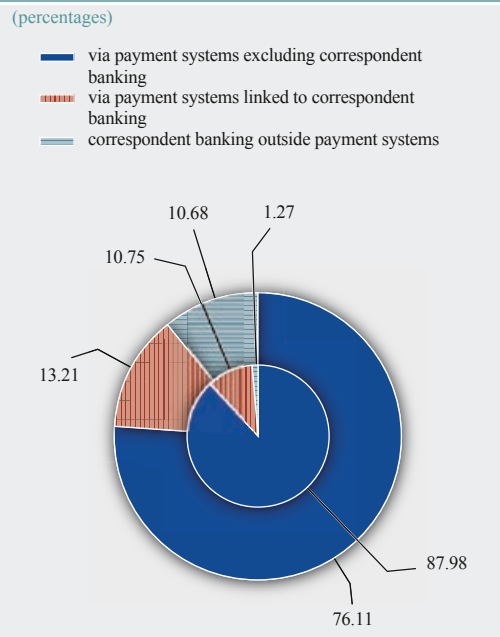


2 OUTCOME OF THE EIGHTH SURVEY

The 2012 survey confirmed that the total daily average value of euro loro transactions settled through correspondent banking arrangements in the euro area is more than €1.1 trillion.

Despite the total size of correspondent banking business being very large, service-providing banks reported that payments settled through payment systems (both retail and wholesale) represent by far the majority of their overall payments in terms of both value and volume. As shown in Chart 2, almost 76% of the value and 88% of the volume of their daily payments in euro are settled in payment systems without any connection to correspondent banking arrangements. Payments originated through correspondent banking arrangements but settled through payment systems account for around 13% of the value and almost 11% of the volume. Finally, payments processed solely through correspondent banking arrangements represent almost 11% of the total value of transactions and slightly over 1% of the total number.

Chart 2 Average daily payments in 2012 per settlement channel, broken down by value (outer pie) and volume (inner pie)¹



Source: ECB calculations (based on payment statistics and data reported by the banks surveyed).
 1) Figures for payments settled via payment systems (excluding correspondent banking) refer to data for 2011.

The main results of the eighth survey are presented in detail in the following sections. The first three deal with the value, volume and average size of euro transactions via correspondent banking arrangements, including figures for loro and nostro transactions, while the fourth section presents the number of customer and service-providing banks. These sections include a trend analysis based on data collected in the last six surveys, i.e. the surveys conducted in 2002, 2003, 2005, 2007, 2010 and 2012 (as summarised below in Table 1). To ensure consistency, the trend analysis focuses on correspondent banks whose total turnover on their loro accounts is greater than €1 billion. This allows a consistent image of correspondent banking business to be presented throughout the surveys, although it remains the case that changes in the population of respondent banks from one survey to another may sometimes be the main driver of a given trend development.⁹ Finally, the last two sections provide an analysis of the business concentration and intraday/overnight credit management in large correspondent banks.

Where relevant, the survey results differentiate between retail and wholesale markets. Retail correspondent banking is usually carried out domestically by a service-providing bank that processes a large number of small value payments (e.g. less than €10,000), notably acting as a gateway to retail payment systems for the settlement of card, cheque and other low-value transactions. Wholesale correspondent banks deal with large-value transactions, such as those related to the settlement of securities and money market trades, and provide indirect access to large-value payment systems. In this report, the banks surveyed have been split between the “retail”

⁹ Figures have been estimated in some cases, e.g. when facing outliers or certain known issues in the data reported, on the basis of interpolation using available data.

Table 1 Transactions in correspondent banking

Year	Number of respondents included per survey (Unit)	Total turnover (EUR Million, daily average)		Number of transactions (Thousands, daily average)		Number of customer banks (Unit, end of period)		Transaction size (EUR, daily average)		
		Loro	Nostro	Loro	Nostro	Loro	Nostro	Loro	Nostro	
		Total								
2002	31	643 336	251 639	14 459	184	26 003	2 178	-	-	
2003	34	651 699	111 999	20 556	138	24 871	2 115	-	-	
2005	29	897 042	368 703	26 186	306	21 508	1 142	-	-	
2007	32	1 370 275	272 385	22 592	277	19 191	1 134	-	-	
2010	28	995 807	235 677	22 211	293	18 309	900	-	-	
2012	24	1 103 874	158 619	15 218	378	14 198	801	-	-	
Average per service providing bank										
2002	31	20 753	8 987	466	7	839	38	44 493	1 365 288	
2003	34	19 168	3 733	605	4	732	64	31 704	836 196	
2005	29	30 932	12 714	903	11	742	39	34 257	1 205 336	
2007	32	42 821	8 512	706	9	600	35	60 652	983 442	
2010	28	35 565	8 417	793	10	654	32	44 835	804 763	
2012	24	45 995	6 609	634	16	592	33	72 536	419 252	

and “wholesale” segments according to the average size of their transactions: those banks whose average size of transaction (total loro turnover divided by the total number of loro transactions) on loro accounts is less than €10,000 have been classified as retail banks, while all the other banks have been considered as wholesale banks.

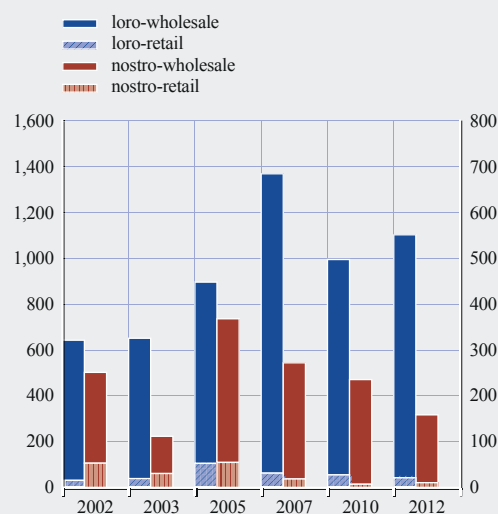
2.1 VALUE OF TRANSACTIONS

As shown in Chart 3, the total value of turnover on loro accounts decreased in 2010, after stable growth in the period from 2002 to 2007, but increased again in 2012, reaching over €1.1 trillion per day. The relatively strong decrease in turnover from 2007 to 2010 is likely to have been due to the financial crisis, which led to less business in general, with the real economy being no exception. It can be deduced from the increase in the average size of transactions (see section 2.3 below) that the wholesale correspondent banking segment may have been primarily responsible for the growth in loro turnover in 2012.

