



The circulation of euro banknotes and coins in 2018: robust growth driven by non-euro area countries and cash hoarding

Demand for euro banknotes and coins remains robust, buoyed by circulation in non-euro area countries and the hoarding of cash as a store of value. Nevertheless, the use of cash as a means of payment is in decline due to rising competition from cashless payment instruments and changing patterns of consumption.

The Banque de France remains the central player in the French cash cycle. It manufactures euro banknotes (795.4 million notes in 2018), puts banknotes and coins into circulation in metropolitan France, and maintains the quality of those in issuance. In the French overseas departments and collectivities that have the euro as their currency, these tasks are performed by the *Institut d'émission des départements d'outre-mer* (IEDOM – the French overseas departments' note-issuing bank).

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JEL codes
E5, E50

EUR 1,260.1 billion

total value of euro banknotes in circulation worldwide as at 31 December 2018

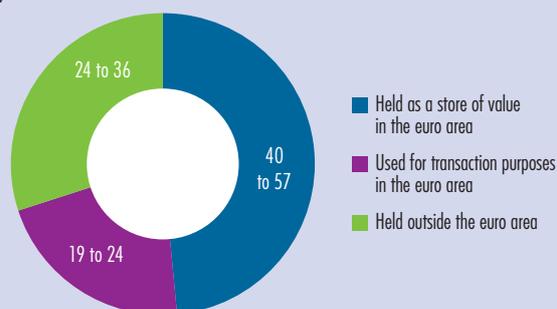
50 cash processing sites

Banque de France and IEDOM cash centres/branches carrying out banknote processing activities at end-2018

1 banknote in 6

share of banknotes lodged with euro area national central banks that are deposited at Banque de France counters

Estimated distribution of euro banknotes in circulation, by value (%)



Source: European Central Bank (estimate).



1 Robust demand in the Eurosystem and France, buoyed by non-euro area countries and cash hoarding

In 2018, the Eurosystem continued to register strong demand for euro banknotes and coins: the total amount of cash in circulation (notes and coins combined) rose by 5.1%, reaching EUR 1,260.1 billion at the end of the year (see Chart 1). The value of banknotes in circulation increased by 5.2% to EUR 1,231.1 billion, while the total value of coins rose by 3.6% to EUR 29.0 billion.

The value of euro currency in circulation thus increased at a faster pace than nominal euro area GDP in 2018. This phenomenon, which has been observed consistently since the fiduciary euro was launched in 2002, suggests that the rise in currency in circulation cannot be attributed solely to demand for transaction purposes (i.e. for the payment of goods and services in the euro area).¹ Indeed, the payment instrument market is currently marked by the emergence of alternatives forms of payment to cash and by a shift in patterns of consumption (rise of online shopping). As well as being used as a means of payment, euro banknotes, and especially those with a high face

value, are also held by European households as a store of value. In addition, there is an increasing demand for euro notes from outside the euro area.

The structure of demand

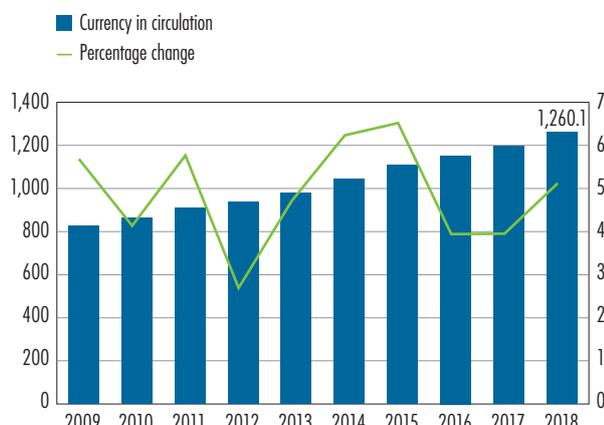
The use of cash as a store of value, which is particularly significant in periods of economic or political uncertainty (such as the bankruptcy of Lehman Brothers in September 2008 and the political uncertainties in Greece at the start of 2015), was confirmed by the 2016 survey conducted by the European Central Bank (ECB) on the use of cash by households in the euro area.² Nearly 24% of European respondents said they held cash outside their bank account as a form of precautionary reserve or savings.

