



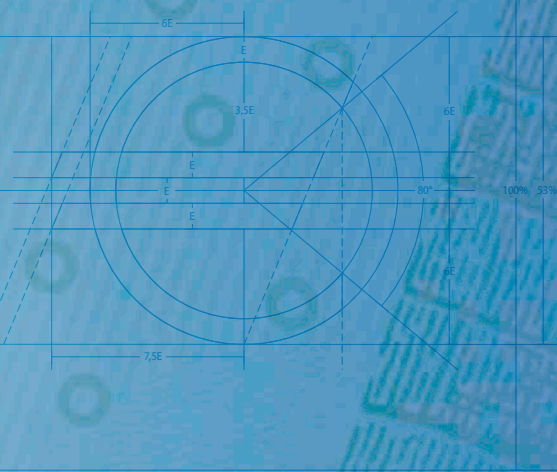
EUROPEAN CENTRAL BANK

EUROSYSTEM

Ninth survey on correspondent banking in euro

2014

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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 European Central Bank (ECB) was established.

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 indicators such as balance sheet size, staff numbers and the size of the branch network) and/or are known to be very active in providing payment services. The most recent survey (the ninth) was conducted in March 2014 and, like the eighth survey, only covered banks with an average daily turnover on loro accounts of at least €1 billion. This threshold was introduced in 2012 in order to increase the overall efficiency of the survey. 22 banks located in eight euro area countries participated in the ninth survey.

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

This report presents the results of the ninth survey and provides some risk and policy considerations with regard to correspondent banking. It is the second survey to be published after the eighth survey in 2013. The report also provides a trend analysis of developments in the correspondent banking business by comparing the results of the 2014 survey with the data obtained from the previous surveys.

The results of the ninth correspondent banking survey confirm 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 almost €1 trillion (loro transactions of the banks responding to the survey). However, most payments originated through correspondent banking arrangements are settled through payment systems, while payments processed solely through correspondent banking arrangements represent just over 12% of the total value (and less than 1% of the total volume) of payments processed by the respondent banks.

The rapid growth in loro turnover in 2012 has now reversed with the 2014 figure slightly below that of 2010. This could be explained by some large banks beginning to move away from correspondent banking to payment systems for low volume/ high value payments following the introduction of the Single Euro Payments Area (SEPA). SEPA was initially scheduled to be fully implemented in the euro area in February 2014 but was subsequently delayed to August 2014. However, in terms of value, the wholesale correspondent banking segment continues to be much larger than the retail correspondent banking segment. The latter has declined even further owing to the establishment of a new clearing house which has had an impact on the results for domestic retail banks' use of correspondent banks.

As regards concentration in correspondent banking business, the survey results suggest that the growth seen in previous surveys has ceased but at a very high level. Therefore, this continues to warrant 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 the correspondent banking business, with intraday credit exposures usually being uncollateralised.

The survey also indicates that, as a consequence of the high concentration of the business, major developments that affect the policies of only a subset of the respondent banks, such as the establishment of a new domestic clearing house, can nevertheless have a strong impact on the overall results of the survey. This could have implications for the future should the number of respondents continue to decline¹ and if the non-participating banks process high volumes of payments and/or high values. It is also too early to tell what the long-term influence of SEPA will be with regard to correspondent banking, but there is evidence that at least some banks are using it as an alternative where their correspondents are reachable through the SEPA framework.

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 these institutions. The Eurosystem has instead relied on banking supervision, working together with supervisors at various levels (European, global and national) with the aim of ensuring that risks in correspondent banking are consistently and uniformly covered in the euro area. The Single Supervisory Mechanism (SSM) – the new system of banking supervision comprising the ECB and the national competent authorities of the participating countries – is likely to facilitate such close cooperation.

¹ A bank may decide not to participate in the survey, or it may not fulfil the turnover threshold. See Section 1.1.



INTRODUCTION

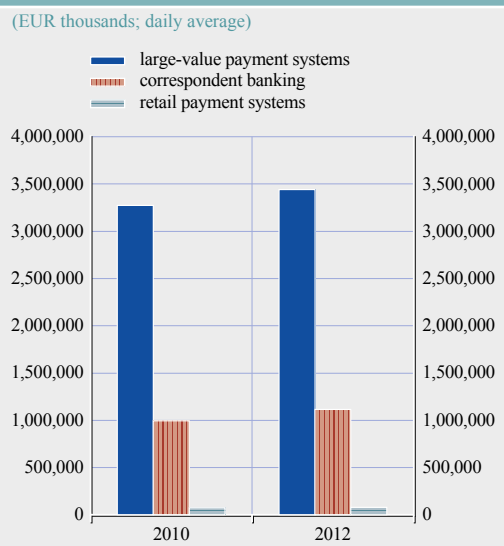
Correspondent banking arrangements are agreements or contractual relationships between banks to provide payment services for each other. Correspondent banking relationships play an important role in the processing of payment transactions in euro. They ensure payments flow between credit institutions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

The Eurosystem, comprising the ECB and the national central banks (NCBs) of Member States whose currency is the euro, 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, especially in terms of the overall value of payment transactions processed by large-value payment systems and retail payment systems. The average daily turnover of correspondent banking transactions reported by the service-providing banks that took part in the 2012 survey amounted to €1,115 billion, while the average daily turnover of payments in large-value payment systems and retail payment systems was €3,440 billion and €76 billion² respectively. All three figures showed an increase since 2010 (see Chart 1).

Correspondent banking services have been within the scope of the Eurosystem's oversight activity since the ECB was established, given their relevance for the smooth functioning of payment systems.³ While reports on previous surveys were only distributed to the banks participating, the Eurosystem decided to publish the report on the eighth survey, conducted in 2012, in order to increase the transparency of 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. This policy has been continued with the ninth survey, conducted in 2014. The report does not disclose any individual bank or country-specific data in order to ensure the anonymity of the respondent banks and protect the confidentiality of the information provided.

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 results of the ninth and most recent survey. Chapter 3 provides some risks and policy considerations with regard 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 reported by the respondent banks).

