

II

(Non-legislative acts)

DECISIONS

DECISION OF THE EUROPEAN CENTRAL BANK

of 16 September 2010

on the authenticity and fitness checking and recirculation of euro banknotes

(ECB/2010/14)

(2010/597/EU)

THE GOVERNING COUNCIL OF THE EUROPEAN CENTRAL BANK,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 128(1) thereof,

Having regard to the Statute of the European System of Central Banks and of the European Central Bank (hereinafter the Statute of the ESCB), and in particular Article 16 thereof,

Whereas:

- (1) Article 128(1) of the Treaty and Article 16 of the Statute of the ESCB provide that the European Central Bank (ECB) has the exclusive right to authorise the issue of euro banknotes within the Union. This right includes the competence to take measures to protect the integrity of euro banknotes as a means of payment.
- (2) To protect the integrity of euro banknotes and enable a proper detection of counterfeits, euro banknotes in circulation must be maintained in good condition to ensure that they can be easily and reliably checked for genuineness, and therefore euro banknotes must be checked for fitness. Furthermore, suspect counterfeit euro banknotes must be quickly detected and handed over to the competent national authorities.
- (3) Article 6 of Council Regulation (EC) No 1338/2001 of 28 June 2001 laying down measures necessary for the protection of the euro against counterfeiting ⁽¹⁾ originally

obliged credit and other relevant institutions to withdraw from circulation all euro banknotes received by them which they know or have sufficient reason to believe to be counterfeit.

- (4) To establish harmonised standards on euro banknote recirculation, in 2005 the ECB published the banknote recycling framework which laid down common rules and procedures on authenticity and fitness checking of euro banknotes ⁽²⁾, including operational standards for banknote handling machines. Subsequently, the ECB adopted common procedures for the testing of banknote handling machines by NCBs.
- (5) Regulation (EC) No 1338/2001 has been amended ⁽³⁾ to the effect that the scope of its addressees has been extended and that they are now obliged to ensure that euro banknotes they have received and which they intend to put back into circulation are checked for authenticity and that counterfeits are detected. In this respect Regulation (EC) No 1338/2001 stipulates that, for euro notes, this check shall be carried out in line with the procedures defined by the ECB. It is therefore appropriate to lay down those procedures in a legal act.

⁽²⁾ Recycling of euro banknotes: framework for the detection of counterfeits and fitness sorting by credit institutions and other professional cash handlers.

⁽³⁾ By Council Regulation (EC) No 44/2009 of 18 December 2008 amending Regulation (EC) No 1338/2001 laying down measures necessary for the protection of the euro against counterfeiting (OJ L 17, 22.1.2009, p. 1).

⁽¹⁾ OJ L 181, 4.7.2001, p. 6.

- (6) Without prejudice to the Member States' competence to establish sanctions against the institutions referred to in Article 6(1) of Regulation (EC) No 1338/2001 that fail to discharge their obligations thereunder, the Eurosystem must be able to take appropriate administrative measures to ensure that the procedures defined by the ECB are complied with and that the rules and procedures established under this Decision are not circumvented with the consequent risk of counterfeit and unfit banknotes not being detected or being put back into circulation,

HAS ADOPTED THIS DECISION:

Article 1

Scope

This Decision lays down common rules and procedures on the authenticity and fitness checking and recirculation of euro banknotes under Article 6(1) of Regulation (EC) No 1338/2001.

Article 2

Definitions

For the purposes of this Decision:

1. 'NCB' means the national central bank of a Member State whose currency is the euro.
2. 'Cash handlers' means the institutions and economic agents referred to in Article 6(1) of Regulation (EC) No 1338/2001.
3. 'Recirculation' means the action, by cash handlers, of putting back into circulation, directly or indirectly, euro banknotes that they have received, either from the public as payment or as a deposit in a bank account, or from another cash handler.
4. 'Banknote handling machine' means a customer-operated or staff-operated machine as defined in Annex I.
5. 'Type of banknote handling machine' means a banknote handling machine that can be distinguished from other banknote handling machines as described in Annex I.
6. 'Common test procedures' means the test procedures, as specified by the ECB, to be applied by NCBs in order to test types of banknote handling machine.
7. 'Trained staff members' means employees of cash handlers who have: (a) knowledge of the different public security features of euro banknotes, as specified and published by the Eurosystem, and the ability to check them; and (b) knowledge of the sorting criteria listed in Annex IIIb and the ability to check euro banknotes in accordance with them.
8. 'Counterfeit euro banknotes' means counterfeit banknotes as defined in Article 2(a) of Regulation (EC) No 1338/2001.

