

## **FSB Correspondent Banking Data Report – Update**

6 March 2018

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# FSB Correspondent Banking Data Report – Update

## Executive summary

This report presents updated results to the *FSB Correspondent Banking Data Report* of July 2017,<sup>1</sup> based on additional data from January – June 2017 derived from information provided by SWIFT to the FSB, through the intermediation of the National Bank of Belgium and Deutsche Bundesbank. A fuller analysis, including methodological improvements currently being worked on, will be published by mid-2018, based on end-2017 data.

The more limited data available for this report shows that the reduction in the total number of active correspondents, as measured by the number of banks that have sent or received messages corridor by corridor in a given month, continued in the first half of 2017. While there may be some seasonality in the changes in the latest six months, the number of active correspondents in June 2017 is also lower than in June 2016.

Although no comprehensive regional breakdown is available for this mid-year data, the average number of active corridors per country (i.e. of direct relationships with countries, again measured by the flow of SWIFT messages) increased in the first half of 2017 in Oceania, Eastern Europe, and Northern America, while the rest of the Americas and of Europe, as well as Africa and Asia continued to experience declines. However, it is difficult to draw firm conclusions from six-monthly data.

The twelve-month rates of change between June 2016 and June 2017 appear to confirm increases in the average number of active corridors per country for North America and Eastern Europe and slower declines than in the year June 2015 to June 2016 in Africa and Oceania. On the other hand, the rate of decline between June 2016 and June 2017 increased in the Americas (excl. North America), Asia and Europe (excl. Eastern Europe) compared with June 2015 to June 2016.

Over the period from 2011 to mid-2017, the Americas (excl. North America) and Oceania are the most affected regions in terms of the average number of active corridors per country and the rate of the decline of this variable. Europe (excl. Eastern Europe) remains the region that has experienced the largest absolute decline in the average number of active corridors per country, which may be the result of the greater use of regional payment systems and is counterbalanced by the fact that this region remains the one with the highest average number of active corridors per country.

In line with previous analyses in the Committee on Payments and Market Infrastructures (CPMI) report of July 2016 and *FSB Correspondent Banking Data Report* of July 2017, data continues to support that, at the global level, the decline in the number of active correspondents (as defined in this report) has not resulted in a lower number of payment messages (volume) or a lower underlying value of the messages processed through SWIFT. The higher volume of messages could in part reflect a lengthening of payment chains, as discussed in the July 2017 report.

Regarding concentration of correspondent banking, the Gini coefficient on the number of active correspondents per corridor slightly decreased in the first half of 2017, but remains at high levels.

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<sup>1</sup> Available at <http://www.fsb.org/2017/07/fsb-correspondent-banking-data-report/>

The average volume of messages handled by a given correspondent has increased in all regions, although to a lesser extent in Africa and Eastern Europe.

As noted in other reports, the data does not represent a comprehensive account of correspondent banking cross-border financial flows. Because financial institutions have multiple means of exchanging information about their financial transactions, SWIFT messages flows do not represent complete market or industry statistics.

## 1. Introduction

This report presents updated results, based on end-June 2017 data, from the *FSB Correspondent Banking Data Report* of July 2017<sup>2</sup> derived from information provided by SWIFT to the FSB, through the intermediation of the National Bank of Belgium (as overseer of SWIFT) and Deutsche Bundesbank (as Chair of the CPMI Working Group on Correspondent Banking).

This mid-year update provides an overview of evolutions affecting correspondent banking, however with fewer details than the publications of July 2017, which presented full year data. The FSB has agreed with SWIFT to an arrangement under which SWIFT will provide six-monthly data updates until at least end-2018, thereby expanding the data set beyond the years 2011-2015 analysed by CPMI in its 2016 report on correspondent banking.<sup>3</sup> In addition, the FSB is also continuing its discussions with SWIFT on the regular provision of an enhanced data set to monitor future trends. A fuller analysis, including methodological improvements currently being worked on, will be published by mid-2018, based on end-2017 data.

## 2. Data description: The SWIFT dataset<sup>4</sup>

SWIFT provided an anonymised and aggregated data set similar to the one analysed by CPMI in its July 2016 report, covering 2011 to June 2017:

- The data set includes message types MT 103 (single customer credit transfer, by which a financial institution instructs another financial institution to transfer funds for the benefit of a single customer) and MT 202 (general financial institution transfer, used to request the movement of funds between financial institutions not related to an underlying customer credit transfer<sup>5</sup>), as well as subtypes.
- The data contain sent and received volumes (referring to the number of messages) and nominal values for corridors (unidirectional country pair<sup>6</sup>), as well as data on the number of active correspondents in each corridor.

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<sup>2</sup> Available at <http://www.fsb.org/2017/07/fsb-correspondent-banking-data-report/>

<sup>3</sup> <http://www.bis.org/cpmi/publ/d147.htm>

<sup>4</sup> Data relating to SWIFT messaging flows is published with permission of S.W.I.F.T. SCRL. SWIFT © 2018. All rights reserved. Because financial institutions have multiple means of exchanging information about their financial transactions, SWIFT messages flows do not represent complete market or industry statistics. SWIFT disclaims all liability for any decisions based, in full or in part, on SWIFT statistics, and for their consequences. Analysis of SWIFT statistics were prepared by staff of the National Bank of Belgium. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of the National Bank of Belgium. The National Bank of Belgium does not guarantee the accuracy of the data included in this work. Significant input has been provided by Deutsche Bundesbank (which led the CPMI analysis of SWIFT data and chairs the CPMI Working Group on Correspondent Banking) and the Bank of Mexico (which chairs the CBCG Workstream on Data Collection and Analysis).