Euro banknotes and coins are also used outside the euro area, as evidenced by the demand from non-European central banks and from wholesale banks acting as intermediaries for non-euro area commercial banks and bureaux de change.

According to ECB estimates, between 19% and 24% of the euro banknotes in circulation, by value, are used for transaction purposes, while 24-36% are held as reserves outside the euro area. This suggests that between 40% and 57% are potentially kept as a store of value within the euro area.

C1 Value of euro banknotes and coins in circulation at year-end between 2009 and 2018

(left-hand scale: amount in EUR billions; right-hand scale: % change)

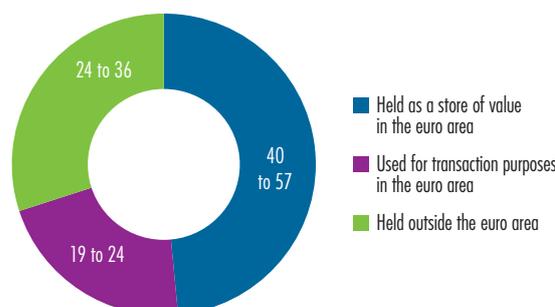


Source: Banque de France.

Note: Banknotes and coins in circulation outside the euro area.

C2 Estimated distribution of euro banknotes in circulation, by value

(%)



Source: European Central Bank (estimate).

1 Lalouette and Esselink (2018), "Trends and developments in the use of euro cash over the past ten years", *Economic Bulletin*, European Central Bank, Issue 6/2018.

2 Esselink and Hernández (2017), "The use of cash by households in the euro area", *ECB Occasional paper series*, No. 201.



Holding of cash in France

In France it is difficult to evaluate the demand for cash among resident economic actors. The actual number of notes and coins held within French territory can only be estimated, as those withdrawn from the country's two note-issuing institutions (the Banque de France for metropolitan France and the IEDOM for the overseas territories using the euro) may in fact be spent or held in another country. Similarly, a coin or banknote issued in another euro area country may be spent in France and ultimately end up being lodged with the Banque de France or the IEDOM. This "migration" of banknotes and coins between euro area countries – linked notably to tourism and cross-border purchases – means there is no way of knowing exactly how many coins and banknotes are in circulation in each Eurosystem member country. Since 2002, the difference between the total number of banknotes disbursed via a central bank's counters and those lodged with the same central bank has been referred to as "national net issuance" rather than "national circulation" (see glossary).

As at 31 December 2018, France's net issuance amounted to EUR 138.7 billion, representing a rise of 7.5% versus the previous year. Net coin issuance in turn amounted to EUR 3.6 billion, representing a rise of 3.0% versus end-2017.

It is likely that these figures differ substantially from the value of banknotes and coins actually held in France due to the migration of cash between euro area countries. To illustrate the scale of this phenomenon, since the introduction of the euro in 2002, the Banque de France and IEDOM have received more EUR 5, EUR 200 and EUR 500 notes via their counters than they have effectively issued. The same is true for the 1 euro coin.

Decline in the use of cash for transaction purposes in France

Only a fraction of France's total net issuance appears to be held for transaction purposes. A 2017 study by the Banque de France's Cash Management Directorate

estimated that some EUR 12.2 billion worth of notes are held for use in payments throughout France.³ Faced with increasing competition from cashless payment instruments and changes in patterns of consumption, banknotes and coins are being used less and less as a means of payment, as illustrated by the fall in the value of banknote withdrawals at ATMs and bank counters: -2.2% in 2018 versus 2017.