9. 'Cash dispenser' means a self-service machine which, through the use of a bank card or other means, dispenses euro banknotes to the public, debiting a bank account, such as an automated teller machine (ATM) dispensing cash. Self-checkout terminals (SCoTs) with which the public can pay for goods or services either by bank card, cash or other payment instruments, having a cash-withdrawal function, are also considered cash dispensers.

10. 'Competent national authorities' means authorities as defined in Article 2(b) of Regulation (EC) No 1338/2001.

11. 'Unfit euro banknotes' means euro banknotes which are evaluated as unsuitable for recirculation following the fitness checking referred to in Article 6.

12. 'Credit institution' means a credit institution as defined in Article 4(1)(a) of Directive 2006/48/EC of the European Parliament and of the Council of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions ⁽⁴⁾.

Article 3

General principles

1. The obligation of cash handlers to check euro banknotes for authenticity and fitness shall be carried out in line with procedures laid down in this Decision.
2. If two or more cash handlers are involved in the recirculation of the same euro banknotes, the cash handler responsible for the authenticity and fitness checking of these euro banknotes shall be designated in accordance with national regulations or, in the absence of such regulations, in contractual arrangements between the relevant cash handlers.
3. The authenticity and fitness checking shall be carried out either by a type of banknote handling machine successfully tested by an NCB, or manually by a trained staff member.
4. Euro banknotes may only be recirculated via customer-operated machines or cash dispensers if they have been checked for authenticity and fitness by a type of banknote handling machine successfully tested by an NCB and classified as genuine and fit. However, this requirement shall not apply to euro banknotes that have been delivered directly to a cash handler by an NCB or by another cash handler that has already checked the euro banknotes for authenticity and fitness in this manner.
5. Staff-operated machines, when used for the purpose of authenticity and fitness checking, and customer-operated machines may only be put into operation by cash handlers if they have been successfully tested by an NCB and listed on the ECB's website as laid down in Article 9(2). The machines shall be used with the standard factory settings, including any updates thereof, that have been successfully tested unless stricter settings are agreed between the NCB and the cash handler.

⁽⁴⁾ OJ L 177, 30.6.2006, p. 1.

6. Euro banknotes which have been checked for authenticity and fitness and classified as genuine and fit by trained staff members but not by a type of banknote handling machine successfully tested by an NCB may only be recirculated over the counter.

7. This Decision shall not apply to the authenticity and fitness checking of euro banknotes carried out by NCBs.

Article 4

Classification and treatment of euro banknotes by banknote handling machines

1. Euro banknotes checked by a customer-operated machine shall be classified and treated in accordance with Annex IIa.

2. Euro banknotes checked by a staff-operated machine shall be classified and treated in accordance with Annex IIb.

Article 5

Detection of counterfeit euro banknotes

Banknotes that are not authenticated as genuine euro banknotes following classification carried out in accordance with Annex IIa or IIb or following manual authenticity checking by a trained staff member shall immediately, in line with national regulations and in any case within a maximum of 20 working days, be handed over by cash handlers to the competent national authorities.

Article 6

Detection of unfit euro banknotes

1. Fitness checking shall be carried out in accordance with the minimum standards laid down in Annexes IIIa and IIIb.

2. An NCB may, after informing the ECB, lay down stricter standards for one or more denominations of euro banknotes if this is justified, for example by a deterioration in the quality of the euro banknotes in circulation in its Member State.