The total value of turnover on nostro accounts started decreasing in 2007 and has continued to do so in subsequent surveys, reaching €235 billion per day in 2010 and €159 billion

Chart 3 Turnover of loro and nostro transactions

(EUR millions; daily average)



Source: The banks surveyed.

per day in 2012. The decrease from 2005 to 2007 may have been triggered by a clearer survey methodology, which emphasised that nostro accounts with central banks should not be included in the survey. The significant turnover with central banks that had probably been counted in 2005 therefore disappeared in 2007.

In comparison with loro transactions, nostro transactions account for a much smaller part of the correspondent banking survey (slightly over 14% in 2012), mainly owing to two factors: first, the reporting banks, being the largest banks in their jurisdictions, in principle tend to be the service-provider in a correspondent banking relationship and consequently present limited nostro transactions; second, customer banks in a correspondent banking relationship are typically smaller banks that do not participate in the surveys, either because they do not reach the threshold or because they are not located in the euro area. In 2012, for instance, almost 47% of the total value of loro transactions was related to customer banks located outside the euro area.¹⁰

At the bank level, the daily turnover of loro transactions varies significantly among the 24 banks included in the survey. In particular, eight banks presented figures for loro transactions in excess of €20 billion per day (down from ten in 2010), while another three presented figures of between €10 billion and €20 billion per day (down from 14 in 2010), i.e. a total of 11 banks had a total turnover of more than €10 billion per day. As far as nostro transactions are concerned, 14 banks reported an average daily nostro turnover in excess of €1 billion, with one bank having a turnover of between €10 billion and €20 billion and two in excess of €20 billion. Finally, comparing loro and nostro transactions, only four of the 24 banks reporting presented a higher turnover on nostro accounts than on loro accounts. However, only one of them was among the five largest banks in terms of total turnover on loro accounts.

As could be expected, the retail correspondent banking segment is much smaller in terms of value than the wholesale banking segment. In 2012 the retail segment represented only 3.86% and 6.75% of the total business for loro and nostro respectively. Chart 4 supports the impression already given in 2010 of an outward movement of retail payments towards payment systems.¹¹

2.2 VOLUME OF TRANSACTIONS

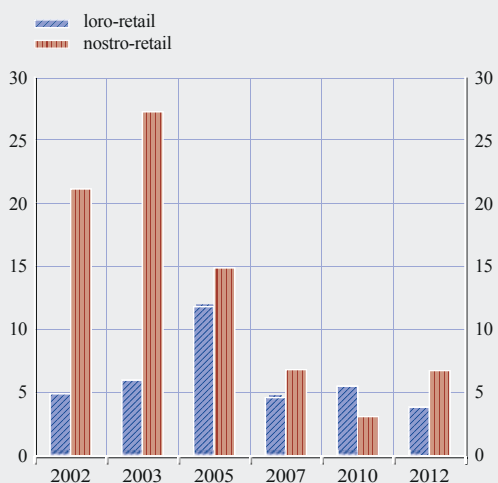
The average daily number of transactions on loro accounts increased until 2005, before decreasing in 2007 to a stable level until 2010, but then decreased significantly in 2012, falling from 22 million to 15 million (see Chart 5).

¹⁰ No banks from non-euro area countries participated in the eighth survey.

¹¹ See *The Payment System*, ECB, 2010, p. 202.

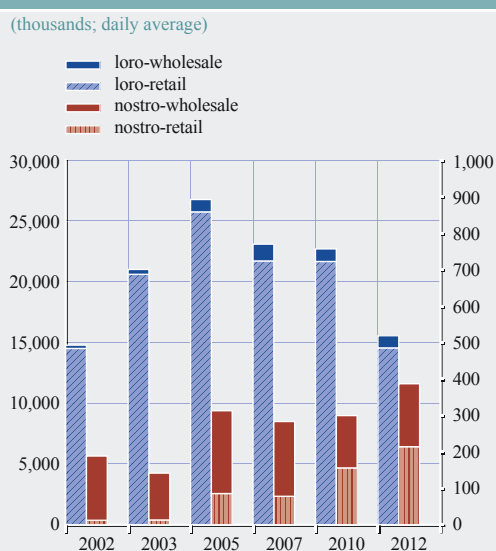
Chart 4 Market share of the retail segment

(as a percentage of the total daily value)



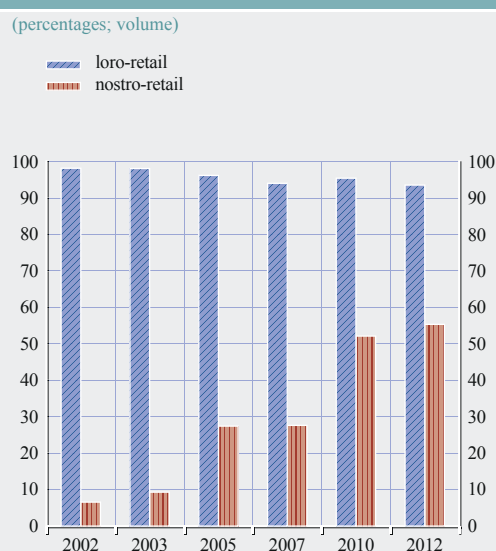
Source: The banks surveyed.

Chart 5 Number of loro and nostro transactions



Source: The banks surveyed.

Chart 6 Market share of the retail segment



Source: The banks surveyed.

In contrast to the sharp decrease in value between 2007 and 2010, the number of transactions remained stable in the aftermath of the crisis, probably because the number of retail payments remains fairly stable (many retail payments are regular payments such as wages, insurance premiums and utilities) and is not as influenced by the economic situation as the value of transactions. The decrease in volume in 2012 seems to have been due to a shift in retail payments in favour of payment systems. The combination of the increase in the value and decrease in the number of transactions in 2012 confirms that any recovery in correspondent banking business would mainly relate to the wholesale segment.