Cashless means of payment, especially contactless and mobile payments, and the rise in online purchases, are eating into the segment of the market traditionally dominated by cash: low-value, everyday purchases. French data from the aforementioned ECB survey⁴ show that the average value of a cash transaction in France is EUR 7.5.

Lower use of cash as a store of value in France

Although there is little documentation on the phenomenon, cash appears to be used less as a store of value in France than in the rest of the euro area. According to the ECB survey, France ranks last in the Eurosystem for the number of respondents saying they hold cash as a form of precautionary reserve or savings (15%).

2 The cash cycle: the production and circulation of coins and banknotes in France

Production of new coins and banknotes

The production of euro banknotes and coins follows two different patterns.

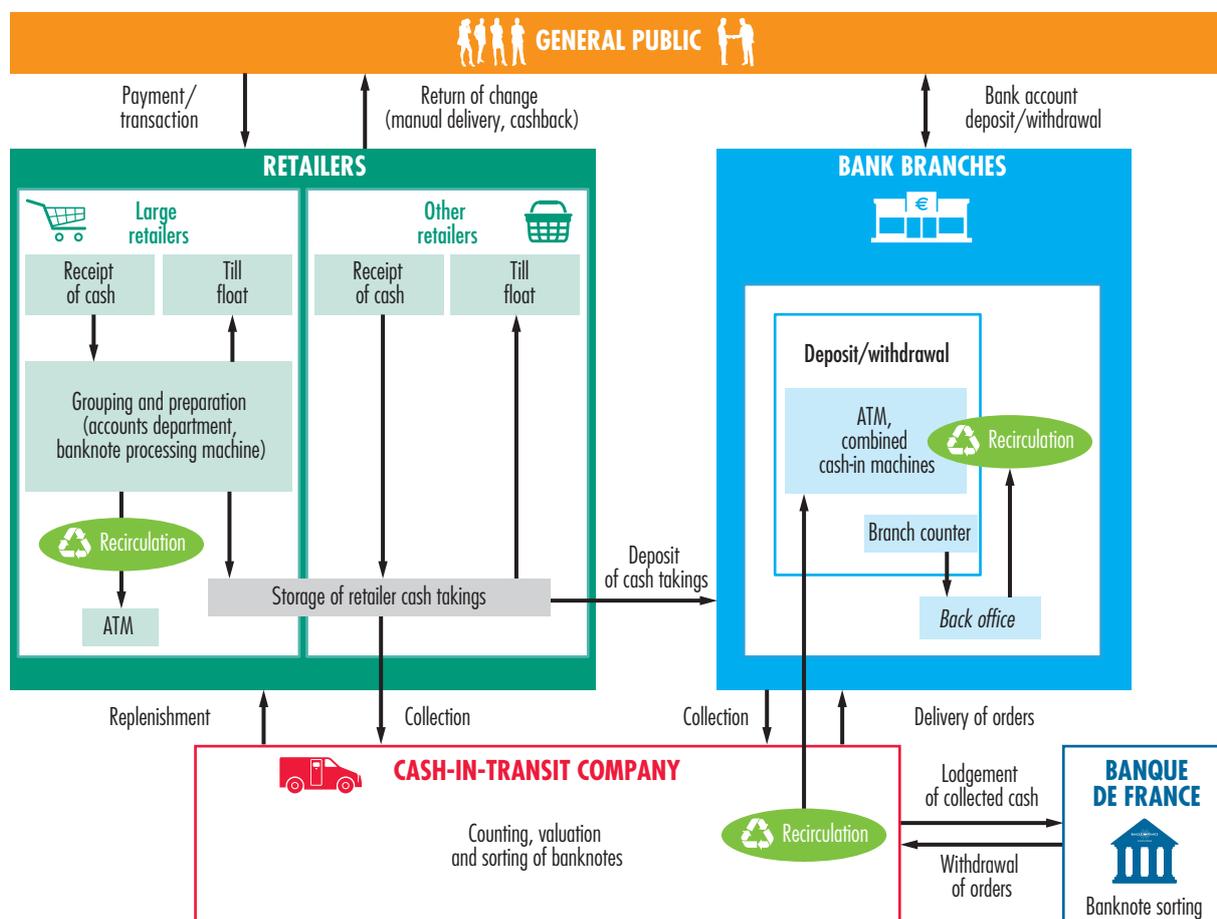
- The production of new banknotes is coordinated by the ECB. Each year the ECB and the 19 euro area national central banks (NCBs) estimate the number of new banknotes that will be needed over the next two years. The total volume of notes to be produced is then split between the NCBs according to their shares in the ECB's paid-up capital. Each NCB is then free to either manufacture its allotted share itself or outsource production to private printers. Once produced, the banknotes are exchanged between the NCBs according to their respective needs.