3. Unfit euro banknotes shall be handed over to an NCB in consideration of national regulations.

Article 7

Exceptions

1. NCBs may grant remote branches of credit institutions with a low level of cash operations permission for trained staff members to carry out manual fitness checking of euro banknotes to be recirculated via customer-operated machines or cash dispensers, provided that authenticity checking is carried out by a type of banknote handling machine successfully tested by an NCB. To apply for this permission, credit institutions shall provide the NCB

of their Member State with evidence of the remoteness of the branch in question and the low level of its cash operations. Each NCB shall ensure that the volume of euro banknotes manually checked in this manner does not exceed a maximum of 5 % of the overall volume of euro banknotes which are distributed annually via customer-operated machines or cash dispensers. NCBs shall decide whether the 5 % threshold shall apply at the level of each credit institution or at that of all credit institutions at national level.

2. Where an exceptional event occurs as a result of which the euro banknote supply in a Member State is significantly impaired, cash handlers' trained staff members may, on a temporary basis, and subject to the relevant NCB's agreement that the event is exceptional, carry out manual authenticity and fitness checking of euro banknotes to be recirculated via customer-operated machines or cash dispensers.

Article 8

Eurosystem commitments

1. The information, as specified by the Eurosystem, on euro banknotes and their machine-readable security features shall be provided to manufacturers by the Eurosystem in advance of the issue of a new banknote series and thereafter to enable them to build banknote handling machines that are able to pass the common test procedures and to adapt to new requirements.

2. The information, as specified by the Eurosystem, on euro banknotes and their public security features shall be provided by the Eurosystem to cash handlers in advance of the issue of a new euro banknote series and thereafter to enable their staff members to be given any training required.

3. Training by cash handlers of their staff members to ensure that trained staff members are competent to check euro banknotes for authenticity and fitness shall be supported by the Eurosystem.

4. Cash handlers shall be informed by the Eurosystem of counterfeit threats when appropriate and may be required by the Eurosystem for action to be taken, including a temporary prohibition on the recirculation of the banknote denomination(s) concerned.

5. Manufacturers of banknote handling machines shall be informed by the Eurosystem of counterfeit threats as appropriate.

Article 9

Eurosystem's common test procedures for banknote handling machines

1. Types of banknote handling machines shall be tested by NCBs in accordance with the common test procedures.

2. All successfully tested types of banknote handling machines shall be listed on the ECB's website during the periods of validity of the test results, as referred to in paragraph 3. A type of banknote handling machine that becomes unable during this period to detect all counterfeit euro banknotes known to the Eurosystem shall be removed from the list in accordance with a procedure specified by the ECB.

3. Where a type of banknote handling machine is successfully tested, the test results shall be valid throughout the euro area for one year from the end of the month of their publication on the ECB's website, provided that it remains capable of detecting all counterfeit euro banknotes known to the Eurosystem during this period.

4. The Eurosystem shall not be held liable if a successfully tested type of banknote handling machine is unable to classify and treat euro banknotes in accordance with Annex IIa or IIb.

Article 10

Eurosystem monitoring activities and corrective measures

1. Subject to national law requirements, NCBs are authorised (i) to carry out on-site inspections, including unannounced ones, at cash handlers' premises to monitor their banknote handling machines, in particular the machines' capacity to check for authenticity and fitness and to trace suspect counterfeit euro banknotes and euro banknotes that are not clearly authenticated to the account holder; and (ii) to verify the procedures governing the operation and control of the banknote handling machines, the treatment of checked euro banknotes and any manual authenticity and fitness checking.

2. Subject to national law requirements, NCBs are authorised to take samples of processed euro banknotes to check them at their own premises.

3. When in the course of an on-site inspection an NCB detects non-compliance with the provisions of this Decision, it shall require the adoption by the cash handler of corrective measures within a specified time limit. Until the non-compliance is rectified, the requiring NCB may, on behalf of the ECB, prohibit the cash handler from recirculating the banknote denomination(s) concerned. If the non-compliance is due to a failure of the type of banknote handling machine, this may lead to its removal from the list referred to in Article 9(2).