<sup>5</sup> Transfers related to an underlying customer credit transfer that was used using the cover method should use the MT 202 COV message type, which were not included in the data set to avoid double counting with MT 103, given that an MT 103 is sent directly to the financial institution of the final recipient of funds when the cover method is used.

<sup>6</sup> Unidirectional means that country pair A to B, and country pair B to A are differentiated.

- The data also contain the currencies, volumes and nominal values per message type for each corridor.

SWIFT's messaging services are used by more than 11,000 financial institutions in more than 200 countries and territories around the world. As SWIFT is the most commonly used messaging standard for cross-border payments, SWIFT captures a meaningful amount of correspondent banking activity and the data deliver an accurate picture of the actual payment traffic between jurisdictions.

However, the following factors should be underlined:

- Financial institutions have multiple means to exchange information about their financial transactions. For instance, transfers between the offices of the same bank or banking group in different countries may use other messaging systems specific to the bank or banking group. Therefore, SWIFT statistics on financial flows do not represent complete market or industry statistics.
- For confidentiality reasons, underlying data for corridors with fewer than four transactions or four correspondents were not included in the data set provided by SWIFT. However, this restriction, which only applies at corridor level for the data of that corridor, mainly impacts the availability of the cumulative value of transactions (when there are fewer than four transactions), not the information whether a corridor is active or not. Therefore, an active corridor is a corridor with at least one transaction in either direction (for the relevant month, currency or message type).
- The nominal values of the transfers have been converted to US dollars using daily exchange rates. This means that changes in the value may partially reflect changes in the exchange rate.
- The data do not differentiate payments cleared via correspondent banking arrangements from those sent via transnational financial market infrastructures, such as TARGET2 in Europe.
- While a payment message generally reflects the existence of an account relationship between the banks sending and receiving the message for correspondent banking transactions using the serial method,<sup>7</sup> this is not the case when the cover method is used. In the cover method, a bank exchanges MT 103 with banks with which it has no account relationships, and therefore a count of “correspondents” based on the analysis of messages may be higher than when measured by the number of accounts. However, the use of the cover method, evidenced by the number of MT 202 COV messages (Graph 1), appears stable over the period, at least at the global level.

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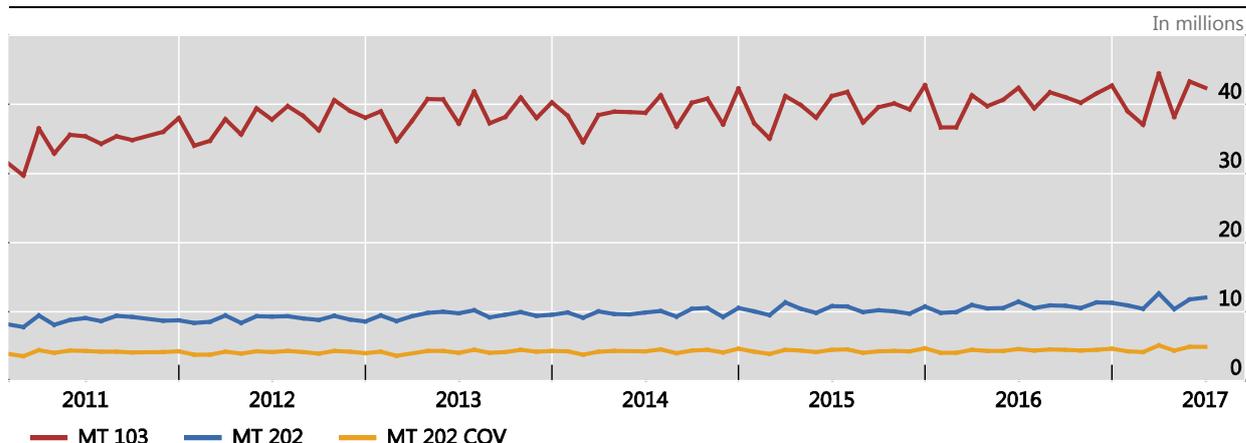
<sup>7</sup> As explained in the CPMI report of July 2016, in the serial method, “the payment information and the settlement instruction travel together in the MT 103 message and there exists a direct account relationship between each connected pair of banks in the payment chain” (when not considering the use of payment systems), whereas “the cover method decouples the settlement from the payment information. The MT 103 with the payment information is sent directly through the SWIFT network from the originating bank to the receiving bank, whereas the settlement instruction (the cover payment) is sent via intermediary banks through the path of direct correspondent banking relationships.” (CPMI, Correspondent Banking, p. 34).

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## Monthly transaction volume by message type

In millions

Graph 1



Sources: SWIFT Watch; National Bank of Belgium.

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### 3. Scale of the withdrawal from correspondent banking

SWIFT data (Graph 2) shows that the decline in the number of active corridors and active correspondents continued in the first half of 2017, based on monthly data. As noted above, an active corridor is defined as a country pair that processed at least one transaction.

The count of active correspondents measures, corridor by corridor, the number of banks that have sent or received messages. As a result, correspondents active in more than one corridor are counted several times. This explains the count of some 470,000 active correspondents in June 2017 in Graph 2, whereas there are approximately 11,000 financial institutions connected to SWIFT.<sup>8</sup>

There is a clear downward trend in both the number of active corridors and the number of active correspondents per month from 2011 to mid-2017, though more acute from 2014 onwards, representing over the period a reduction of 7.9% of active corridors (from 13,072 to 12,034) and 8% of active correspondents (from 510,619 to 469,684). There was a significant drop at the beginning of 2017 (which seems a recurring seasonal event, associated with Chinese New Year) and the average of monthly values for the number of active correspondents in the first half of 2017 are 2.8% below the first semester of 2016. The number of active corridors in the first half of 2017 declined by 1.2% over the first semester of 2016.