- 2 According to payments statistics from the ECB's Statistical Data Warehouse, which can be accessed via the ECB's website (www.ecb.europa.eu).
- 3 Promoting the smooth operation of payment systems is one of the basic tasks to be carried out through the European System of Central Banks (ESCB), pursuant to Article 127(2) of the Treaty on the Functioning of the European Union. The Eurosystem's oversight function covers not only payment systems, but also other payment, clearing and settlement arrangements, and related services. See European Central Bank (2011), *Eurosystem oversight policy framework*, July (<http://www.ecb.europa.eu/pub/pdf/other/eurosystemoversightpolicyframework2011en.pdf>).

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. However, 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 “loro” (or “vostro”) 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.

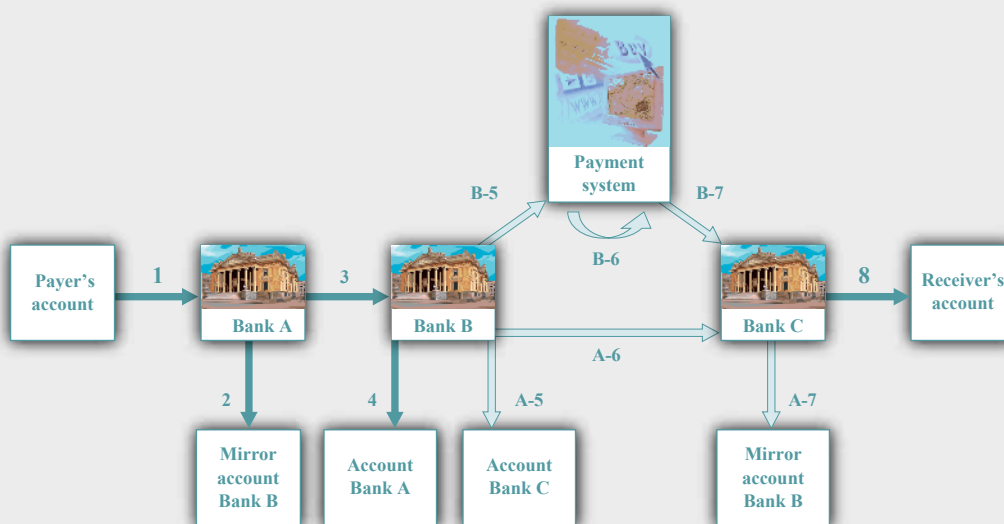
The chart below shows the settlement of a payment from Bank A to Bank C via a correspondent bank. Since Banks A and C do not hold accounts with each other, they use a third party, Bank B (the service-providing bank), which holds accounts for both Bank A and Bank C. In principle, there could be further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

¹ European Central Bank (2010), *The payment system: payments, securities and derivatives, and the role of the Eurosystem*, pp. 38-40 (<http://www.ecb.europa.eu/pub/pdf/other/paymentsystem201009en.pdf>).

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).

I THE EUROSISTEM'S SURVEYS ON CORRESPONDENT BANKING

I.1 SCOPE OF THE SURVEY

Participation in the surveys has always been voluntary. Before the survey is carried out, the NCBs decide which banks in their jurisdiction are to be invited to participate. In practice, each NCB invites the largest banks in its jurisdiction in terms of general business size (based on indicators such as balance sheet size, staff numbers and the size of the branch network) and/or banks that are known to be very active in providing payment services. The surveys are conducted in a decentralised manner. The NCBs collect participating banks' responses to the questionnaires and check them before transmitting them to the ECB for aggregation and further analysis. If a participating bank so requests, its name is withheld and its data anonymised before being forwarded to the ECB.

The surveys cover 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, it is likely that the surveys cover a very high proportion of all correspondent banking business. However, it is acknowledged that nostro account turnover may be underrepresented, as the largest banks mostly manage loro accounts in bilateral relationships.

The surveys are conducted on the basis of two questionnaires: (i) a general questionnaire for all participating banks, asking for quantitative and qualitative information about their correspondent banking business in euro (e.g. number of account relationships, volume and value of transactions); and (ii) an additional questionnaire for those participating banks that are very active in providing payment services (i.e. 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.

The number of banks participating in the survey has fluctuated over time, with a gradual increase from 52 banks in the first survey in 1999 to over 100 banks in 2005 and 2007, before dropping to 83 in 2010. The number of participating banks has decreased further as a result of the Eurosystem's decision, for the eighth survey, to focus only on the largest correspondent banks in order to increase the efficiency of the overall survey. (Indeed, the results of 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 decision to limit the participating banks to those with an average daily turnover on loro accounts of at least €1 billion resulted in the number of respondents dropping to 24. This trend continued in the 2014 survey where 22 banks submitted data.⁵ The turnover threshold will apply to future Eurosystem surveys on correspondent banking.

1.2 THE NINTH SURVEY ON CORRESPONDENT BANKING

The ninth survey was conducted in March 2014 and covered all correspondent banking transactions in euro that were booked on participating banks' accounts between 1 and 31 March 2014. For data not related to the daily turnover (e.g. number of customers and accounts managed), figures as at 31 March 2014 were reported.

The minimum turnover threshold introduced for the eighth survey was also applied in the ninth survey. As a result, 22 banks located in eight euro area countries participated, eight of which also replied to the additional questionnaire.⁶

There were very few changes to the questionnaires in the ninth survey in order to allow a consistent time series of data to be built up. Only one new question was added.⁷ As in the 2012 survey, each bank was asked if the relevant NCB could disclose its name to the ECB for the purpose of using the survey data to analyse institution-based interdependencies in payments and securities clearing and settlement

4 The general and additional questionnaires for the 2014 survey are attached to this report as an annex.

5 Nevertheless, NCBs willing to obtain 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 are not analysed by the ECB, nor are they reflected in the report.

6 Three banks eligible to respond to the additional questionnaire did not submit data while two banks that were not eligible to respond to it nevertheless did so.