³ Politronacci, Ninlias, Palazzeschi and Torre (2017), "The demand for cash in France: review of evidence", International cash conference 2017.

⁴ Politronacci, Moret, Bounie and François (2018), "Use of cash in France: the payment method of choice for low-value purchases", *Bulletin de la Banque de France*.



Diagram Organisation of the cash industry in France: the banknote cycle



Source: Banque de France.

The Banque de France manufactures its quota of banknotes itself in the Puy-de-Dôme department: the security paper is manufactured by its subsidiary Europafi located in Vic-le-Comte, and the banknotes are then printed at the Banque de France's printing works in Chamalières.

- The production and circulation of euro coins remains the responsibility of national governments. In France, coins are manufactured by the *Monnaie de Paris* (Paris Mint) and then put into circulation or withdrawn from use by the Banque de France on behalf of the state. These latter tasks are performed by the IEDOM in those territories within its remit.

In 2018, the Banque de France printed close to 20% of all new euro banknotes (795.4 million of the 4.0 billion

produced in the Eurosystem). It also took delivery of 711 million new coins manufactured by the Paris Mint.

The circulation of banknotes and coins in France

Once the banknotes and coins have been manufactured and delivered, the Banque de France and IEDOM distribute them via their network of cash processing sites. Cash-in-transit firms (CITs) collect the notes and coins from Banque de France or IEDOM counters on behalf of credit institutions, which in turn make the cash available to the general public.

In 2018, 5.7 billion banknotes with a total value of EUR 143.6 billion were withdrawn from Banque de France and IEDOM counters, along with 1.3 billion coins with a total value of EUR 541.4 million.



BOX

Banknote authentication

The Banque de France contributes actively to the fight against counterfeiting and provides its expertise to cash industry professionals. In 2018, it delivered banknote authentication training to some 21,000 professional cash handlers (cash centre or bank staff, retailers, tradespeople and any other individuals handling cash). This service, which is provided free of charge by one of the Bank's 200 trainers, is designed to teach cash handlers to recognise banknote security features using the "Feel-Look-Tilt" method.

- **Feel** to check the crispness of the paper and the raised print on the front of the note.
- **Look** to see the window containing the portrait of Europa, the watermark, the security thread, the incomplete number showing the value of the banknote, the hologram patch and the colour-shifting ink.
- **Tilt** to reveal the emerald number and the hologram stripe showing the value of the banknote, the euro symbol and rainbow-coloured lines.

The banknotes and coins then circulate between different economic actors, principally banks, merchants and consumers. The public obtains banknotes from credit institutions, mainly via their ATMs but also over the counter at bank branches. Under a decree⁵ passed at the end of 2018 and supplemented by an order⁶ passed at the start of 2019, merchants are now authorised, subject to a strict framework, to distribute cash to customers purchasing goods or services in their stores. This practice, known as cashback, is nonetheless restricted: the minimum purchase amount is set at EUR 1 and a maximum of EUR 60 of cash can be provided with each purchase. In addition, the service is not available for payments by cheque or payment vouchers, including those in electronic form.⁷

⁵ Conseil d'État Decree No 2018-1224 of 24 December 2018.