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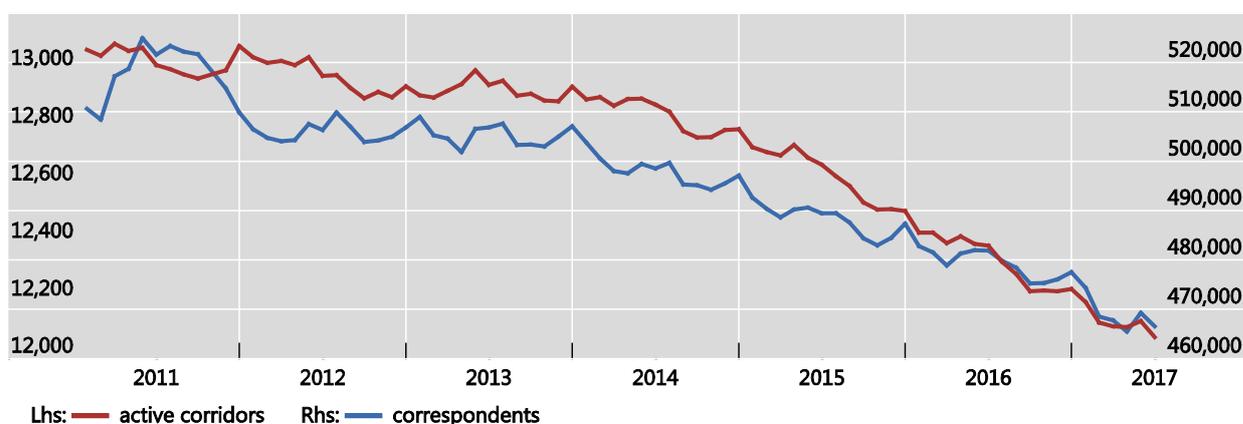
<sup>8</sup> The data set is at BIC8 level (branch/subsidiary level depending on the legal set-up). In addition, in this graph, there is a multiplication effect as activity was counted separately by currencies and message types.

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## Number of active corridors per month and number of active correspondents

Three month moving averages

Graph 2



Note: An active corridor is defined as a country pair that processed at least one transaction. The count of active correspondents measures, corridor by corridor, the number of banks that have sent or received messages. As a result, correspondents present in more than one corridor are counted several times. Moreover, the data set is at BIC8 level (branch/subsidiary level depending on the legal set-up). In addition, in this graph, there is a multiplication effect as activity was counted separately by currencies and message types. There are approximately 11,000 financial institutions connected to SWIFT.

Sources: SWIFT Watch; National Bank of Belgium.

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As explained in the *FSB Correspondent Banking Data Report* of July 2017, the reduction of the count of correspondents can mean that:

- there are fewer banks in that region that send or receive messages, for instance as a result of:
  - A reduction in the number of banks in the region (mergers between banks, loss of banking licence, ...)
  - A bank using a messaging system other than SWIFT (for instance an intragroup messaging system)
- banks in that region send messages to, or receive messages from, fewer countries (ie, they are active in fewer corridors). This happens for instance:
  - if a bank that had a correspondent bank X in country A and two correspondent banks Y and Z in country B loses the relationship with bank X;
  - If a bank that was using the cover payment method moves to the serial payment method: instead of sending MT 103 messages directly to the banks of the final recipients of wire transfers (presumably in multiple countries), it only sends them to the banks with which it has an account (likely in a lesser number of countries).

Terminations of correspondent banking relationships can result in a reduction in the number of active corridors, i.e. of direct relationships between two countries, although flows are likely to continue flowing through intermediary countries. The Graph 3 and 4 show the change in the average number of counterparty countries by region, that is, the average number of corridors for each jurisdiction within a region.

Over the period from 2011 to mid-2017, the average number of active counterparty countries declined in all regions, although the rates varied significantly. The Americas (excl. North America) and Oceania are the most affected regions. These regions have the lowest average number of counterparty countries (24.6 and 32.1, respectively) and experienced the largest rate of decline (15.7% and 22.2%, respectively). Africa and Europe (excl. Eastern Europe) also saw declines over the period, though a greater average number of counterparty countries in Europe may have helped cushion the impact in this region. As discussed in the FSB Correspondent Banking Data Report of July 2017, and the CPMI report on Correspondent banking of July 2016, the decline in Europe can in part be attributed to the introduction of the Single European Payment Area (SEPA).

Although no comprehensive regional breakdown is available for this mid-year data, the average number of active corridors per country increased in the first half of 2017 in Oceania, Eastern Europe, and Northern America, while the rest of the Americas and Europe, as well as Africa and Asia continued to experience declines. However, it is difficult to draw firm conclusions from six-monthly data, as illustrated by the case of Oceania in table 1, where a modest increase in the first half of 2016 was followed by a decrease in the second half of that year.

Given the seasonal movements, especially at the beginning of the year, the comparison of full years appears preferable to assess the regional evolution. When comparing changes between June 2016 and June 2017 to changes between June 2015 and June 2016, improvements are apparent in North America and Eastern Europe, as well as in Africa and Oceania, although the two latter regions still experienced a decline. On the other hand, the rate of the decline increased in the Americas (excl. North America), Asia and Europe (exc. Eastern Europe) (Table 1).