As far as transactions on nostro accounts are concerned, their average daily volume continued to increase in 2012, reaching a peak of 378,000. The number of nostro transactions is far smaller than that of loro transactions. This is largely due to the fact that retail payments are underrepresented, as smaller customer banks do not participate in the survey.

At the bank level, only two service-providing banks processed more than 1,000,000 transactions per day (unchanged since 2010). This suggests that their business is geared towards domestic retail payments. 13 banks processed more than 10,000 transactions per day, down from 15 in 2010.

In terms of volume, the retail correspondent banking segment is predominant over that of wholesale. In 2012 retail correspondent banking accounted for almost 94% of the total volume of transactions on loro accounts (a continuous decline since 2002) and slightly more than 55% on nostro accounts (a continuous rise since 2002 – see Chart 6).

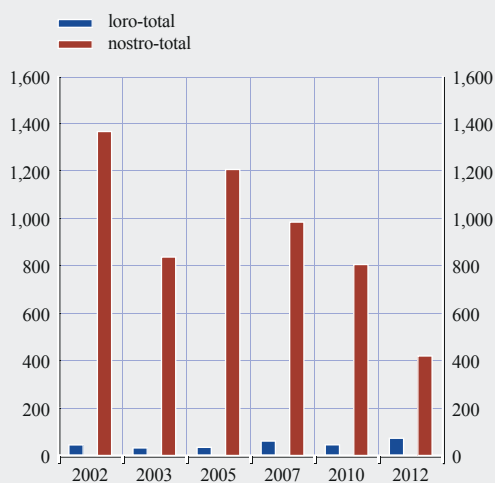
2.3 AVERAGE TRANSACTION SIZE

In 2012 the average size of a loro transaction peaked at €72,536, up by almost 62% from 2010 (see Chart 7), while the average size of a nostro transaction continued to decrease, reaching an all-time low of €419,252. The average size of nostro transactions is noticeably higher than that of loro transactions. This is because retail nostro transactions are underrepresented in the survey compared with large-value nostro transactions, such as securities and foreign exchange transactions.

At the bank level, the range of the average size of loro transaction varies from €2,661 to almost €18 million. In particular, 11 of the 24 banks participating reported an average size of loro transaction of over €1 million, indicating their specialisation in large-value payments, e.g. acting as an access point to large-value payment systems in which they are direct participants. At the other end of the spectrum, four banks reported average loro transaction sizes below €10,000, indicating that their focus is mainly on retail payments. This confirms previous assumptions that some banks specialise in different kinds of correspondent banking business.¹²

Chart 7 Trends in the average size of transactions

(EUR units; daily average)



Source: The banks surveyed.

2.4 NUMBER OF CUSTOMER/SERVICE-PROVIDING BANKS

The number of correspondent banking relationships has steadily decreased since 2002 (see Chart 8). The reasons for this could be manifold.

First, the single currency reduced the need for euro area banks to have correspondent banking relationships with each other for payment purposes, as banks can instead use integrated euro payment systems. This also applies to banks outside the euro area, which would only need one euro area bank as an access point for the single currency area to process payments to/from any recipients within the euro area.

Second, the costs of maintaining account relationships have risen in recent years, not least owing to increased compliance requirements.¹³ Thus, banks are assessing the necessity and benefit of keeping account relationships more strictly than they used to do. Large service-providing

¹² For instance, a bank may mainly establish bilateral correspondent banking arrangements in a cross-border and cross-currency context, often linked to its trading activity in capital and financial markets. In other cases, a bank may act as a “clearer” for other banks while offering a full set of cash management services, e.g. as a central payment institution providing services to banks (domestic as well as cross-border) belonging to a particular banking sector, such as cooperative banks or savings banks.

¹³ Examples of the increased compliance efforts that banks have to undertake include the anti-money laundering and counter-terrorism financing (AML/CTF) regulations, as well as recommendations issued by authorities or private bodies such as the Financial Action Task Force (FATF), the Bank for International Settlements (BIS) and the Wolfsberg Group. For example, banks are required to conduct due diligence assessments of new counterparties before entering into a relationship (the “know your customer” principle) and/or update assessments regularly.

banks, in particular, are trying to end reciprocal account relationships and limit themselves to maintaining loro accounts.

Third, on the service-providing side, correspondent banking business has become more competitive in recent years, with additional services offered and/or lower transaction fees charged. This may have given customer banks incentives to concentrate their correspondent banking business among one or two service-providing banks that offer specific attractive conditions rather than maintaining multiple relationships.

Fourth, consolidation and mergers in the banking industry have resulted in some correspondent banking relationships ending.

Finally, risk considerations may have induced some banks to terminate their relationships with certain customer banks whose financial reputation had worsened, e.g. in the aftermath of the financial crisis. On the other hand, market uncertainty may have led to some customer banks replacing correspondent banking relationships or establishing additional ones in order to reduce their dependency on a service-proving bank.

The five largest banks in terms of total loro turnover account for 46% of the total number of customer banks reported in the survey. It seems that, on average, banks with a lower loro turnover tend to have fewer customer relationships. However, it can be observed that the banks with the largest average size of payments (i.e. over €5 million) are also those with the smallest number of customer banks. As shown above, this could be interpreted as an additional sign of business specialisation, in this case in large-value transactions.

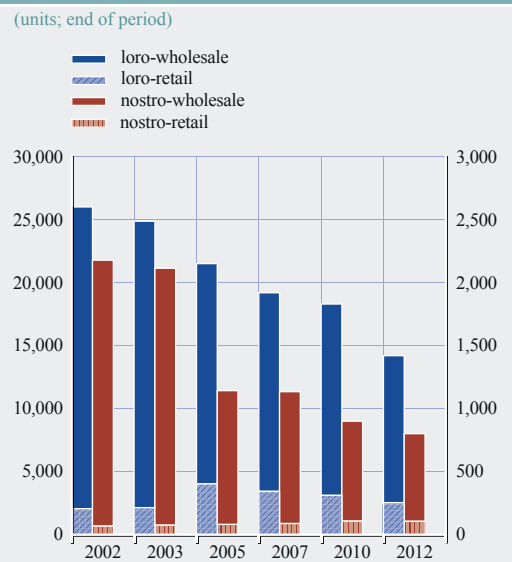
With regard to the location of the banks involved in a correspondent banking relationship, the proportion of customer banks located either in the same country as the reporting banks or within the euro area was almost 45% in 2012, down from 52% in 2010 and up from 38% in 2007.