⁶ Order of 29 January 2019 on the provision of information to consumers on the prices and conditions applicable to the delivery of cash as part of a payment transaction.

⁷ Meal vouchers, holiday vouchers, etc.

Once spent, banknotes and coins are returned to bank branches or collected directly by CITs (in the large general retail sector, for example), and then lodged at Banque de France or IEDOM counters.

In 2018, 5.4 billion banknotes with a total value of EUR 133.9 billion, were returned to Banque de France and IEDOM counters, or one in six banknotes lodged with euro area NCBs. With regard to coins, a total of 669.5 million units with a value of EUR 435.7 million were lodged with the Banque de France and IEDOM, of which 56.5 million were submitted for the *Pièces jaunes* fundraising campaign that the Bank helps to run as part of its corporate social responsibility.

3 The Banque de France – a central player in maintaining the quality of banknotes and coins

Banknotes lodged with the Banque de France and IEDOM are sorted to ensure they are genuine and of good quality: withdrawal of counterfeit notes from circulation, destruction of those that have become unfit for use and recirculation of fit banknotes. These activities are carried out by a network of cash processing sites. A total of 50 were in operation at end-2018: 44 in metropolitan France, including the Centre Fiduciaire Nord de France cash centre (CEFINOF) in Sainghin-en-Mélantois, which was opened to CITs in the autumn of 2016, and 6 in the overseas departments and collectivities that have the euro as their currency. In addition, the Centre Fiduciaire Paris La Courneuve opened its doors in May 2019. It is the Bank's second fully automated site and the largest cash centre in Europe.

Banknotes can also be sorted and authenticated by private operators (banks, CITs or operators from the retail sector), under the supervision of the Banque de France. At end-2018, the Banque de France had two types of agreement in place with private operators:

- an agreement signed with 88 credit institutions setting out the terms and conditions for recirculating



banknotes that have not come from a central bank via ATMs;

- an agreement signed with 173 private operators authorising them to process banknotes and setting out the criteria for banknote sorting.

The Banque de France has entrusted the IEDOM with managing relationships with private operators based in the overseas departments and collectivities (signature of agreements, collection of statistics and on and off-site supervision).

In total, 5.7 billion banknotes were put into circulation by Banque de France and IEDOM cash processing sites in 2018 (new and recirculated banknotes) and 2.0 billion were put directly back into circulation by private operators (external recycling). The Banque de France remains the central player in the management of currency in circulation in France, even though external recycling has increased in recent years.

As a result, the Banque de France has reinforced its system of supervision: in 2018 its cash processing