7 This additional question asked participating banks to specify the most common transaction types in their total payment flow, i.e. settlement of payments, securities, derivatives or other. All but one of the 15 respondent banks stated "settlement of payments", indicating that payments represent the vast majority of transactions processed through correspondent banking arrangements. One bank mentioned securities as well, although in very small percentages.

systems. However, for the 2014 survey, there was a marked reduction in the number of participating banks willing to allow this – only a third of participating banks, down from a half in 2012.⁸

2 RESULTS OF THE NINTH SURVEY

According to the 2014 survey, the total average daily value of euro loro transactions channelled through correspondent banking arrangements in the euro area is close to €1 trillion, a slight decline from the 2012 survey results.

Although the total size of correspondent banking business is very large, service-providing banks reported that payments settled through payment systems (both retail and wholesale) continue to represent by far the majority of their overall payments in terms of both value and volume. As shown in Chart 2, just over 75% of the value and 81% of the volume of their daily payments in euro are settled in payment systems without any connection to correspondent banking arrangements. These figures are slightly down from almost 76% of the value and 82% of the volume in 2012.

Chart 2 Average daily payments in 2014 per settlement channel, broken down by value (outer ring) and volume (inner ring)¹⁾

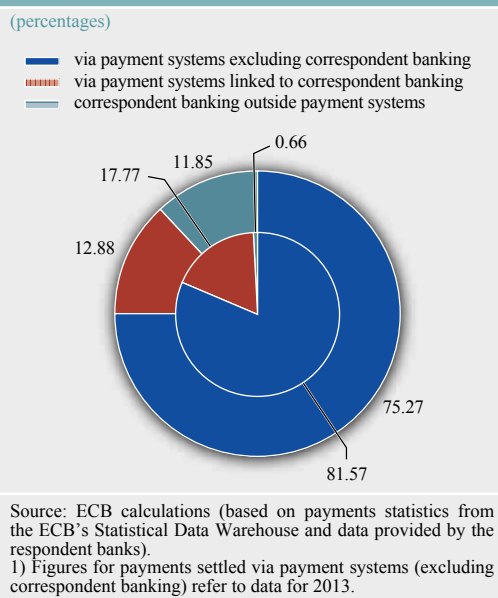
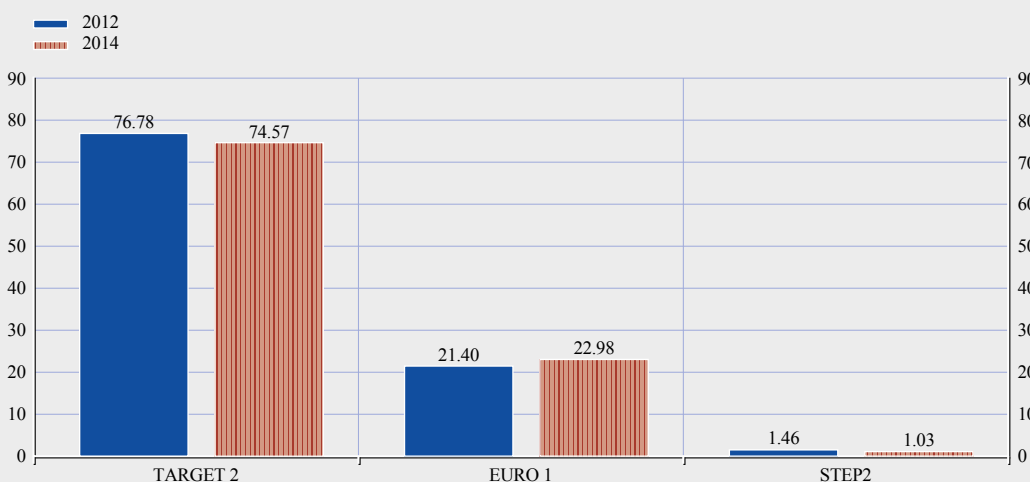


Chart 3 Settlement in payment systems

(value-weighted, percentages)



Source: Respondent banks.

⁸ Several banks that were willing to have their names disclosed in 2012 were not willing in 2014. Other banks allowed their names to be disclosed for the first time in 2014 having not wanted to do so previously. Comparison of the datasets submitted by anonymous banks in 2014 with certain identified banks in 2012 strongly suggest a correlation between them but without a naming consistency this cannot be confirmed.

Payments originated through correspondent banking arrangements but settled through payment systems account for around 13% of the value (unchanged from 2012) and almost 18% of the volume (slightly up from just under 17% in 2012). Finally, payments processed and settled solely through correspondent banking arrangements represent just under 12% of the total value of the transactions and 0.66% of the total number. The equivalent figures in 2012 were around 11% and slightly over 1% respectively.

The level of use of payment systems remained relatively stable between 2012 and 2014⁹ (Chart 3). TARGET2 remains the largest payment system in terms of the value of transactions processed (around 74%), followed by EURO1 and STEP2, with almost 23% and just over 1% of the total value settled respectively.

The main results of the ninth survey are presented in detail in the following sections. The first three sections deal with the value, volume and average size of euro transactions channelled 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 the data collected in the last seven surveys, i.e. the surveys conducted between 2002 and 2014 (see Table 1). As mentioned above, a turnover threshold was applied in the eighth and ninth surveys which limited the participating banks to those with an average daily turnover on loro accounts of at least €1 billion. This change in survey methodology thereby altered the population of respondent banks. In order to ensure comparability of the data over all of the surveys, therefore, the trend analysis focuses on those correspondent banks whose average daily turnover on their loro accounts is greater than €1 billion. This enables consistency in the correspondent banking population 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.¹⁰ Finally, the last two sections provide an analysis of the business concentration and intraday/overnight credit management in large correspondent banks.