2.5 CONCENTRATION

In general, the following three ratios are commonly used in economics to measure concentration: the concentration ratio of the four largest firms, that of the eight largest firms and the Herfindahl index.

The four-firm/eight-firm concentration ratios (CR4/CR8) measure the total market share of the four/eight largest firms in an industry. These concentration ratios range between 0 and 100%, with 100% indicating an extremely concentrated oligopoly.

Chart 8 Trends in the number of customer/ service-providing banks



Source: The banks surveyed.

Table 2 Concentration indicators for value and volume in correspondent banking

(percentages)				
Concentration index	Value		Volume	
	2012	2010	2012	2010
Concentration ratio 4	81.10	73.72	4.42	67.81
Concentration ratio 8	91.73	85.52	55.25	68.24
Herfindahl	45.38	34.37	39.08	49.46

The Herfindahl index is constructed as the sum of the squares of the market shares of all firms in an industry. By construction, the Herfindahl index, which can range from 0% to 100%, gives more weight to the larger firms, thus providing a clearer picture of the competitiveness of the industry. An index value of more than 25% indicates high concentration, i.e. higher values indicate greater concentration.

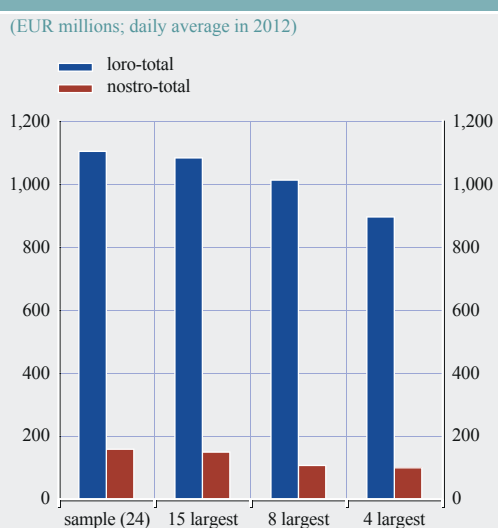
Table 2 (above) presents these concentration ratios for correspondent banking business with respect to the turnover of loro transactions reported by service-providing banks.

The concentration ratios CR4 and CR8 suggest a highly concentrated market, typical of an oligopoly. The same is suggested by the Herfindahl index. It is worth noting that, although concentration grew in terms of value from 2010, it declined in terms of volume, reflecting the loro retail correspondent banks' decline in volume between 2010 and 2012.¹⁴ In general, there are several reasons behind the increasing concentration in correspondent banking. These include: i) the fall in the number of correspondent banking networks within the euro area, owing to the existence of the single currency; ii) the specialisation of some banks in the provision of correspondent banking services; iii) the ongoing consolidation of the banking sector in general; and iv) customer banks' demands for higher levels of service, the costs of which can only be economically justified in the presence of economies of scale.¹⁵

The high concentration in correspondent banking business is also evident in Chart 9, which compares the turnover of the loro and nostro transactions of the 15, eight and four largest banks with total turnover in 2012.

With regard to internal concentration¹⁶, the banks that responded to the additional questionnaire also reported figures for the total turnover of both their 20 largest customer banks and their three largest customer banks. On average, 74.07% of the total value of transactions was generated by the 20 largest customer banks (ranging from 32% to over 99%), while the average for the three largest customer banks was

Chart 9 Turnover of loro and nostro transactions by sample size



Source: The banks surveyed.

14 In particular, the group of the four largest correspondent banks solely included wholesale service-providing banks in 2012, while in 2010 there was one retail service-providing bank among the largest four. This explains the drastic drop in CR4 in terms of volume.

15 See *The Payment System*, ECB, 2010, p. 202.

16 See the definition in Box 2.

44.26% (ranging from 12% to over 97%). Finally, the largest customer of each bank accounted, on average, for 30.57% of the service-providing bank's turnover in terms of value (ranging from just under 6% to just under 95%), while the share in terms of volume was negligible.

2.6 INTRADAY AND OVERNIGHT CREDIT

In the 2012 survey, those banks that replied to the additional questionnaire also included detailed replies to almost all questions concerning intraday and overnight credit granted to their customer banks and customers' end-of-day positive balances, as summarised below in Table 3.

On average, service-providing banks grant access to intraday credit to less than one third of their customer banks (about 31%, down from 38.5% in 2010). This reflects a general contraction in interbank credit exposures. The reason for this is an increase (or a perceived increase) in counterparty risk, which anecdotal evidence has also documented for other business, e.g. money markets. Some service-providing banks do not grant intraday credit to any of their customer banks.

When intraday credit is granted, e.g. to foster smooth payment flows, service-providing banks set very conservative credit limits. The size of intraday credit limits granted to the 20 largest customer banks averaged around 8% of the service-providing banks' loro turnover (down from 31% in 2010). For the three largest customer banks, the total value of intraday credit limits accounted, on average, for 4.37% of loro turnover. The average percentage of total intraday credit originated by correspondent banking arrangements amounted to 54% of a service-providing bank's total intraday credit.

The overnight overdrafts reported were significantly lower than intraday overdrafts, in line with data from previous surveys. The average overnight overdraft was 1.76% of total loro turnover, whereas the maximum overnight overdraft averaged 3.02%. The total value of overnight overdrafts for the 20 largest customers averaged 0.54% of their loro turnover. The average for the three largest customers was 0.37%. Moreover, the average share of overnight overdrafts as a proportion of the total value of overnight credit limits came to 12%.