Change in the average number of counterparty countries by region for selected time periods

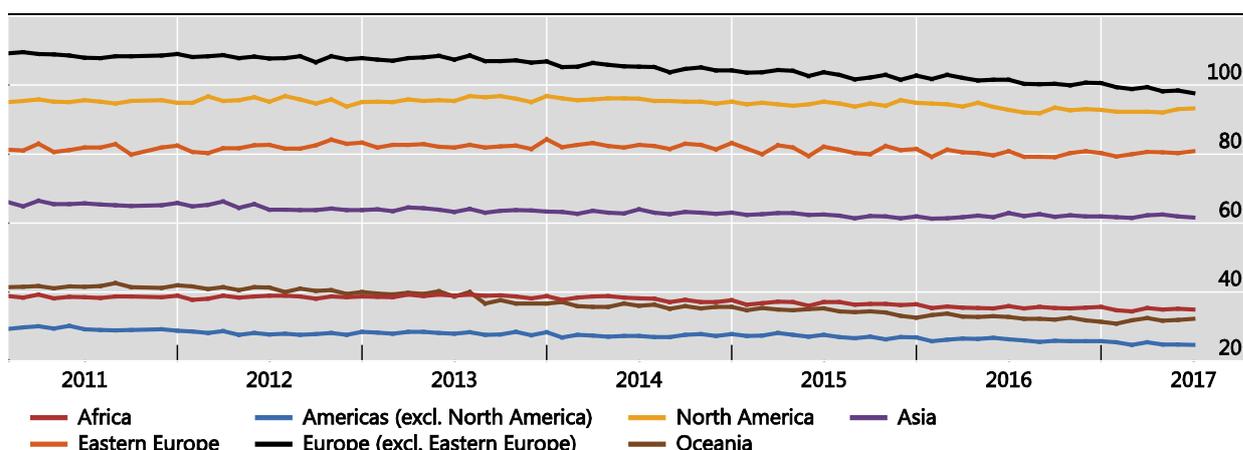
Table 1

| Regions                           | Growth rate              |             |             |                         |                          |                         | Average number |              |
|-----------------------------------|--------------------------|-------------|-------------|-------------------------|--------------------------|-------------------------|----------------|--------------|
|                                   | 2017-<br>H1 <sup>9</sup> | 2016-<br>H2 | 2016-<br>H1 | Jun. 2016-<br>Jun. 2017 | Jun. 2015-<br>June. 2016 | Jan. 2011-<br>Jun. 2017 | Jan.<br>2011   | Jun.<br>2017 |
| Africa                            | -2.2%                    | -0.7%       | -1.4%       | -2.9%                   | -3.1%                    | -10.2%                  | 38.8           | 34.8         |
| Americas (excl.<br>North America) | -4.0%                    | -2.1%       | -1.9%       | -6.0%                   | -4.6%                    | -15.7%                  | 29.2           | 24.6         |
| Asia                              | -0.5%                    | -1.5%       | 1.5%        | -2.0%                   | 0.6%                     | -6.7%                   | 66.0           | 61.5         |
| Eastern Europe                    | 0.7%                     | -0.6%       | -0.9%       | 0.1%                    | -1.7%                    | -0.5%                   | 81.2           | 80.8         |
| Europe (excl.<br>Eastern Europe)  | -2.9%                    | -1.0%       | -1.2%       | -3.9%                   | -2.0%                    | -10.6%                  | 109.2          | 97.6         |
| Northern<br>America               | 0.4%                     | 0.0%        | -2.1%       | 0.4%                    | -2.5%                    | -1.9%                   | 95.0           | 93.2         |
| Oceania                           | 2.4%                     | -4.0%       | 0.6%        | -1.7%                   | -7.1%                    | -22.2%                  | 41.3           | 32.1         |

<sup>9</sup> H1: first half of the year (here, Dec. 2016- Jun. 2017)

Average number of counterparty countries by region

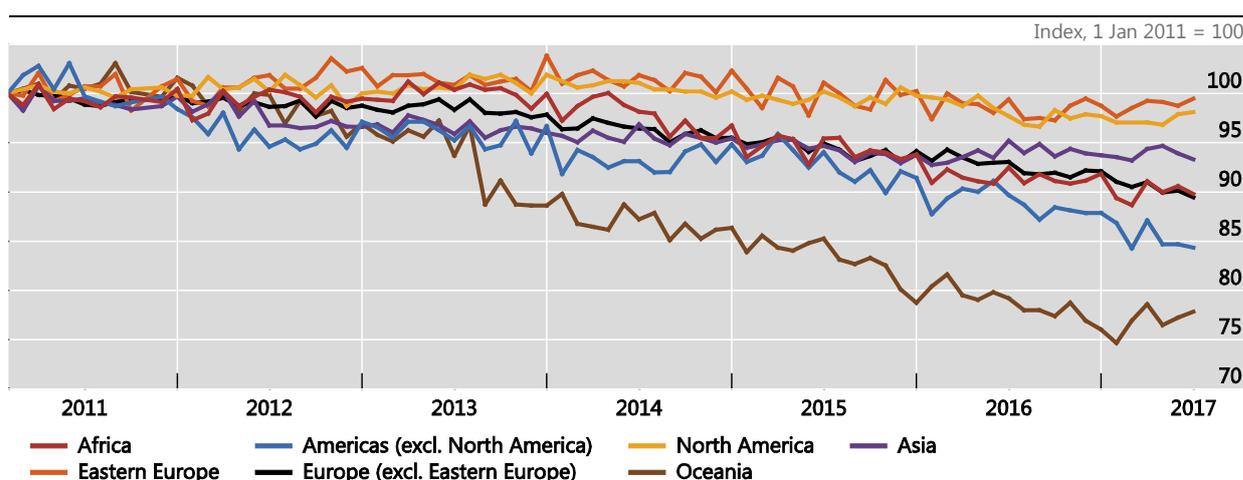
Graph 3



Sources: SWIFT Watch; National Bank of Belgium.

Average number of counterparty countries by region (Index)

Graph 4



Source: SWIFT Watch; National Bank of Belgium; Bank of Mexico.