Table 1 Transactions in correspondent banking business

Year	Respondents included (units)	Total						Average per service-providing bank							
		Total turnover		Number of transactions		Number of customer banks		Turnover		Number of transactions		Number of customer banks		Transaction size	
		(EUR millions; daily average)		(thousands; daily average)		(units; end of period)		(EUR millions; daily average)		(thousands; daily average)		(units; end of period)		(EUR; daily average)	
		Loro	Nostro	Loro	Nostro	Loro	Nostro	Loro	Nostro	Loro	Nostro	Loro	Nostro	Loro	Nostro
2002	31	643,336	251,639	14,459	184	26,003	2,178	20,753	8,987	466	7	839	38	44,493	1,365,288
2003	34	651,699	111,999	20,556	138	24,871	2,115	19,168	3,733	605	4	732	64	31,704	836,196
2005	29	897,042	368,703	26,186	306	21,508	1,142	30,932	12,714	903	11	742	39	34,257	1,205,336
2007	32	1,370,275	272,385	22,592	277	19,191	1,134	42,821	8,512	706	9	600	35	60,652	983,442
2010	28	995,807	235,677	22,211	293	18,309	900	35,565	8,417	793	10	654	32	44,835	804,763
2012	24	1,115,846*	158,619	24,485*	378	14,198	801	46,494*	6,609	1,020*	16	592	33	45,573*	419,252
2014	22	966,302	105,923	25,506	158	12,207	703	43,923	4,815	1,159	7	555	32	37,886	671,520

⁹ Percentages do not add up to 100% owing to missing values and rounding. Furthermore, not all respondents completed this section of the questionnaire.

¹⁰ Figures have been estimated in some cases, e.g. to avoid the influence of outliers or to resolve certain known issues in the data reported, on the basis of interpolation using available data.

Where relevant, the survey results differentiate between the 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. This report categorises the respondent banks as “retail” or “wholesale” based on the average size of their transactions. Those banks where the average transaction size (total loro turnover divided by the total number of loro transactions) on loro accounts is less than €10,000 are classified as retail banks, while all of the other banks are classified as wholesale banks.

Wholesale banks make up the vast majority of the banks participating in the survey. In 2012 only four of the 24 banks participating were retail banks. In 2014 this figure declined to just two out of 22.

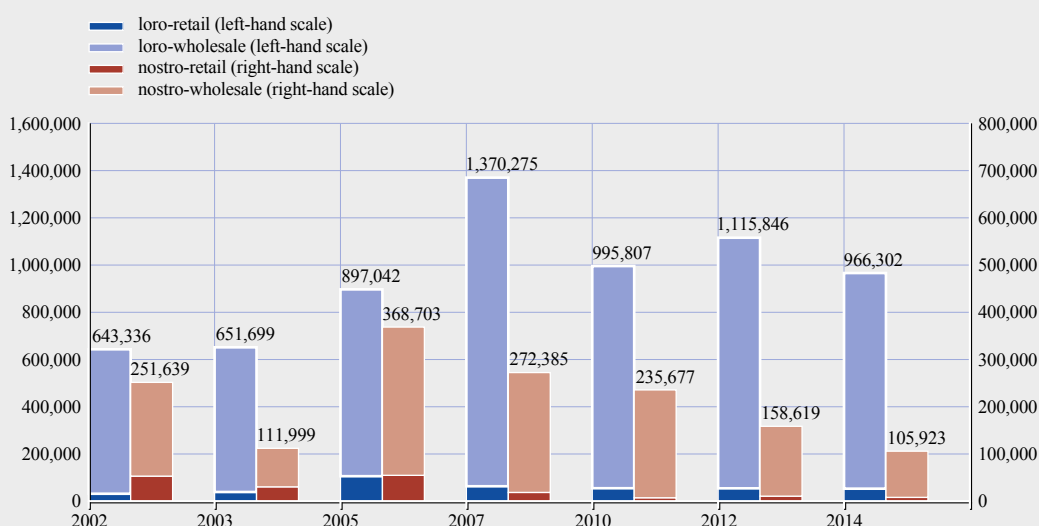
A comparison of the data submitted by banks participating in the ninth survey with data from the eighth survey revealed that one bank had provided incorrect loro data in 2012. This bank subsequently provided revised data which had a significant effect in particular on the overall loro figures for 2012. The revised figures have been integrated in this report and can be identified in the tables by the symbol*.

2.1 VALUE OF TRANSACTIONS

As shown in Chart 4, the total value of turnover on loro accounts decreased in 2010, after stable growth in the period from 2002 to 2007. It increased again in 2012, reaching over €1.1 trillion per day, before declining again in 2014 to €966 billion, just under the 2010 level. 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. The increase in the average

Chart 4 Turnover of loro and nostro transactions

(EUR millions; daily average)



Source: Respondent banks.

transaction size (see Section 2.3 below) suggests that the wholesale correspondent banking segment may have been the main driver of the growth in loro turnover in 2012. Furthermore, the data suggests that the decrease in 2014 may be an early sign of the effects of SEPA implementation by some banks. Some respondents also confirmed the impact of SEPA on their correspondent banking activities.

The total value of turnover on nostro accounts started to decrease in 2007 and has continued to do so over subsequent surveys. It decreased from around €272 billion per day in 2007 to €236 billion in 2010, €159 billion in 2012 and then further down to almost €106 billion per day in 2014. The decrease from 2005 to 2007 can probably be attributed to a clarification to the survey methodology, namely that nostro accounts with NCBs should not be included in the survey responses. It is likely that the significant turnover with central banks that had been counted in 2005 was simply not included for the 2007 survey.

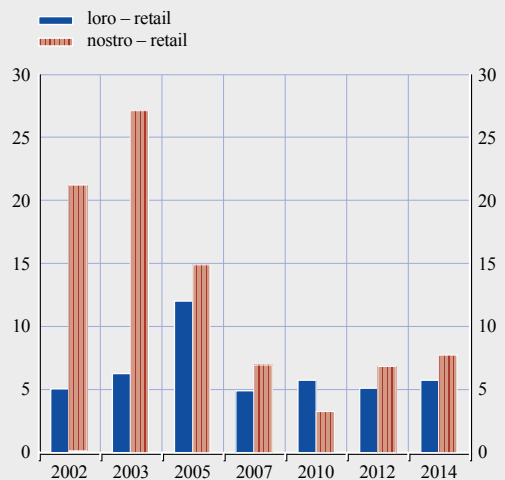
In comparison with loro transactions, nostro transactions account for a much smaller part of the survey responses, mainly owing to two factors. First, the respondent banks, being the largest banks in their jurisdictions, tend to be the service provider in a correspondent banking relationship and consequently have 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 fulfil the threshold (introduced in 2012) or simply because they are not located in the euro area. In 2014, for instance, just over 50% of the total value of loro transactions was related to customer banks located outside the euro area.¹¹ This is a slight increase on the 2012 figure of just under 47%.