Table 3 Intraday and overnight credit in correspondent banking relationships

	(percentages)				
		2012			2010
	No ¹⁾	Average	Min	Max	Average
Share of customer banks with access to intraday credit	8	30.98	0	53	38.5
Intraday credit limit (20 largest)	8	7.98	0	16.71	31.03
Intraday credit limit (three largest)	8	4.37	0	13.31	24.06
Correspondent banking-related intraday credit as a percentage of total intraday credit	6	54	0	100	57.29
Overnight overdraft (as a percentage of total turnover)	10	1.76	0.08	11.74	0.42
Maximum overnight overdraft	10	3.02	0.15	14.29	1.07
Total value of overnight overdraft (20 largest customers)	9	0.54	0.02	1.75	0.64
Total value of overnight overdraft (three largest customers)	9	0.37	0.01	1.32	1.13
Average share of overnight overdrafts in the total value of intraday overdraft limits on loro accounts	6	12.15	0.74	43.89	-
Average positive end-of-day balances on loro accounts	10	5.57	1.49	15.57	3.6
Maximum positive balance	10	16.06	2.42	40.28	6.56
Positive end-of-day balance (20 largest)	9	1.70	0.19	3.61	5.36
Positive end-of-day balance (three largest)	9	1.42	0.03	4.17	5.03

1) Number of banks responding.

The reason the value of overnight overdrafts is so low is clearly that overnight credit is rather expensive for customer banks, i.e. the interest rate applied by service-providing banks is higher than that due on money borrowed via the money market or from a central bank directly. Anecdotal evidence has shown that negative overnight balances on loro accounts are often caused by operational incidents resulting in expected incoming payments being deferred to the following day, or by human errors, e.g. in dispositions.

It should be noted that both intraday and overnight credit are generally provided without collateral. Very few banks provided figures on the actual level of collateralisation, which was usually very close to zero both for intraday and overnight overdrafts. There are two main reasons that credit lines are not collateralised: 1) service-providing banks do not want to commit themselves to providing intraday credit, and can thus reduce or even withdraw the credit line on an ad hoc basis; and 2) credit lines are, in principle, only granted to sound counterparties with a very limited risk of an immediate, unexpected default, so collateralisation is not considered necessary by the service-providing banks.

Finally, the average positive end-of-day balance on loro accounts accounted for approximately 5.57% of total turnover (up from 3.6% in 2010), with the maximum positive balance averaging 16.06%. Lower figures were reported for the positive end-of-day balances of both the 20 largest customer banks and the three largest customer banks, with values amounting to 1.70% and 1.42%. One reason that positive end-of-day balances are somewhat higher than overnight overdrafts is that a few service-providing banks – especially the central institutions of banking sectors (cooperative banks and savings banks) – may pay relatively attractive interest rates on positive balances on loro accounts. Customer banks therefore have little incentive to invest their liquidity surpluses on loro accounts via the money market.

3 RISKS AND POLICY CONSIDERATIONS

Correspondent banking services entail various kinds of risk, including legal, credit and liquidity, operational and concentration risk (as defined in Box 2). These risks are relevant for both the prudential supervision of banks (banking supervision) and the oversight of payment systems. Although the perspective of payment system overseers traditionally differs somewhat from that of banking supervisors, their objectives are closely interrelated.

The main focus of banking supervisors is on the potential risks for the solvency and liquidity of the bank itself. The main focus of overseers is on the potential risks for the smooth functioning of payment systems. In particular, overseers are interested in the appropriate mitigation of such risks and the smooth functioning of correspondent banking services in general to ensure, for example, that i) the processing and flow of payments are reliable, secure and efficient; ii) the function of service-providing banks as channels for indirect participation in payment systems works well; and iii) the failure of very large service-providing banks does not trigger domino effects.

The Eurosystem has not introduced specific oversight requirements for correspondent banks so as to avoid any double regulation of banks. Indeed, correspondent banking business is subject to the same banking supervision as other banking business. The Eurosystem has relied more on banking supervision and has worked together successfully with supervisors at different levels (European, global and national).

Looking ahead, the Eurosystem considers it worthwhile to continue the cooperation between Eurosystem central banks and euro area banking supervisors, with the aim of ensuring that oversight perspectives and concerns regarding correspondent banking are consistently and uniformly covered in the euro area.

Box 2 KEY RISKS IN CORRESPONDENT BANKING

Legal risk is the risk of a loss being incurred on account of the unexpected application of a law or regulation, or because a contract cannot be enforced. In correspondent banking relationships, different kinds of legal risk can materialise, especially in cross-border relationships, when laws of different jurisdictions may be applicable at the same time, e.g. with respect to the finality of payments (for settlement in internal bank accounts and for settlement in payment systems) and the insolvency of the customer bank or service-providing bank. Legal risks increase if important aspects of a correspondent banking relationship are not agreed in writing, i.e. in a contract. This is sometimes still the case in long-standing relationships that were established decades ago by the participants simply opening accounts for each other. However, owing to stricter regulations designed to prevent money-laundering, terrorist financing and tax evasion, for example, being imposed in most countries (“know your customer” (KYC) requirements), most banks currently maintain correspondent banking relationships on a solid contractual legal basis.

Credit risk is the risk that a counterparty will not settle, i.e. pay back, the full value of an obligation, neither when it becomes due, nor at any time thereafter. A customer bank faces a credit risk for the funds it holds in a nostro account at a service-providing bank. A service-providing bank has a credit risk when it grants intraday, overnight or longer-term credit to

its customer banks, i.e. when it allows negative balances on loro accounts. Credit risk could be mitigated through collateralisation. However, intraday credit granted to customer banks is typically not collateralised.

Liquidity risk is generally the risk that a counterparty will not settle, i.e. pay back, an obligation in full when it becomes due. A service-providing bank faces a liquidity risk when expected incoming payments via payment systems do not arrive (in time). When managing its overall intraday liquidity needs, it has to be aware that a liquidity risk does not only exist for its own expected incoming payments, but also for all the incoming payments of its customer banks. If expected incoming payments for customer banks are not received at all, this could lead to negative balances on customer banks' loro accounts at the end of a business day, which would in turn trigger credit risks. A customer bank faces the same liquidity risk as the service-providing bank when expected payments do not arrive in time. If this happens, it may not have enough balances in its nostro account to make scheduled outgoing payments on time. A different kind of liquidity risk could materialise when its service-providing bank does not have enough liquidity to make payments via a payment system. Outgoing payments that should be routed via a payment system are then (temporarily) blocked, even if the customer bank has enough balances in its nostro account.