## 4. Effects of the reduction in correspondent banking relationships

This section examines the effects of the decline of correspondent banking relationships on various variables, including on the volume and value of payments, length of the chains of payments, concentration on the correspondent and respondent side, and use of currencies.

### 4.1 Impact on the volume and value of payments

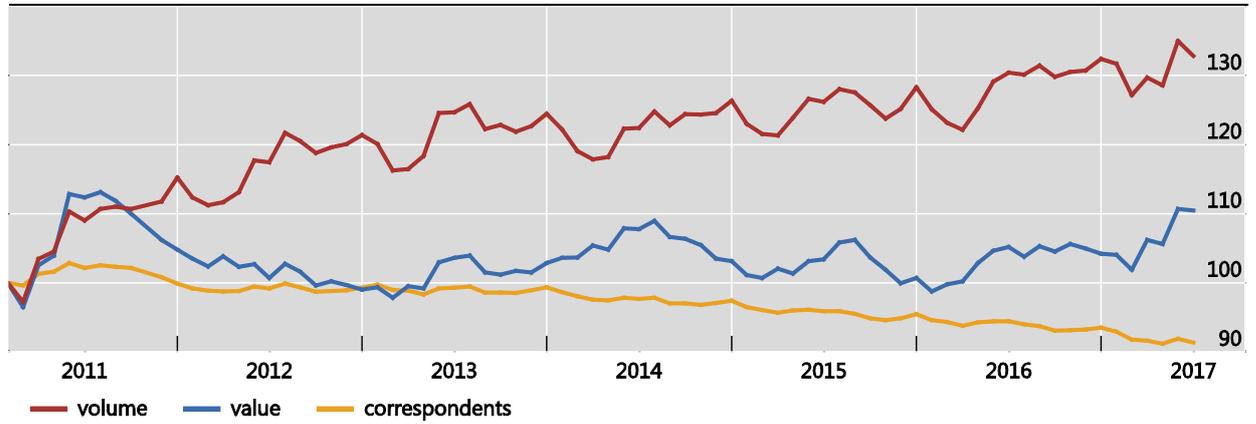
As noted by CPMI in their July 2016 report, at the global level, the decline in the number of active correspondents (as defined earlier in this report) has not resulted in a lower number of payment messages (volume) or a lower underlying value of the messages processed through

SWIFT. On the contrary, the number of messages has increased between 2011 and mid-2017 by 37% (Graph 5). The next sections discuss whether this could, at least in part, be a sign of longer chains of payment and concentration of the market.

Evolution of the number of messages (volume), their total value in USD, and the number of active correspondents<sup>1</sup>

Monthly data, 3-month moving averages, Jan 2011 = 100

Graph 5



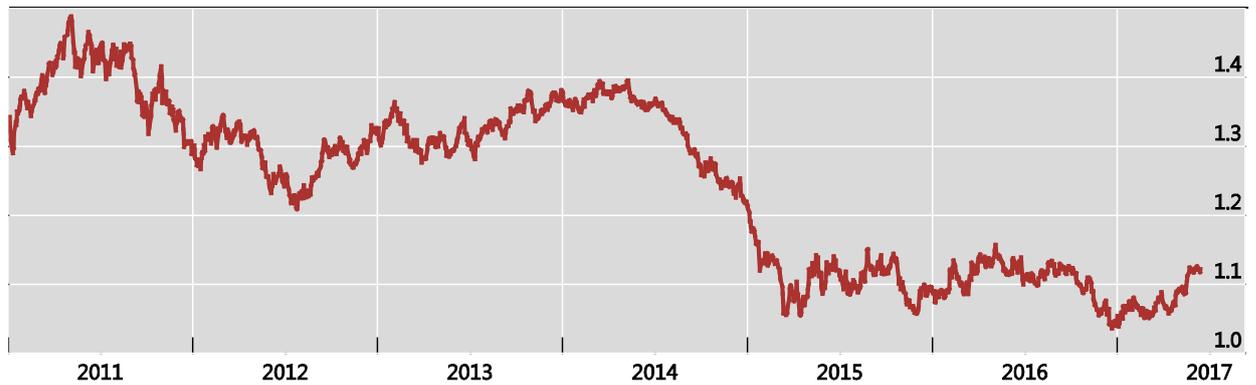
<sup>1</sup> MT 103 and MT 202 excluding MT 202 COV.

Sources: SWIFT Watch; National Bank of Belgium.

The changes to the value appear to reflect in a large part changes in the EUR/USD exchange rate, given that EUR represent 30% to 40% of the value of transfers over the period, against 40% to 50% for USD.

EUR-USD exchange rate

Graph 5 A

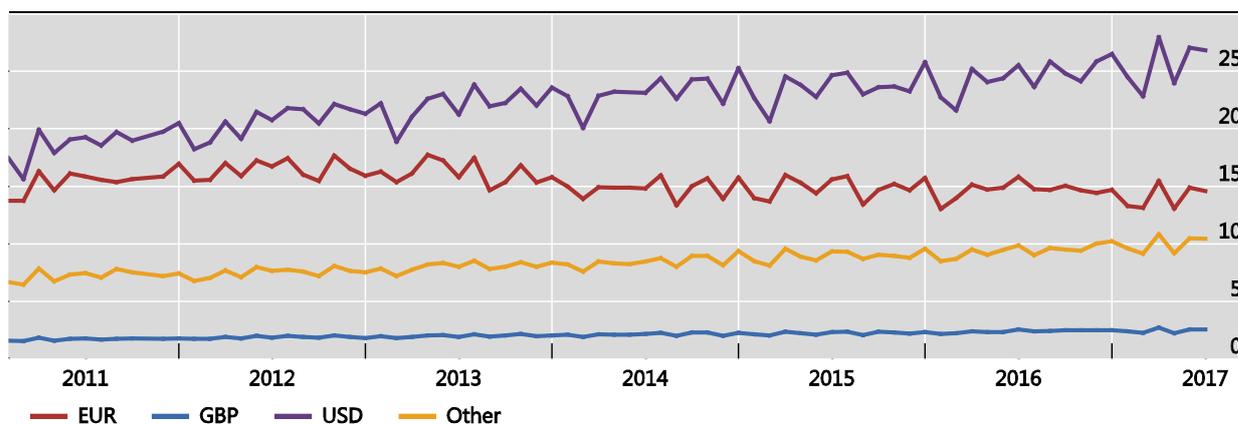


Source: National data.