As would be expected, the daily turnover of loro transactions continues to vary significantly between the banks included in the 2014 survey, as was the case in 2012. A total of eight banks reported loro transactions in excess of €20 billion per day (down from nine in 2012, including the revised figures from one bank), while another two banks reported figures of between €10 billion and €20 billion per day (unchanged from 2012), i.e. ten banks had a total turnover of more than €10 billion per day. As far as nostro transactions are concerned, 12 banks reported an average daily nostro turnover in excess of €1 billion (down from 14 in 2012), with two banks having a turnover in excess of €20 billion (as in 2012) and eight having a turnover of less than €10 billion. Finally, comparing loro and nostro transactions, only three of the 22 participating banks reported a higher turnover on nostro accounts than on loro accounts, none of which were amongst the largest banks in the survey.

In 2014 the retail segment represented only 5.50% and 7.69% of the total business for loro and nostro respectively. In 2010 the results of the survey implied that banks were moving towards the use of payment systems for their retail payments, rather than correspondent banks.¹² Chart 5 suggests that this movement

Chart 5 Market share of the retail segment

(as a percentage of the total daily value)



Source: Respondent banks.

¹¹ No banks from non-euro area countries participated in the ninth survey.

¹² European Central Bank, *The payment system: payments, securities and derivatives, and the role of the Eurosystem*, op. cit., p. 202.

has ceased with regard to loro business and has slightly reversed with regard to nostro business. However, the retail correspondent banking segment nevertheless remains much smaller than the wholesale banking segment in terms of value. The 2014 results for the retail segment are broadly in line with the historical data from 2007 onwards.

2.2 VOLUME OF TRANSACTIONS

The average daily number of transactions on loro accounts increased until 2005, before decreasing in 2007 and remaining stable until 2010. It then increased in 2012 and again in 2014, with loro transaction figures now close to their 2005 peak (see Chart 6).

In contrast to the sharp decrease in value between 2007 and 2010, the number of transactions on loro accounts remained stable in the aftermath of the crisis. Indeed, the number of retail transactions tends to remain 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.

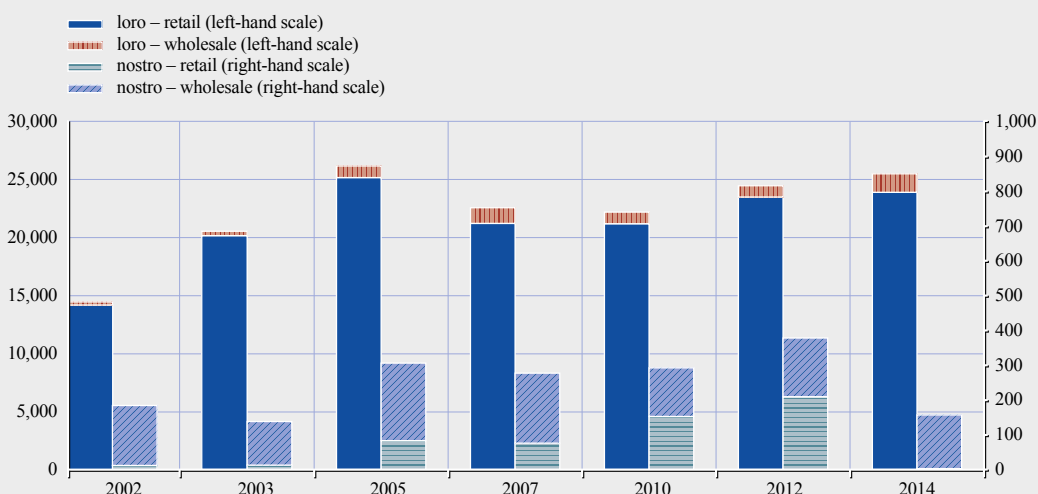
The return to pre-crisis levels of both values and volumes on loro accounts could be considered to be a sign of a return to economic normality. However, while the average number of transactions is increasing, the average value of those transactions is decreasing (albeit not hugely) at the same time. The 2014 results might indicate a shift from correspondent banking to payment systems for low volume/high-value payments following the introduction of SEPA.

The results of the next survey will provide more information on this trend. SEPA was fully implemented in August 2014, i.e. after the ninth survey was conducted.

As far as transactions on nostro accounts are concerned, their average daily volume peaked in 2012 at 378,000 before declining sharply to 158,000. 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,

Chart 6 Number of loro and nostro transactions

(thousands; daily average)



Source: Respondent banks.

as smaller customer banks do not participate in the survey. As a result, any significant change reported by the (large) banks participating in the survey has an exponential effect on the nostro transactions figures.

While nostro wholesale figures have remained similar to those of 2012, nostro retail figures have declined to below their previous lowest figures in 2002 and 2003. This can be explained by the fact that two banks began using a domestic clearing house to settle their domestic retail transactions, while still using correspondent banking for large-value cross-border transactions.

At the bank level, only two service-providing banks processed more than one million transactions per day in 2014 (unchanged since 2010). This suggests that their business is geared towards domestic retail payments. 14 banks processed more than 10,000 transactions per day, up from 13 in 2012 but 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 just over 96% of the total volume of transactions on loro accounts before declining to just under 94% in 2014. Nostro volumes showed a steady rise from 2002 to a high of over 55% in 2012 before dropping to less than 2% in 2014 (see Chart 7).

This drop can be explained by the fact that two banks began processing their (high-volume) domestic nostro retail transactions through a domestic clearing house instead of via correspondent banking, as mentioned above.