Operational risk is generally the risk that regular services for processing correspondent banking transactions are disrupted. Disruption at customer banks is, in general, less problematic than disruption at service-providing banks, as customer banks are often relatively small in size and are only involved in a limited number of payment transactions, so the disruption would only affect the individual bank concerned. By contrast, disruption at a large service-providing bank may have severe consequences. Hundreds or even thousands of customer banks may be affected by an incident. The transactions of these customer banks cannot be executed, or at least the transactions of those that have not established alternative payment channels as back-up. Payment systems in which the service-providing bank is a direct participant can also be affected by the service disruption. A liquidity shortage in a system may be experienced, as not only the outgoing payments of the direct participants are missing, but also those from the customer banks that are indirect participants in the system. The problem of liquidity associated with the outgoing payments of a troubled bank being missing in a system can be exacerbated by incoming payments for this bank, as the liquidity of these payments is trapped, so the bank becomes a "liquidity sink".

Concentration risk in correspondent banking relationships can be of two types. On the one hand, there is the risk of external concentration, which occurs when correspondent banking business is concentrated on a relatively small number of service-providing banks. On the other hand, there is the risk of internal concentration, which occurs when correspondent banking business is concentrated within a service-providing bank on a relatively small number of large customer banks. A high degree of concentration among service-providing banks, or among customer banks, can increase the other risks outlined above, turning a problem for one bank into a problem for many banks, e.g. through the direct participation of a stricken bank in a payment system. The payments landscape and the financial sector more generally are increasingly being characterised by a complex network of interdependencies in which large banks, in particular, can become key channels of contagion.

CONCLUSION

The results of the eighth correspondent banking survey confirmed that correspondent banking remains an important channel for effecting payments in euro. As in previous surveys, both the number and value of payments processed by correspondent banks were very large. For instance, the total daily turnover of euro transactions settled through correspondent banking arrangements averaged more than €1.1 trillion (loro transactions of the banks surveyed). However, most payments originated through correspondent banking arrangements are settled through payment systems, while payments processed solely through correspondent banking arrangements represent almost 11% of the total value (and over 1% of the total volume) of payments processed by the banks surveyed.

The growth in loro turnover in 2012 follows a sharp contraction in 2010 and was primarily a result of the wholesale correspondent banking segment increasing in size. In terms of value, the wholesale correspondent banking segment is much larger than the retail correspondent banking segment. Moreover, the decrease in the volume of loro transactions in 2012 confirms the trend already witnessed in previous surveys of an outward movement of retail payments towards payment systems. On the other hand, the share of nostro transactions accounted for by retail correspondent banking has grown, according to the survey data – which may not be the case for the whole population of nostro correspondent banks, as nostro business may have been underrepresented in the survey.

The survey has also confirmed the growing concentration in correspondent banking business. This warrants the attention of payment system overseers, as the default of one of the larger and most interconnected correspondent banks might quickly trigger a domino effect on their respective customer banks and/or service-providing banks, as well as the risk of spillover to interdependent payment systems. Besides operational risk, liquidity and credit risks also pose a significant threat in correspondent banking business, with intraday credit exposures normally being uncollateralised.

Closer cooperation between overseers and banking supervisors could better ensure that potential risks in correspondent banking are covered uniformly throughout the euro area. The prospective transfer of supervision of euro area credit institutions to the ECB is likely to facilitate such closer cooperation.

ANNEXES

ANNEX I: PARTICIPATING BANKS

The table below shows the number of banks participating for all correspondent banking surveys conducted so far. In the eighth survey, 24 banks correctly submitted valid data, considerably fewer than in previous surveys. The reason for the decline is that, for the first time, a minimum business size (average daily turnover on loro accounts of €1 billion) was required in 2012 in order for banks to participate.

Banks participating in the surveys								
	1st survey 1999	2nd survey 2000	3rd survey 2002	4th survey 2003	5th survey 2005	6th survey 2007	7th survey 2010	8th survey 2012
<i>Total</i>	52	48	91	69	111	110	83	24

ANNEX 2: GENERAL AND ADDITIONAL QUESTIONNAIRES FOR THE 2012 SURVEY

General questionnaire for the 2012 survey

(Please refer to the survey methodology for additional explanations and definitions as to the questions)

Name of reporting bank*:

(* the name of the reporting bank will be forwarded to the ECB, together with the data (for the purpose of analysing interdependencies in the financial market with a view to promoting financial stability), unless the reporting bank requests the home NCB to make the data anonymous before transmitting it to the ECB)