## Evolution of the number of messages by currency<sup>1</sup>

In millions

Graph 6



<sup>1</sup> Monthly data, MT 103 and MT 202 excluding MT 202 COV.

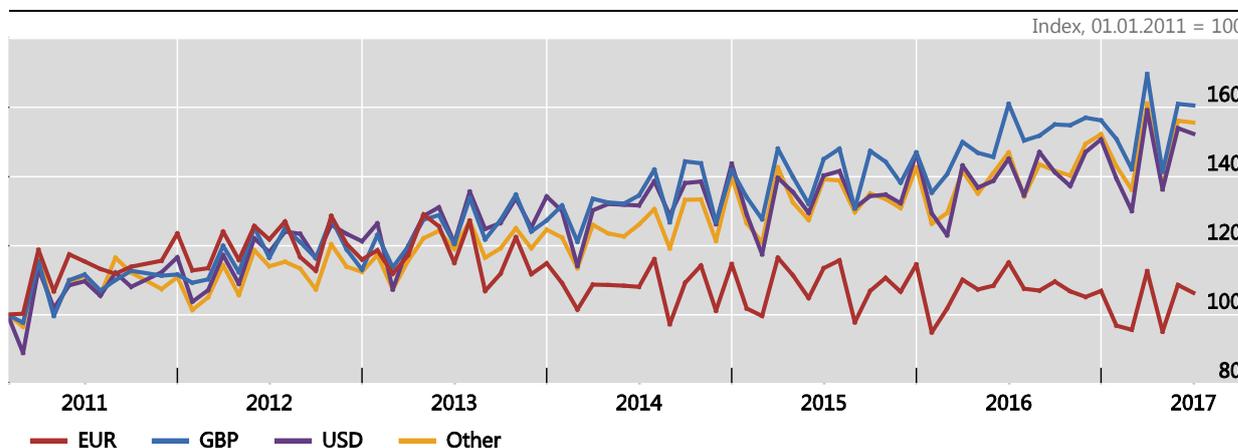
Sources: SWIFT Watch; National Bank of Belgium.

As noted in the July 2017 report, the increase in the number of payment messages (volume) can mainly be attributed to payments in USD, GBP and other currencies, while the volume remains roughly stable over the period for payments in EUR (Graph 6 shows absolute values, and Graph 7 shows the same in index form).

## Evolution of the number of messages by currency<sup>1</sup>

Monthly data, Jan 2011 = 100

Graph 7



<sup>1</sup> MT 103 and MT 202 excluding MT 202 COV.

Sources: SWIFT Watch; National Bank of Belgium.

At the country level, a reduction in the number of active correspondents may be associated with a reduction in the volume of both sent and received messages, and reduction in value, as shown in the July 2017 report. Country level data is not available for this update, but will be presented again for the yearly update as of end-2017.

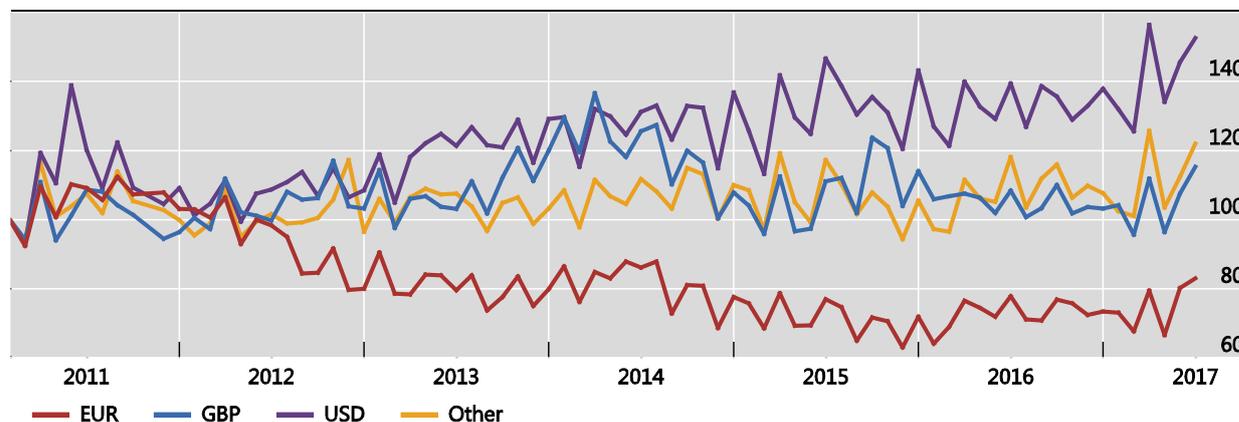
At the global level and for all currencies taken together, the evolution of the value of transaction in messages sent shows no clear trend (Graph 5) but Graph 8 shows that USD payments follow

a clear upward trend, increasing 53% from 2011 to mid-2017; whereas EUR payments follow a downward trend, with a decline of 17% for the same period. GBP payments and other currencies' payments do not follow a discernible trend.