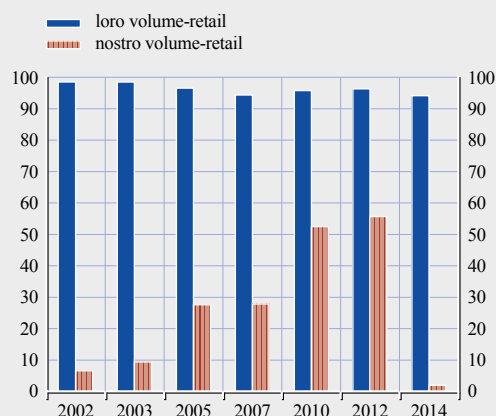
2.3 AVERAGE TRANSACTION SIZE

In 2014 the average loro transaction size was €37,886, a decline of just under 17% from 2012, while the average nostro transaction size increased sharply to €671,520, although this average is still only half of the nostro figure at its 2002 peak (see Chart 8). The average nostro transaction size 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. The increase in the average nostro transaction size is in sharp contrast to the decrease in the average loro transaction size, as nostro transactions reported in the survey are now limited to only a small number of high-value payments.

At the bank level, the average loro transaction size ranges from €1,187 to over €7 million. Although this range is extremely wide, it is still far lower than in 2012 when the equivalent figures were €2,021 to almost €18 million. Six of the 22 banks participating reported an average loro transaction size of over €1 million with a further two banks just under this figure, 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. However, this is a marked decrease from 2012 when 11 out of 24 banks reported an average transaction size of over €1 million. This, again, could be seen as evidence

Chart 7 Market share of the retail segment

(percentages; volume)



Source: Respondent banks.

of banks moving the processing/settlement of large-value payments away from correspondent banking for loro transactions.

At the other end of the spectrum, two banks reported average loro transaction sizes below €10,000, indicating that their focus is mainly on retail payments (down from four in 2012). This confirms previous assumptions that some banks specialise in different kinds of correspondent banking business.¹³

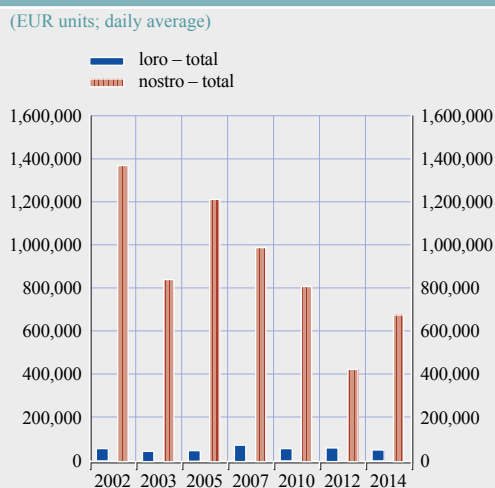
2.4 NUMBER OF CUSTOMER/SERVICE-PROVIDING BANKS

The number of correspondent banking relationships has decreased steadily since 2002 and this trend continued in the 2014 survey (see Chart 9). The possible reasons for this decline are manifold.

First, the single currency has reduced the need for euro area banks to maintain 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 only need one euro area bank as an access point in order to process payments to/from any recipients within the euro area.

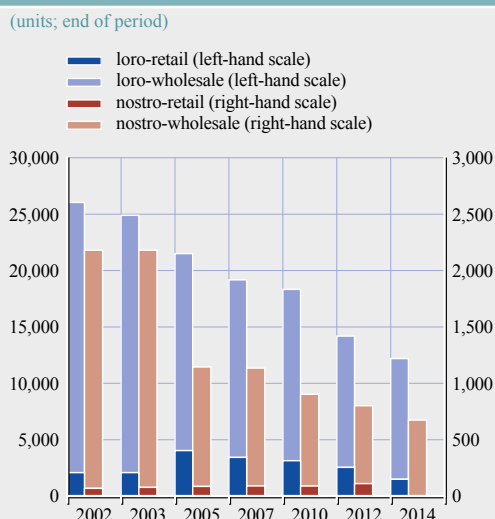
Second, the costs of maintaining account relationships have risen in recent years, not least owing to increased compliance requirements.¹⁴ Thus, it is likely that banks are assessing the need for account relationships and their benefits more closely than before. Large service-providing banks, in particular, are trying to end reciprocal account relationships and limit themselves to maintaining loro accounts.

Chart 8 Trends in the average size of transactions



Source: Respondent banks.

Chart 9 Trends in the number of customer/service-providing banks



Source: Respondent banks.

13 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.

14 EU legislation provides a European framework around the Financial Action Task Force (FATF) anti-money laundering and counter-terrorism financing (AML/CTF) standards. Moreover, the Bank for International Settlements (BIS) has issued guidelines supplementing the FATF standards and the Wolfsberg Group (an association of global banks) a set of principles on correspondent banking. 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.

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

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 arrangements with certain customer banks whose financial reputation had worsened in the aftermath of the crisis. Banks may have moved from a risk-based to a zero tolerance approach in this respect. Furthermore, market uncertainty may have led to some customer banks changing the correspondent bank with which they have a relationship or making arrangements with other ones in order to reduce their dependency on a single service-providing bank.

The five largest banks in terms of total loro turnover account for 34% of the total number of customer banks reported in the survey (down from 46% in 2012). It seems that, on average, banks with a higher loro turnover tend to have fewer customer relationships and this correlation is increasing over time.

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 respondent bank or within the euro area has continued to decline. The figure was 37% in 2014, almost 45% in 2012, 52% in 2010 and slightly under 38% in 2007.

As stated in a separate research paper examining the results of the eighth survey,¹⁵ this supports the view that banks which serve other credit institutions located in a different country are becoming increasingly powerful players in the correspondent banking market.

2.5 CONCENTRATION

In this section, three ratios are used 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 and eight largest firms in an industry. These concentration ratios range between 0% and 100%, with 100% indicating an extremely concentrated oligopoly.

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.

15 See Franch, Fabio (2014), "Correspondent banking in euro: bank clustering via self-organizing maps", *Journal of Financial Market Infrastructures*, Vol. 2, Issue 4, pp. 3-20 (<http://www.risk.net/journal-of-financial-market-infrastructures/technical-paper/2352026/correspondent-banking-in-euro-bank-clustering-via-self-organizing-maps>).