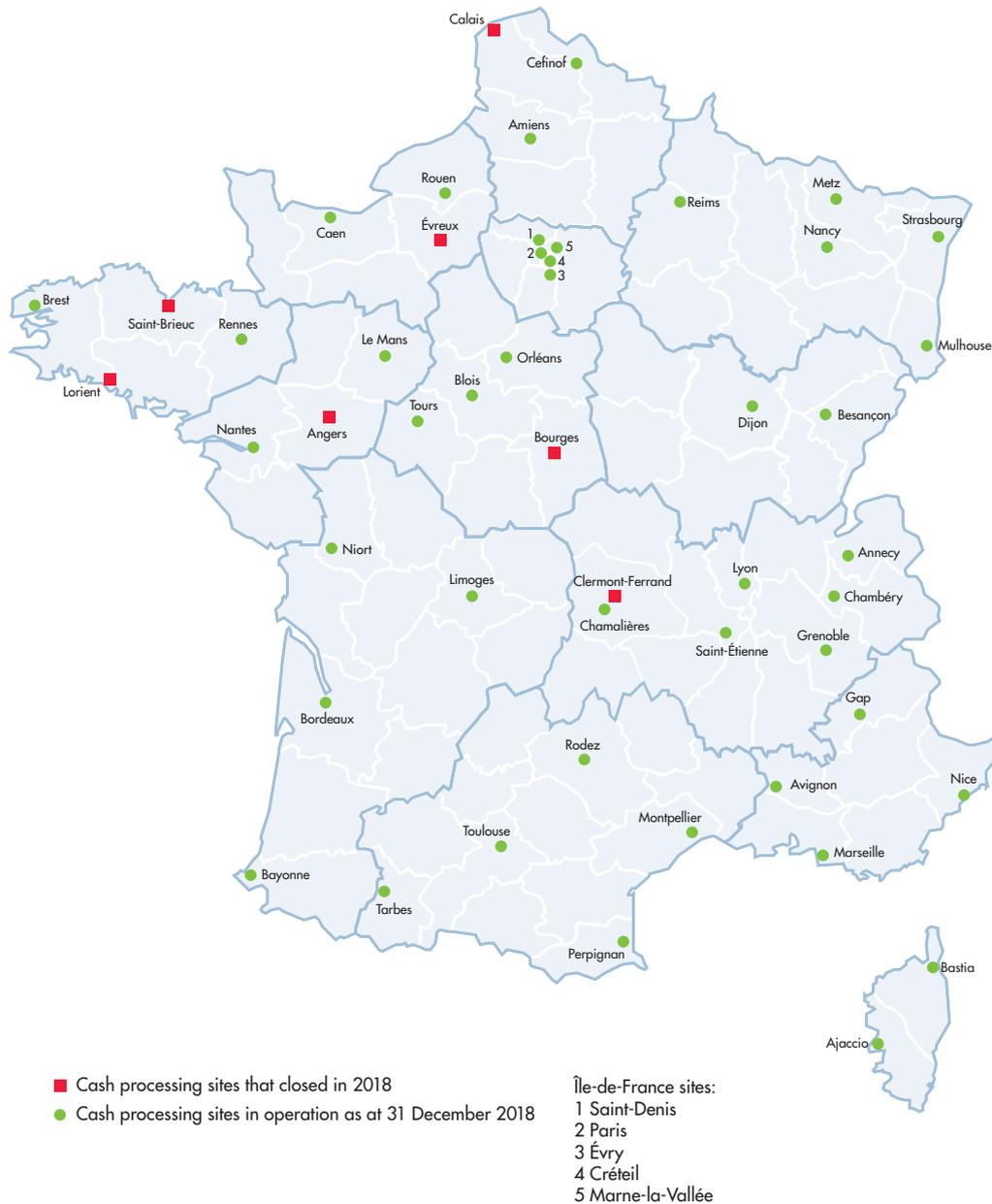
network trained 6 heads of inspection and 150 staff, enabling it to carry out 452 audits of bank branches and banknote processing sites. These on-site inspections are used to check that operators' activities comply with European standards (and the national versions of these standards), and can lead to a temporary ban on the use of a particular piece of equipment, or to the suspension of the entire recirculation agreement. The main anomalies detected in 2018 related to failures to comply with operating procedures, and to poorly maintained or defective equipment.

In contrast with its role for banknotes, the Banque de France is not responsible for maintaining the quality of the euro coins in circulation. This task falls to CITs, who authenticate, count, sort and package the coins before lodging them with the Banque de France. The Bank only carries out these tasks for coins collected as part of the *Pièces jaunes* fundraising campaign. Unfit or counterfeit coins are then returned to the Paris Mint. In terms of supervision, the Banque de France had 27 coin processing agreements in place with private operators as at end-2018, and carried out 31 sites inspections over the course of the year.



Appendix 1

Banque de France cash processing sites in 2018



Source: Banque de France.