4. Where a cash handler does not cooperate with an NCB with regard to an inspection, this shall be considered as non-compliance.

Article 11

Reporting obligations

In order for the ECB and the NCBs to monitor the compliance of cash handlers with this Decision and to oversee developments in the cash cycle, NCBs shall be (i) informed in writing, including by electronic means, by cash handlers before a type of banknote handling machine is put into operation; and (ii) provided by cash handlers with the information specified in Annex IV.

Article 12

Costs

1. The Eurosystem shall not reimburse to cash handlers the costs incurred by them in the fulfilment of this Decision.

2. The Eurosystem shall not compensate for additional costs incurred by cash handlers due to the issue of euro banknotes with changed or new security features.

Article 13

Final provisions

1. This Decision shall enter into force on the day following its publication in the *Official Journal of the European Union*. It shall apply from 1 January 2011. Each NCB may decide to offer cash handlers of their Member States a transitional period for the reporting of statistical data according to Annex IV. Annex IV shall apply at the latest from 1 January 2012.

2. Cash handlers of Member States that adopt the euro on or after 1 January 2011 shall have a one-year transitional period from the date of adoption of the euro to apply this Decision.

Done at Frankfurt am Main, 16 September 2010.

The President of the ECB
Jean-Claude TRICHET

ANNEX I

BANKNOTE HANDLING MACHINES**1. General technical requirements**

- 1.1. To qualify as a banknote handling machine, a machine has to be capable of processing batches of euro banknotes, classifying the individual euro banknotes and physically separating the euro banknotes according to their classifications without the intervention of the machine operator, subject to Annex IIa and IIb. Banknote handling machines need to have the required number of dedicated output stackers and/or other means to ensure the reliable separation of the euro banknotes processed.
- 1.2. Banknote handling machines have to be adaptable to ensure that they are capable of reliably detecting new counterfeits. Moreover, they have to be adaptable to enable the setting up of more or less restrictive fitness sorting standards, if applicable.

2. Categories of banknote handling machines

Banknote handling machines are either customer-operated machines or staff-operated machines:

Table 1

Customer-operated machines

A. Customer-operated machines where cash is deposited with customer tracing		
1.	Cash-in machines (CIMs)	CIMs allow customers, by using a bank card or other means, to deposit euro banknotes in their bank accounts, but do not have any cash-dispensing function. CIMs check euro banknotes for authenticity and allow for traceability of the account holder; fitness checks are optional
2.	Cash-recycling machines (CRMs)	CRMs allow customers, by using a bank card or other means, to deposit euro banknotes in their bank accounts and to withdraw euro banknotes from their bank accounts. CRMs check euro banknotes for authenticity and fitness and allow for traceability of the account holder. For withdrawals, CRMs may use genuine fit euro banknotes that have been deposited by other customers in previous transactions
3.	Combined cash-in machines (CCMs)	CCMs allow customers, by using a bank card or other means, to deposit euro banknotes in their bank accounts and to withdraw euro banknotes from their bank accounts. CCMs check euro banknotes for authenticity and allow for traceability of the account holder; fitness checks are optional. For withdrawals, CCMs do not use euro banknotes that have been deposited by other customers in previous transactions but only euro banknotes loaded separately into them
B. Other customer-operated machines		
4.	Cash-out machines (COM)	COMs are cash dispensers which check euro banknotes for authenticity and fitness before dispensing them to customers. COMs use euro banknotes loaded into them by cash handlers or other automated systems (e.g. vending machines)

Table 2

Staff-operated machines

1.	Banknote processing machines (BPMs)	BPMs check euro banknotes for authenticity and fitness
2.	Banknote authentication machines (BAMs)	BAMs check euro banknotes for authenticity
3.	Teller assistant recycling machines (TARMs)	TARMs are cash recycling machines operated by cash handlers that check euro banknotes for authenticity and fitness. For withdrawals, TARMs may use genuine fit euro banknotes that have been deposited by other customers in previous transactions. In addition, they keep euro banknotes in safe custody and allow cash handlers to credit or debit the bank accounts of customers
4.	Teller assistant machines (TAMs)	TAMs are machines operated by cash handlers that check euro banknotes for authenticity. In addition, they keep euro banknotes in safe custody and allow cash handlers to credit or debit the bank accounts of customers

Where customers feed euro banknotes to be deposited into TARMs or TAMs, or take the euro banknotes dispensed by these machines, these machines have to be considered customer-operated machines and have to classify and treat the euro banknotes in accordance with Annex IIa.