Table 2 Concentration indicators for value and volume in correspondent banking

(percentages)				
Concentration index	Value		Volume	
	2014	2012	2014	2012
Concentration ratio 4	78.28	80.23*	2.45	2.75*
Concentration ratio 8	87.94	90.75*	30.46	34.34*
Herfindahl	47.47	44.46*	51.64	46.88*

*Revised figures

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

Although there was a slight decline in both the value and volume concentration ratios between 2012 and 2014, the Herfindahl values and volumes increased slightly over the same period. Therefore, while the Herfindahl index suggests an industry that is becoming more concentrated and less competitive over time, the concentration ratios, by contrast, suggest that the market shares of the largest banks have reached a plateau.

However, all three ratios point to the same conclusion – that of a highly concentrated correspondent banking market, typical of an oligopoly.

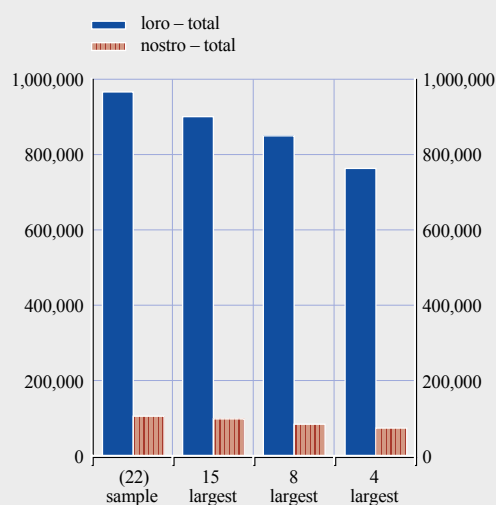
In general, there are several reasons behind the high concentration in correspondent banking. These include (i) the fall in the number of correspondent banking networks within the euro area, owing to the existence of the single currency; (ii) the specialisation of some banks in the provision of correspondent 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.¹⁶

The high concentration in correspondent banking business is also evident in Chart 10, which compares the turnover of the loro and nostro transactions of the 15, eight and four largest banks with total turnover in 2014.

With regard to internal concentration, the banks that responded to the additional questionnaire also reported figures for the total turnover of their 20 and three largest customer banks. On average, 71.95% of the total value of transactions was generated by the 20 largest customer banks (ranging from almost 0% to 98%), down from 74.07% in 2012, while the average for the three largest customer banks was

Chart 10 Turnover of loro and nostro transactions by sample size

(EUR millions; daily average in 2014)



Source: Respondent Banks

16 See European Central Bank, *The payment system: payments, securities and derivatives, and the role of the Eurosystem*, op. cit., p. 202.

48.70% (ranging from almost 0% to 79%), up from 44.26% in 2012. Finally, the largest customer of each bank accounted, on average, for 35.05% of the service-providing bank's turnover in terms of value (ranging from almost 0% to just above 65%), up from 30.57% in 2012.¹⁷

2.6 INTRADAY AND OVERNIGHT CREDIT¹⁸

In the 2014 survey, those banks that responded to the additional questionnaire answered most of the questions concerning intraday and overnight credit granted to their customer banks and their customers' end-of-day positive balances, as summarised below in Table 3.

On average, service-providing banks grant access to intraday credit to under a fifth of their customer banks (19.44%, compared with about 31% in 2012). This reflects an ever greater general contraction in interbank credit exposures owing to an increasing aversion to counterparty risk. Anecdotal evidence of this increasing aversion to risk has already been documented in other business areas, e.g. the money markets. Some service-providing banks continue not to grant intraday credit to any of their customer banks.

Where intraday credit is granted, e.g. to foster smooth payment flows, service-providing banks continue to set very conservative credit limits although there has been a slight increase from the 2012 figures. The size of intraday credit limits granted to the 20 largest customer banks averaged around 14% of the service-providing banks' loro turnover (up from 8% in 2012 but still far lower than the 31% figure in 2010). For the three largest customer banks, the total value of intraday credit limits accounted, on average, for around 16% of loro turnover (up from around 4% in 2012). The average percentage of total intraday credit originated by correspondent banking arrangements

Table 3 Intraday and overnight credit in correspondent banking relationships

(percentages)	2014				2012
	No. ¹⁾	Average	Minimum	Maximum	Average
Share of customer banks with access to intraday credit	8	19.44	0	37.90	30.98
Intraday credit limit (20 largest)	8	14.03	0	41.53	7.98
Intraday credit limit (three largest)	8	16.40	0	84.37	4.37
Correspondent banking-related intraday credit as a percentage of total intraday credit	8	25.92	0	52	54.00
Overnight overdraft (as a percentage of total turnover)	8	1.03	0.06	3.40	1.76
Maximum overnight overdraft	8	2.39	0.17	7.79	3.02
Total value of overnight overdraft (20 largest customers)	6	0.34	0.04	1.03	0.54
Total value of overnight overdraft (three largest customers)	6	0.32	0.05	0.99	0.37
Average share of overnight overdrafts in the total value of intraday overdraft limits on loro accounts	-	-	-	-	12.15
Average positive end-of-day balances on loro accounts	8	13.18	1.86	47.08	5.57
Maximum positive balance	8	24.55	0.01	95.24	16.06
Positive end-of-day balance (20 largest)	8	3.08	0.37	11.53	1.70
Positive end-of-day balance (three largest)	8	2.64	0.31	15.83	1.42

1) Number of banks responding. Two banks' responses have been included despite their not reaching the €10 billion threshold for the additional questionnaire. See footnote 6.

¹⁷ It should be noted that the 2014 and 2012 additional questionnaire data are not directly comparable. In 2014 two banks responded to the additional questionnaire despite not being eligible to do so. Three banks that were eligible did not provide data. Indeed, very few banks provided answers – ten in 2012 and eight in 2014 – and only a subset of the eight banks answered the comparative data section on their largest customer banks.

¹⁸ As indicated above, the 2012 and 2014 data are not directly comparable.

dropped to just under 26% of a service-providing bank's total intraday credit – less than half of the 2012 figure of 54%. However, it is worth noting that, given the small sample size, it is possible for such large fluctuations between datasets to occur without explanation.