1	Loro accounts denominated in euro
1.1	Accounts managed in the survey country for customer banks from the survey country [All euro-denominated accounts managed by the reporting bank (as service-providing bank) for customer banks from the survey country. For the <i>parent company</i> of a banking group, transactions on accounts maintained by the parent company and all its branches in the survey country are counted, but not transactions of subsidiaries. For <i>subsidiaries</i> , transactions by the subsidiary and its domestic branches are counted.]
1.1.1	Number of customer banks [Number of institutions, not the number of accounts provided to each institution.]
1.1.2	Number of transactions (daily average over the reporting period) [All credit and debit entries registered on all accounts of the customer banks, such as large-value, retail, domestic, cross-border payments, fees, etc.]
1.1.3	Value of transactions (daily average over the reporting period, in EUR) [All credit and debit entries registered on all accounts of the customer banks, such as large-value, retail, domestic, cross-border payments, fees, etc.]
OPTIONAL:	
1.1.4	Median size of payments over the reporting period (in EUR)
1.2	Accounts managed in the survey country for euro area customer banks outside the survey country [All euro-denominated accounts managed by the reporting bank for euro area customer banks outside the survey country. For the <i>parent company</i> of a banking group, transactions on accounts maintained by the parent company and all its branches in the survey country are counted, but not transactions of subsidiaries. For <i>subsidiaries</i> , transactions by the subsidiary and its domestic branches are counted.]
1.2.1	Number of customer banks [Number of institutions, not the number of accounts provided to each institution.]
1.2.2	Number of transactions (daily average over the reporting period) [All credit and debit entries registered on all accounts of the customer banks, such as large-value, retail, domestic, cross-border payments, fees, etc.]
1.2.3	Value of transactions (daily average over the reporting period, in EUR) [All credit and debit entries registered on all accounts of the customer banks, such as large-value, retail, domestic, cross-border payments, fees, etc.]
OPTIONAL:	
1.2.4	Median size of payments over the reporting period (in EUR)
1.3	Accounts managed in the survey country for non-euro area customer banks [All euro-denominated accounts managed by the reporting bank for non-euro area customers. For the <i>parent company</i> of a banking group, transactions on accounts maintained by the parent company and all its branches in the survey country are counted, but not transactions of subsidiaries. For <i>subsidiaries</i> , transactions by the subsidiary and its domestic branches are counted.]
1.3.1	Number of customer banks [Number of institutions, not the number of accounts provided to each institution.]
1.3.2	Number of transactions (daily average over the reporting period) [All credit and debit entries registered on all accounts of the customer banks, such as large-value, retail, domestic, cross-border payments, fees, etc.]

1.3.3 Value of transactions (daily average over the reporting period, in EUR)
[All credit and debit entries registered on all accounts of the customer banks, such as large-value, retail, domestic, cross-border payments, fees, etc.]

OPTIONAL:

1.3.4 Median size of payments over the reporting period (in EUR)

1.4 Loro accounts managed in branches outside the survey country but within the euro area

[All euro-denominated accounts managed for customer banks in the reporting bank's branches outside the survey country but within the euro area.]

1.4.1 Number of customer banks

[Number of institutions, not the number of accounts provided to each institution.]

1.4.2 Number of transactions (daily average over the reporting period)

[All credit and debit entries registered on all accounts of the customer banks, such as large-value, retail, domestic, cross-border payments, fees, etc.]

1.4.3 Value of transactions (daily average over the reporting period, in EUR)

[All credit and debit entries registered on all accounts of the customer banks, such as large-value, retail, domestic, cross-border payments, fees, etc.]

OPTIONAL:

1.4.4 Median size of payments over the reporting period (in EUR)

1.5 Total loro accounts (sum of Questions 1.1 to 1.4)

[Calculated sum total of the answers to Questions 1.1 to 1.4 above; all euro-denominated accounts managed for all customer banks in the reporting bank and its branches outside the survey country but within the euro area.]

1.5.1 Number of customer banks

[Number of institutions, not the number of accounts provided to each institution.]

1.5.2 Number of transactions (daily average over the reporting period)

[All credit and debit entries registered on all accounts of the customer banks, such as large-value, retail, domestic, cross-border payments, fees, etc.]

1.5.3 Value of transactions (daily average over the reporting period, in EUR)

[All credit and debit entries registered on all accounts of the customer banks, such as large-value, retail, domestic, cross-border payments, fees, etc.]

OPTIONAL:

1.5.4 Median size of payments over the reporting period (in EUR)

1.6 Importance ratio for loro accounts

In your total payment flow, what is the percentage of payments accounted for by customer banks?

[Euro-denominated transactions and accounts only. Percentage of transactions counted for answer to Question 1.5 in the total of all transactions on all euro accounts of the reporting bank, i.e. on euro accounts for customer banks, for non-bank customers and for the reporting bank itself. Please refer to the definition in Section 4.1 of the methodology for more details. Estimates of the ratio are acceptable; the method used for the estimation should be explained briefly in the response.]

1.6.1 In terms of volume, expressed as a percentage

1.6.2 In terms of value, expressed as a percentage

1.7 Overall ratio of settlement in payment systems for transactions booked on loro accounts and shares of the individual payment systems used for settlement

a) What percentage of customer banks' payments do you forward to, or receive from, payment systems in general (overall ratio)?
[Euro-denominated transactions and accounts only. Percentage of all customer banks' payments received from or forwarded to a payment system in the total of all transactions counted for answer to Question 1.5.]

b) Which payment systems do you use (names) and what is their individual share in settling customer banks' payments forwarded to, or received from, payment systems?

[Breakdown of the settlement of customer banks' payments forwarded to, or received from, payment systems counted for Question 1.7 a) per payment system. Shares of the payment systems used should add up to 100%.]

[Please refer to the definition in Section 4.2 of the methodology for more details. Estimates of the ratio are acceptable; the method used for the estimation should be explained briefly in the response.]

1.7.1 a) All payments in terms of volume, expressed as a percentage (overall ratio)

b) Payments in terms of volume, expressed as a percentage per payment system

1.7.2 a) All payments in terms of value, expressed as a percentage (overall ratio)