3. Types of banknote handling machines

The Eurosystem tests types of banknote handling machines. Types of banknote handling machines can be distinguished from each other through their specific detector systems, software and other components for the performance of their core functionalities. These are: (a) the authentication of genuine euro banknotes; (b) the detection and separation of euro banknotes suspected to be counterfeit; (c) the detection and separation of unfit euro banknotes from fit euro banknotes, if applicable; and (d) the tracing of objects identified as suspect counterfeit euro banknotes and of euro banknotes that are not clearly authenticated, if applicable.

ANNEX IIa

CLASSIFICATION AND TREATMENT OF EURO BANKNOTES BY CUSTOMER-OPERATED MACHINES

Euro banknotes are classified into one of the following categories and are physically separated by category. Machines which do not check euro banknotes for fitness do not need to distinguish between categories 4a and 4b.

Table 1

Classification and treatment of euro banknotes by customer-operated machines in which cash is deposited with customer tracing

Category	Properties	Treatment
1 Objects not recognised as euro banknotes	Not recognised as euro banknotes because of any of the following: <ul style="list-style-type: none"> — non-euro banknotes — euro banknote-like objects — wrong image or format — large folded corner(s) or missing part(s) — feeding or transportation error of the machine 	Return by the machine to the customer
2 Suspect counterfeit euro banknotes	Image and format recognised, but one or more authentication feature checked by the machine not detected or clearly out of tolerance	Withdraw from circulation To be handed over for authentication, together with information related to the account holder, to the competent national authorities immediately, at the latest 20 working days after deposit in the machine. Do not credit to the account holder
3 Euro banknotes that are not clearly authenticated	Image and format recognised, but not all authentication features checked by the machine are recognised because of quality and/or tolerance deviations. In most cases unfit euro banknotes	Withdraw from circulation. The euro banknotes are processed separately and handed over for authentication to the competent national authorities immediately, at the latest 20 working days after deposit in the machine Information on the account holder is stored for eight weeks after the euro banknotes have been detected by the machine. This information is made available on request to the competent national authorities. Alternatively, in agreement with the competent national authorities, information allowing the traceability of the account holder can be handed over together with the euro banknotes to those authorities May be credited to the account holder
4a Euro banknotes that are identified as genuine and fit	All authenticity and fitness checks carried out by the machine giving positive results	Can be used for recirculation Credited to the account holder
4b Euro banknotes that are identified as genuine and unfit	All authenticity checks carried out by the machine giving positive results. At least one fitness criterion checked giving a negative result	Cannot be used for recirculation and are returned to the NCB Credited to the account holder

Categories 2 and 3 euro banknotes are not returned to the customer by a machine if the machine allows the cancellation of a deposit transaction. Retaining such euro banknotes when a transaction is cancelled can be done by storing them in a temporary storage area in the machine.

An NCB may agree with a cash handler that category 3 euro banknotes may not be physically separated from categories 4a and 4b euro banknotes, and that in such a case all three categories must be treated as category 3 euro banknotes.

Table 2

Classification and treatment of euro banknotes by other customer-operated machines