The overnight overdrafts reported were significantly lower than the intraday overdrafts, in line with data from previous surveys. The average overnight overdraft was 1.03% of total loro turnover, whereas the maximum overnight overdraft averaged 2.39%. The total value of overnight overdrafts for the 20 largest customers averaged 0.34% of their loro turnover. The average for the three largest customers was 0.32%. All reported figures were slightly down on the corresponding results in 2012. None of the banks answered the question on the average share of overnight overdrafts as a proportion of the total value of overnight credit limits in 2014.

The value of overnight overdrafts is so low because overnight credit is rather expensive for customer banks: 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 generally very close to zero both for intraday and overnight overdrafts. There are two main reasons why credit lines are not collateralised. First, service-providing banks do not want to commit themselves to providing intraday credit, and can thus reduce or even withdraw a credit line on an ad hoc basis. Second, credit lines are, in principle, only granted to sound counterparties with a very limited risk of immediate, unexpected default. The service-providing banks therefore do not consider collateralisation to be necessary.

Finally, the average positive end-of-day balance on loro accounts accounted for approximately 13.18% of total turnover (a steady upward trend from 5.57% in 2012 and from 3.6% in 2010), with the maximum positive balance averaging 24.55%. Lower figures were reported for the positive end-of-day balances of both the 20 and three largest customer banks, with values amounting to 3.08% and 2.64% (both increases on 2012 where the results were 1.70% and 1.42% respectively). One reason why positive end-of-day balances are somewhat higher than overnight overdrafts is that some 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. Alternatively, in times of low interest rates, banks may not make the effort to place funds in the money market but decide to leave them on the respective loro account.

3 RISKS AND POLICY CONSIDERATIONS

Correspondent banking services entail various kinds of risk, including legal, credit, liquidity, operational and concentration risk. 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 somewhat different from the perspective of banking supervisors, their objectives are closely interrelated.

Banking supervisors focus on the potential risks to the solvency and liquidity of an individual bank. The main focus of payment system overseers, however, is the potential risks to the smooth functioning of payment systems. 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 is 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 these institutions. Indeed, correspondent banking is subject to the same banking supervision as other banking business. The Eurosystem continues to rely more on banking supervision and has worked together successfully with banking 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 under the auspices of the SSM, with the aim of ensuring that oversight perspectives and concerns regarding the risks in correspondent banking are consistently and uniformly covered in the euro area. The SSM – the new system of banking supervision comprising the ECB and the national competent authorities of the participating countries – is likely to facilitate such close cooperation. The SSM's main aims are to contribute to the safety and soundness of credit institutions and the stability of the European financial system and to ensure consistent supervision.

CONCLUSION

The results of the ninth 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 almost €1 trillion (loro transactions of the respondent banks). However, most payments originated through correspondent banking arrangements are settled through payment systems, while payments processed solely through correspondent banking arrangements represent over 12% of the total value (and less than 1% of the total volume) of payments processed by the respondent banks.

The rapid growth in loro turnover in 2012 has now reversed with the 2014 figure slightly below that of 2010. This could be explained by some large banks beginning to move away from correspondent banking to payment systems for low volume/high-value payments following the introduction of SEPA. SEPA was initially scheduled to be fully implemented in the euro area in February 2014 but was subsequently delayed to August 2014. However, in terms of value, the wholesale correspondent banking segment continues to be much larger than the retail correspondent banking segment. The latter has declined even further owing to the establishment of a new clearing house which has had an impact on the results for domestic retail banks' use of correspondent banks.

The steady increase in the volume of loro transactions in 2014 suggests that wholesale correspondent banking is returning to pre-crisis levels, at least for high volume/low-value payments. On the other hand, the share of nostro transactions accounted for by retail correspondent banking has dropped sharply according to the survey data. This may not be the case for all nostro correspondent banks, however, as nostro business may have been underrepresented in the survey.

As regards concentration in the correspondent banking business, the survey suggests that the growth seen in previous surveys has ceased but at a very high level. This continues to warrant 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 its 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 the correspondent banking business, with intraday credit exposures usually being uncollateralised.

Given the high concentration in the correspondent banking business, major developments that affect the policies of only a subset of the respondent banks, such as the establishment of a new domestic clearing house, can nevertheless have a strong impact on the overall results of the survey. This could have implications for the future should the number of respondents continue to decline and if the non-participating banks process high volumes of payments and/or high values. It is also too early to tell what the long-term influence of SEPA will be with regard to correspondent banking, but there is evidence that at least some banks are using it as an alternative where their correspondents are reachable through the SEPA framework.

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.

Close cooperation between overseers and banking supervisors should ensure that potential risks in correspondent banking are covered uniformly throughout the euro area. The SSM – the new system of banking supervision comprising the ECB and the national competent authorities of the participating countries – is likely to facilitate such cooperation.

ANNEX I GENERAL AND ADDITIONAL QUESTIONNAIRES FOR THE 2014 SURVEY

General questionnaire for the 2014 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 parent company 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 subsidiaries, 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.]
1.1.4	OPTIONAL: 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 parent company 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 subsidiaries, 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.]
1.2.4	OPTIONAL: 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 customer. For the parent company 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 subsidiaries, 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, including such as large-value, retail, domestic, cross-border payments, fees, etc.]
1.3.4	OPTIONAL: 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.]
1.4.4	OPTIONAL: 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.]
1.5.4	OPTIONAL: 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 payments 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)
1.7.2	b) Payments in terms of value, expressed as a percentage per payment system
1.7.3	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 Transaction types In your total payment flow, what are the most common transaction types (i.e. settlement of payments, securities, derivatives, other: please name them if other) and what is your estimate of their individual share?
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.]
2.1.4	OPTIONAL: 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.]
2.2.4	OPTIONAL: 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.]
2.3.4	OPTIONAL: Median size of payments over the reporting period (in EUR)

Additional questionnaire for the 2014 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)? Qualitative information on the management of risks related to intraday overdrafts:
1.4	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 (<i>daily average</i> over the reporting period)
4.2.2B	Value of transactions (<i>daily average</i> 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 (<i>daily average</i> over the reporting period)
4.2.2C	Value of transactions (<i>daily average</i> 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.	