Appendix 2

Banknote and coin statistics in 2018

TA1 Net issuance and circulation of banknotes and coins in 2018, France and the Eurosystem

(value in EUR billions; volume in billions; change in %)

	Value	Year-on-year change	Volume	Year-on-year change
Banknotes				
Banque de France and IEDOM ^{a)}	138.7	7.5	5.5	7.1
Eurosystem	1,231.1	5.2	22.6	5.6
Coins				
Banque de France and IEDOM ^{a)}	3.6	3.0	20.9	3.1
Eurosystem	29.0	3.6	130.7	3.7

Source: Banque de France.

a) IEDOM: *Institut d'émission des départements d'outre-mer* (the French overseas departments' note-issuing bank).

TA2 Withdrawals of banknotes and coins in 2018, France and the Eurosystem

(value: in EUR billions for banknotes, in EUR millions for coins; volume in millions; change in %)

	Value	Year-on-year change	Volume	Year-on-year change
Banknotes				
Metropolitan France	134.6	-9.0	5,435.9	-10.2
IEDOM ^{a)}	8.9	0.3	298.9	-1.5
Whole of France	143.6	-8.4	5,734.8	-9.8
Eurosystem	1,080.0	-2.9	33,661.9	-4.3
Coins				
Metropolitan France	522.2	-15.6	1 218.2	-14.1
IEDOM ^{a)}	19.2	-5.0	77.2	-4.3
Whole of France	541.4	-15.2	1,295.4	-13.6
Eurosystem	6,114.4	-5.7	17,906.3	-4.5

Source: Banque de France.

a) IEDOM: *Institut d'émission des départements d'outre-mer* (the French overseas departments' note-issuing bank).

TA3 Lodgements of banknotes and coins in 2018, France and the Eurosystem

(value: in EUR billions for banknotes, in EUR millions for coins; volume in millions; change in %)

	Value	Year-on-year change	Volume	Year-on-year change
Banknotes				
Metropolitan France	125.8	-9.9	5,088.7	-10.8
IEDOM ^{a)}	8.1	0.8	279.3	-0.8
Whole of France	133.9	-9.3	5,368.0	-10.3
Eurosystem	1,017.4	-4.5	32,419.0	-4.5
Coins				
Metropolitan France	424.6	-13.0	651.8	-5.5
IEDOM ^{a)}	11.0	-12.0	17.7	-7.5
Whole of France	435.7	-13.0	669.5	-5.6
Eurosystem	5,116.5	-5.4	13,231.6	-2.7

Source: Banque de France.

a) IEDOM: *Institut d'émission des départements d'outre-mer* (the French overseas departments' note-issuing bank).



Glossary

Currency in circulation

Since the introduction of euro banknotes and coins on 1 January 2002, this concept has applied only at the Eurosystem level. It corresponds to all euro banknotes and coins in circulation, including those outside the euro area. Currency in circulation is thus measured as the difference between the total amount of banknotes and/or coins put into circulation and that of banknotes and/or coins withdrawn from circulation by all the Eurosystem central banks since they joined the euro area.

At the national level, the concept of “net issuance” is used.

Eurosystem

A body comprising the European Central Bank and the national central banks of the European Union Member States that have adopted the euro. The Eurosystem comprised 19 countries at 31 December 2018.

Lodgements

Flows of banknotes or coins whose deposit is recorded at the counters of an NCB.

Net issuance

Net issuance is defined as the cumulative sum of the difference between withdrawals and lodgements at each NCB’s counters since the adoption of the euro for the country in question. At the Eurosystem level, the sum of the net issuance of each Member State is equal to the currency in circulation.

Recirculation (external recycling)

Recirculation or external recycling consists, for an authorised operator (credit institution, cash-in-transit companies, retailers), in authenticating and checking the quality of banknotes and coins received with a view to putting them back into circulation via ATMs.

The “Framework for the detection of counterfeits and fitness sorting of euro banknotes by credit institutions and professional cash handlers”, adopted in Europe in 2004 and effective in 2006, created a legal framework for the activities of external cash recyclers. In France, parties wishing to carry out this type of activity must sign an agreement with and are supervised by the Banque de France.

Withdrawals

Flows of banknotes or coins withdrawn from NCB branches and ultimately delivered to the general public.

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