Category	Properties	Treatment
A (i) Objects not recognised as euro banknotes; or (ii) suspect counterfeit euro banknotes; or (iii) euro banknotes that are not clearly authenticated	(i) Not recognised as euro banknotes because of any of the following: — non-euro banknotes — euro banknote-like objects — wrong image or format — large folded corner(s) or missing part(s) — feeding or transportation error of the machine (ii) Identified as suspect counterfeit euro banknotes because image and format recognised, but one or more authentication feature checked by the machine not detected or clearly out of tolerance (iii) Euro banknotes that are not clearly authenticated because image and format recognised, but not all authentication features checked by the machine recognised because of quality and/or tolerance deviations. In most cases unfit euro banknotes	Withdraw from circulation To be handed over for authentication to the competent national authorities immediately, at the latest 20 working days after detection by the machine
B1 Euro banknotes that are identified as genuine and fit	All authenticity and fitness checks carried out by the machine giving positive results	Can be dispensed to customers
B2 Euro banknotes that are identified as genuine and unfit	All authenticity checks carried out by the machine giving positive results. At least one fitness criterion checked giving a negative result	Cannot be dispensed to customers and are returned to the NCB

ANNEX IIb

CLASSIFICATION AND TREATMENT OF EURO BANKNOTES BY STAFF-OPERATED MACHINES

Euro banknotes are classified into one of the following categories and are physically separated by category. Machines which do not check euro banknotes for fitness do not need to distinguish between categories B1 and B2.

Classification and treatment of euro banknotes by staff-operated machines

	Category	Properties	Treatment
A	(i) Objects not recognised as euro banknotes; (ii) suspect counterfeit euro banknotes; or (iii) euro banknotes that are not clearly authenticated	(i) Not recognised as euro banknotes because of any of the following: — non-euro banknotes — euro banknote-like objects — wrong image or format — large folded corner(s) or missing part(s) — feeding or transportation error of the machine (ii) Identified as suspect counterfeit euro banknotes because image and format recognised, but one or more authentication feature checked by the machine not detected or clearly out of tolerance (iii) Euro banknotes that are not clearly authenticated because image and format recognised, but not all authentication features checked by the machine recognised because of quality and/or tolerance deviations. In most cases unfit euro banknotes	Return by the machine to the operator for further evaluation and treatment (i) objects not recognised as euro banknotes: after visual evaluation by a staff member these are separated from the suspect counterfeit euro banknotes and euro banknotes that are not clearly authenticated; (ii) suspect counterfeit euro banknotes; and (iii) euro banknotes that are not clearly authenticated: these are processed separately and handed over for final authentication to the competent national authorities immediately, at the latest 20 working days after deposit in the machine.
B1	Euro banknotes that are identified as genuine and fit	All authenticity and fitness checks carried out by the machine giving positive results	Can be used for recirculation. Credited to the account holder
B2	Euro banknotes that are identified as genuine and unfit	All authenticity checks carried out by the machine giving positive results. At least one fitness criterion checked giving a negative result	Cannot be used for recirculation and are returned to the NCB. Credited to the account holder

Specific classification and sorting rules for some staff-operated machines

1. BPMs classify and physically sort euro banknotes into categories A, B1 and B2 as set out in Annex IIb, for which at least three dedicated output stackers are needed to avoid the intervention of the machine operator.

2. BPMs with only two dedicated output stackers may however classify and sort euro banknotes if the following requirements are fulfilled:
 - (a) The authenticity and fitness checks are conducted in the same pass. In this pass, any category B1 euro banknotes must be sorted into one stationary output stacker, whereas both category A and B2 euro banknotes must be sorted into a separate stationary output stacker that does not have any physical contact with any category B1 euro banknote.
 - (b) If a category A euro banknote is identified as being present in the second output stacker, the operator must re-run the euro banknote(s) from the second output stacker. In this second pass, euro banknotes suspected to be counterfeits must be separated from the category B2 euro banknotes by sorting the former into a dedicated output stacker.
 3. BAMs classify and physically sort euro banknotes into categories A and B, for which at least two dedicated output stackers are needed to avoid the intervention of the machine operator.
 4. BAMs with only one dedicated output stacker may however classify and sort euro banknotes if the following requirements are fulfilled:
 - (a) Each time a category A euro banknote is processed, the machine must stop the processing immediately and keep the category A euro banknote in a position that avoids any physical contact with authenticated euro banknotes.
 - (b) The result of the authenticity check must be indicated for any single category A euro banknote on a display.
 - (c) The machine must check for the presence of a category A euro banknote when it stops processing, and processing can only be resumed after the physical removal of the category A euro banknote by the operator.
 - (d) For each stop of the processing mode no more than one category A euro banknote can be accessible to the operator.
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ANNEX IIIa

MINIMUM STANDARDS FOR AUTOMATED FITNESS CHECKING OF EURO BANKNOTES

This Annex lays down minimum standards for automated fitness checking of euro banknotes by banknote handling machines.