Share of transaction value of MT 103 and MT 202 messages by currency

Jan 2011 = 100 for each currency independently

Graph 8



Sources: SWIFT Watch, National Bank of Belgium.

## 4.2 Impact on the length of payment chains

As can be seen in the previous section, the reduction in the number of correspondent relationships does not necessarily lead to a reduction in payments sent and received. In cases where the corridor between countries A and B becomes inactive, payments may continue to flow through a third country C that still has active corridors with A and B.

The increasing volume of payments while the number of relationships decreases could be consistent with a lengthening of payment chains, as shown in Graph 9, although the increase in the volume of messages with limited increase in value may also reflect a greater use of correspondent banking for smaller transactions. The CPMI report of July 2016 had noted that the rerouting of payments through third countries could lead to an increase in correspondent banking activity. Indeed, in the serial method described earlier in this report, when a bank X wants to send a payment to bank Z through bank Y, X sends an MT 103 to Y, which then sends an MT 103 to Z. Therefore, two messages are sent instead of one if banks do not have accounts with each other and use instead a third bank as an intermediary. Available statistics do not allow identification of the messages that are part of the same chain of payments, and therefore the lengthening of payment chains cannot be measured accurately.

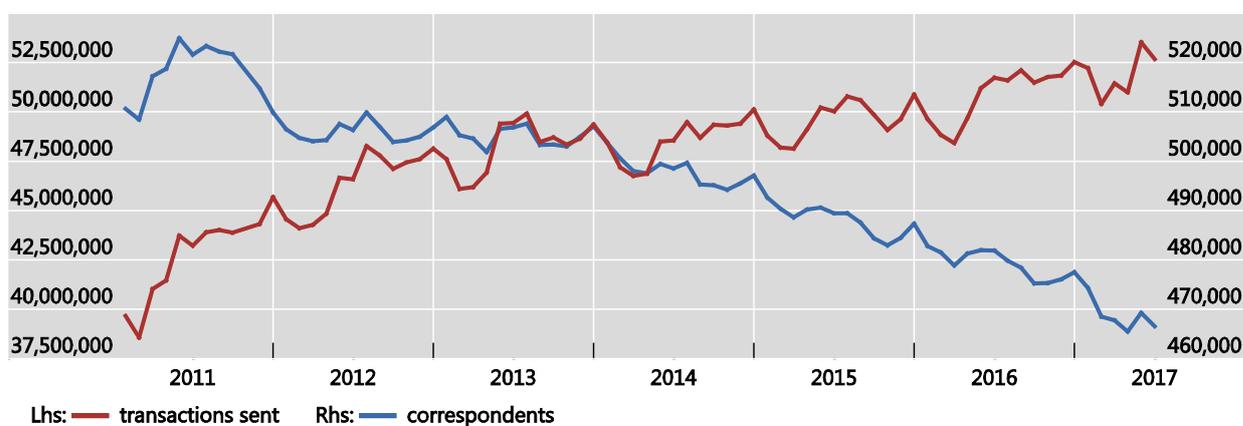
From June 2016 to June 2017, the decrease in the number of active correspondents was accompanied by an increase in volume. Data for the entire year will be analysed in the next update to assess whether the phenomenon of opposite evolutions of the two values has changed.

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## Number of active correspondents over all corridors and volume of messages<sup>1</sup>

3-month moving average

Graph 9



<sup>1</sup> MT 103 and MT 202 excluding MT 202 COV.

Sources: SWIFT Watch; National Bank of Belgium.

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### 4.3 Concentration in correspondent banking

An increase in the concentration of the correspondent banking market increases the market share of remaining participants, and hence could affect competition, raise costs, and especially lead to more fragile networks since failure of a participant could have larger effects on the market and the economy. Another possible hypothesis is that consolidation could strengthen correspondent banking relationships over the medium term as larger volumes address some of the business-related drivers of termination.

The increase in aggregated volume of payments between 2011 and mid-2017, and the falling number of active correspondent during the same period, suggests that the concentration in the correspondent banking market has increased over the period (as shown in Graph 10). The Gini coefficient on the number of active correspondents per corridor remains at high levels, between 0.766 and 0.769.<sup>10</sup> This measure increased over the 2012–2015 period but has slightly decreased since then.

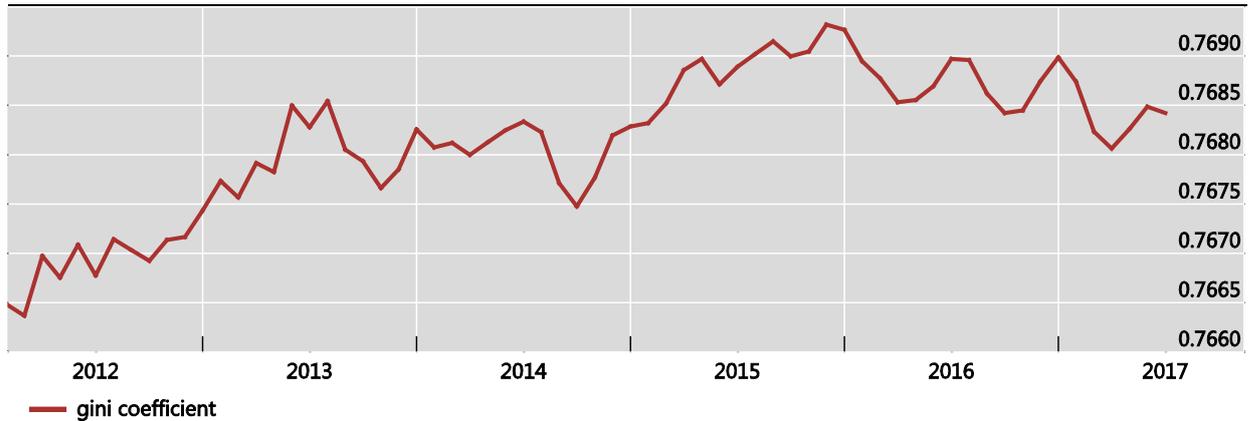
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<sup>10</sup> A Gini coefficient of 1 would mean that there is only one active bank per corridor.