b) Payments in terms of value, expressed as a percentage per payment system

1.8	Intraday overdraft limits What is the total value (i.e. the sum total of the individual values) of the intraday overdraft limits across all euro-denominated loro accounts on an average day?
1.8.1	In EUR
1.8.2	As a percentage of own funds
1.9	Collateralisation of intraday overdraft limits What percentage of the loro account intraday overdraft limits is collateralised?
2	Nostro accounts denominated in euro
2.1	Accounts held with service-providing banks from the survey country [All euro-denominated accounts held by the reporting bank (i.e. as customer bank) with service-providing banks located in the survey country. For parent companies, including transactions of the parent company and its branches in the survey country, but excluding the transactions of subsidiaries. For subsidiaries, including only transactions related to the subsidiary. Accounts maintained by central banks are not included.]
2.1.1	Number of service-providing banks [Number of institutions, not the number of accounts held at each institution.]
2.1.2	Number of transactions (daily average over the reporting period) [All credit and debit entries registered on all accounts with the service-providing banks, such as large-value, retail, domestic, cross-border payments, fees, etc.]
2.1.3	Value of transactions (daily average over the reporting period, in EUR) [All credit and debit entries registered on all accounts with the service-providing banks, such as large-value, retail, domestic, cross-border payments, fees, etc.]
	OPTIONAL:
2.1.4	Median size of payments over the reporting period (in EUR)
2.2	Accounts held with euro area service-providing banks outside the survey country [All euro-denominated accounts held by the reporting bank with service-providing banks located outside the survey country. For parent companies, including transactions of the parent company and its branches in the survey country, but excluding the transactions of subsidiaries. For subsidiaries, including only transactions related to the subsidiary.]
2.2.1	Number of service-providing banks [Number of institutions, not the number of accounts held at each institution.]
2.2.2	Number of transactions (daily average over the reporting period) [All credit and debit entries registered on all accounts with the service-providing banks, such as large-value, retail, domestic, cross-border payments, fees, etc.]
2.2.3	Value of transactions (daily average over the reporting period, in EUR) [All credit and debit entries registered on all accounts with the service-providing banks, such as large-value, retail, domestic, cross-border payments, fees, etc.]
	OPTIONAL:
2.2.4	Median size of payments over the reporting period (in EUR)
2.3	Total nostro accounts denominated in euro (sum of Questions 2.1 and 2.2) [Calculated sum total of the answers to Questions 2.1 and 2.2 above; all euro-denominated accounts held by the reporting bank with all its service-providing banks. For parent companies, including transactions of the parent company and its branches in the survey country, but excluding the transactions of subsidiaries. For subsidiaries, including only transactions related to the subsidiary. Accounts maintained by central banks are not included.]
2.3.1	Number of service-providing banks [Number of institutions, not the number of accounts held at each institution.]
2.3.2	Number of transactions (daily average over the reporting period) [All credit and debit entries registered on all accounts with the service-providing banks, such as large-value, retail, domestic, cross-border payments, fees, etc.]
2.3.3	Value of transactions (daily average over the reporting period, in EUR) [All credit and debit entries registered on all accounts with the correspondents, such as large-value, retail, domestic, cross-border payments, fees, etc.]
	OPTIONAL:
2.3.4	Median size of payments over the reporting period (in EUR)

Additional questionnaire for the 2012 survey

(Please refer to the survey methodology for additional explanations and definitions as to the questions)

Name of reporting bank:

1	Intraday overdrafts
1.1	What is the percentage of customer banks that are eligible for intraday overdrafts on their accounts?
1.2	What is the total value (i.e. the sum of the individual values) of the intraday overdraft limits for your <i>20</i> largest customer banks (on an average day in the reporting period, in EUR)?
1.3	What is the total value (i.e. the sum of the individual values) of the intraday overdraft limits for your <i>three</i> largest customer banks (on an average day in the reporting period, in EUR)?
1.4	Qualitative information on the management of risks related to intraday overdrafts: Please describe how usage of intraday overdrafts is monitored during the day and explain the measures applied to minimise potential liquidity risk arising from unexpectedly high usage of the intraday overdrafts, as well as the measures to minimise the credit risks of overdrafts that may change during the day.
1.5	What percentage of your institution's total intraday overdraft limits is due to correspondent banking?
2	Overnight overdrafts (negative end-of-day balances)
2.1	What is the <i>total</i> value (i.e. the sum of the individual values) of overnight overdrafts across all euro loro accounts (daily average over the reporting period, in EUR)?
2.2	What is the <i>maximum</i> value (i.e. the sum of the individual values) of overnight overdrafts across all euro loro accounts during the reporting period (in EUR)?
2.3	What is the daily average share of overnight overdrafts in the total value of intraday overdraft limits on loro accounts (as a percentage)?
2.4	What is the total value (i.e. the sum of the individual values) of the overnight overdrafts for your <i>20</i> largest customer banks (daily average over the reporting period, in EUR)?
2.5	What is the total value (i.e. the sum of the individual values) of the overnight overdrafts for your <i>three</i> largest customer banks (daily average over the reporting period, in EUR)?
2.6	What proportion of the value of loro account overnight overdrafts is collateralised (as a percentage)?
3	Positive end-of-day balances
3.1	What is the <i>total</i> value (i.e. the sum of the individual values) of positive end-of-day balances across all euro loro accounts (daily average over the reporting period, in EUR)?
3.2	What is the <i>maximum</i> value of positive end-of-day balances across all euro loro accounts in the survey period (in EUR)?
3.3	What is the total value (i.e. the sum of the individual values) of positive end-of-day balances for the <i>20</i> largest customer banks (daily average over the reporting period, in EUR)?
3.4	What is the total value (i.e. the sum of the individual values) of positive end-of-day balances for the <i>three</i> largest customer banks (daily average over the reporting period, in EUR)?
4	Comparative data
4.1	20 largest customer banks (names of the banks¹⁾):
4.1.1	Total number of transactions of the 20 largest customer banks (<i>daily average</i> over the reporting period).
4.1.2	Total value of transactions of the 20 largest customer banks (<i>daily average</i> over the reporting period, in EUR)
OPTIONAL:	
4.1.3	Median size of payments (in EUR)
4.2	Each of the three largest customer banks:
Bank A (name of the bank¹⁾)	
4.2.1A	Number of transactions (<i>daily average</i> over the reporting period)
4.2.2A	Value of transactions (<i>daily average</i> over the reporting period, in EUR)

OPTIONAL:

4.2.3A Median size of payments (in EUR)

Bank B (name of the bank¹⁾)

4.2.1B Number of transactions (daily average over the reporting period)

4.2.2B Value of transactions (daily average over the reporting period, in EUR)

OPTIONAL:

4.2.3B Median size of payments (in EUR)

Bank C (name of the bank¹⁾)

4.2.1C Number of transactions (*daily average* over the reporting period)

4.2.2C Value of transactions (*daily average* over the reporting period, in EUR)

OPTIONAL:

4.2.3C Median size of payments (in EUR)

1) It would be highly appreciated if the reporting bank could provide the names of its 20 largest and its three largest customer banks respectively in order to enable the ECB to make use of the information for the purpose of analysing interdependencies in the financial market with a view to promoting financial stability.