In the course of the fitness checks, euro banknotes with any defect in respect of which a mandatory requirement has been defined as set out below are unfit.

The acceptable tolerance level for the fitness checks by banknote handling machines is 5 %. This means that a maximum of 5 % of the euro banknotes that do not meet the fitness criteria may be misclassified by the machines and sorted as fit.

Table 1

List of sorting criteria for automated fitness sorting

Defect		Definition
1.	Soil	General distribution of dirt across the entire euro banknote
2.	Stain	Localised concentration of dirt
3.	Graffiti	Added image or lettering written or marked in any manner on a euro banknote
4.	De-inked note	Lack of ink on part or whole of the euro banknote, e.g. a washed euro banknote
5.	Tear	Self-explanatory
6.	Hole	Self-explanatory
7.	Mutilation	Euro banknotes with part(s) missing, along at least one edge (in contrast to holes)
8.	Repair	Parts of one or more euro banknotes joined together by tape or glue or other means
9.	Crumples	Multiple random folds
10.	Limpness	Structural deterioration resulting in a marked lack of stiffness
11.	Fold	Self-explanatory
12.	Folded corner	Self-explanatory

Further information on sorting criteria

1. Soil

Soil increases the optical density of euro banknotes. The following table specifies the maximum density increase of limit samples compared to new euro banknotes that euro banknotes may exhibit to be classified as fit:

Table 2

Optical density levels

Denomination	Maximum density increase of limit sample compared to new euro banknote	Filter
EUR 5	0,06	Magenta
EUR 10	0,06	Magenta
EUR 20	0,08	Magenta
EUR 50	0,07	Magenta
EUR 100	0,07	Magenta
EUR 200	0,04	Magenta
EUR 500	0,04	Magenta

Euro banknotes not meeting these criteria are unfit. NCBs keep reference euro banknotes showing a soil level derived from these criteria. The densitometric measurements of the reference euro banknotes are based on the following criteria:

- Standard for density measurements: ISO 5 parts 3 and 4
- Standard for the filters: DIN 16536
- Absolute measurements: standard calibration (white tile)
- Polarisation filter: on
- Aperture: 3 mm
- Illumination: D65/2
- Background: white tile standard calibration

The density increase of a reference banknote is the highest value between the averages of at least four measurement points measured on the front and on the back of the banknote in the unprinted area and without any watermark modulation.

2. Stain

Euro banknotes with a localised concentration of dirt covering at least 9 mm by 9 mm in the non-printed area or at least 15 mm by 15 mm in the printed area are unfit.

3. Graffiti

At present there is no mandatory requirement to detect graffiti.

4. De-inked note

De-inking of euro banknotes can occur, e.g. if they have been washed or subjected to aggressive chemical agents. These kinds of unfit euro banknotes might be detected by image detectors or UV detectors.

5. Tear

Euro banknotes with tears which are open and not partly or fully covered by the machine's transport belt(s) are unfit if the size of the tear is greater than indicated below.

Table 3

Tear

Direction	Width	Length
Vertical	4 mm	8 mm
Horizontal	4 mm	15 mm
Diagonal	4 mm	18 mm (*)

(*) This is measured by drawing a straight line from the peak of the tear to the edge of the banknote where the tear begins (rectangular projection), rather than measuring the length of the tear itself.

6. Hole

Euro banknotes with holes which are not partly or fully covered by the machine's transport belt(s) are unfit if the area of the hole is greater than 10 mm².

7. Mutilation

Euro banknotes with lengths reduced by 6 mm or more or widths reduced by 5 mm or more are unfit. All measurements relate to differences from the nominal lengths and widths of the euro banknotes.