## Gini coefficient on the number of active correspondents per corridor

3-month moving average

Graph 10

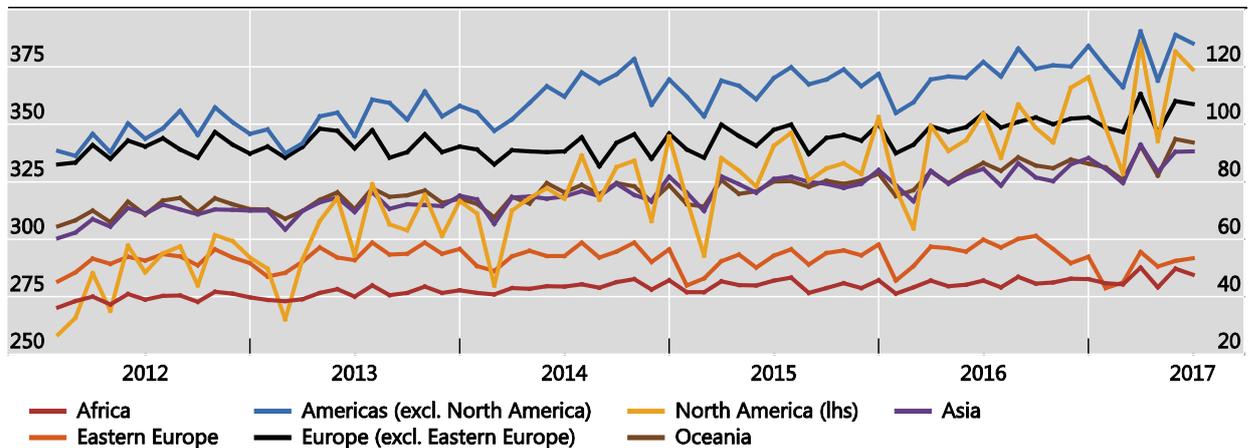


Sources: SWIFT Watch; National Bank of Belgium.

Graphs 11 and 12 show an indicator of the average volume of MT 103 and MT 202 messages sent per month by correspondent banks. This indicator shows that the average volume of messages handled by correspondents has increased in most regions, although to a lesser extent in Africa and Eastern Europe. The indicator in Northern America has increased at a higher rate than in other regions and is three times higher than elsewhere, which may be a sign of greater concentration.

## Indicator of average volume of messages handled by correspondents in each region

Graph 11

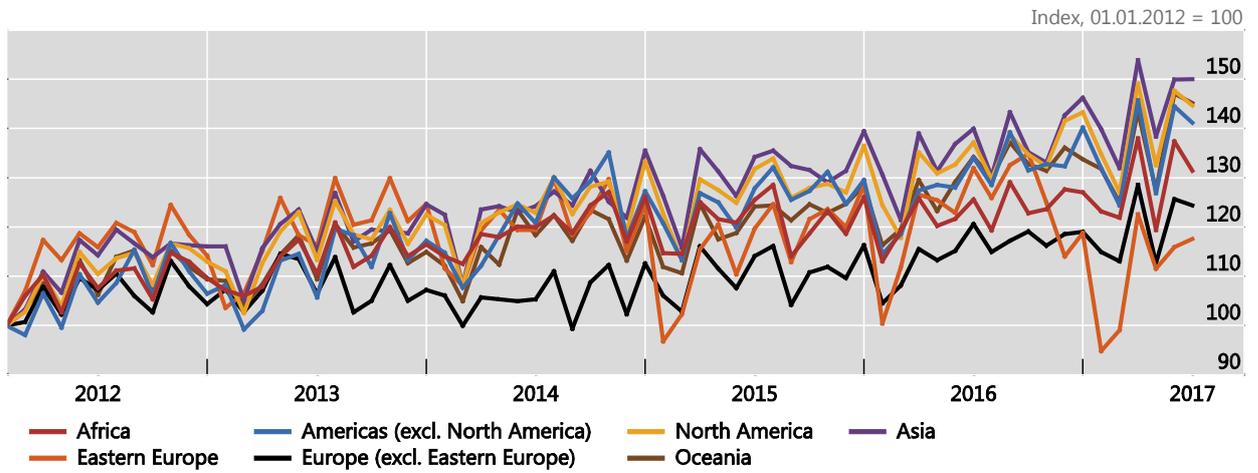


Note: The values provided are an indicator computed by dividing the total number of MT 103 and MT 202 messages sent per region in a month by the total number of counterparties for a region. Because the number of counterparties is first computed at corridor level on an anonymised basis, counterparties are counted several times in the same region if they are active in several corridors. As a result, the indicator is not directly an average number of messages per correspondent bank.

Sources: SWIFT Watch; National Bank of Belgium.

Indicator of average volume of messages handled by correspondents in each region (Index)

Graph 12



Note: The values provided are an indicator computed by dividing the total number of MT 103 and MT 202 messages sent per region in a month by the total number of counterparties for a region. Because the number of counterparties is first computed at corridor level on an anonymised basis, counterparties are counted several times in the same region if they are active in several corridors. As a result, the indicator is not directly an average number of messages per correspondent bank.

Sources: SWIFT Watch; National Bank of Belgium.