8. Repair

A repaired euro banknote is created by joining parts of euro banknote(s) together, e.g. by using tape or glue. A euro banknote with tape covering an area greater than 10 mm by 40 mm and which is more than 50µm thick is unfit.

9. Crumples

Crumpled euro banknotes can normally be identified if their level of reflectance or stiffness is reduced. There is no mandatory requirement.

10. Limpness

As far as possible, euro banknotes with very little stiffness are sorted as unfit. As limpness normally correlates with soiling, limp euro banknotes are generally also detected via soil sensors. There is no mandatory requirement.

11. Fold

Folded euro banknotes, because of their reduced length or width, can be detected by sensors checking the size of the euro banknotes. In addition, they can be detected by thickness sensors. However, due to technical limitations, only folds fulfilling the criteria laid down for mutilations, i.e. folds leading to a reduction in length greater than 6 mm or a reduction in width greater than 5 mm, can be identified and are unfit.

12. Folded corner

A euro banknote with a folded corner with an area of more than 130 mm² and a minimum length of the smaller edge greater than 10 mm is unfit.

ANNEX IIIb

MINIMUM STANDARDS FOR MANUAL FITNESS CHECKING OF EURO BANKNOTES

This Annex lays down minimum standards for manual fitness checking of euro banknotes by trained staff members.

In the course of the fitness checks, euro banknotes with any defect as set out in the table below, or with a clearly noticeable defect in one of the visible security features, are unfit. However, folded euro banknotes and euro banknotes with folded corners may be rectified by manual unfolding where possible. The fitness checks are carried out by a visual inspection of the individual euro banknotes and do not require the use of any tools.

List of sorting criteria for manual fitness checking

Feature		Description
1.	Soil	Visually noticeable distribution of dirt across the euro banknote
2.	Stain	Visually noticeable localised concentration of dirt
3.	Graffiti	Visually noticeable added image or lettering written or marked in any manner on a euro banknote
4.	De-inked note	Visually noticeable lack of ink on part or whole of the euro banknote, e.g. a washed euro banknote
5.	Tear	Euro banknote with at least one tear at the edge
6.	Hole	Euro banknote with at least one visually noticeable hole
7.	Mutilation	Euro banknote with a part/parts missing along at least one edge (in contrast to holes), e.g. a missing corner
8.	Repair	Parts of one or more euro banknotes joined together by tape, glue or other means
9.	Crumples	Euro banknote with multiple random folds across it that strongly affect its visual appearance
10.	Limpness	Euro banknote with structural deterioration resulting in a marked lack of stiffness
11.	Folded euro banknote	Euro banknote that is folded, including a euro banknote that cannot be unfolded
12.	Folded corner	Euro banknote with at least one clearly noticeable folded corner

ANNEX IV

DATA COLLECTION FROM CASH HANDLERS

1. **Objectives**

The objectives of data collection are to enable the NCBs and the ECB to monitor the relevant activities of cash handlers and to oversee developments in the cash cycle.

2. **General principles**

2.1. Data on banknote handling machines are only reported when the machines are used for recirculation.

2.2. Cash handlers regularly provide the NCB of their Member State with the following:

- information on establishments where cash is handled such as branch offices, and
- information on banknote handling machines and cash dispensers.

2.3. In addition, cash handlers that recirculate euro banknotes via banknote handling machines and cash dispensers regularly provide the NCB of their Member State with the following:

- information on the volume of cash operations (number of euro banknotes processed) involving banknote handling machines and cash dispensers,
- information on remote branches of credit institutions with a low level of cash operations where fitness checks are carried out manually.

3. **Type of data and reporting requirements**

3.1. Depending on its nature, the data collected are divided into master data and operational data.

Master data

3.2. Master data cover information on: (a) the individual cash handlers and their banknote handling machines and cash dispensers in operation; and (b) remote branches of credit institutions.

3.3. Master data are provided to the NCB at the date of application of this Decision and every six months thereafter. The data specified in the template set out in Appendix 1 must be provided, although the NCB may require them to be provided in a different format. NCBs may for a transitional period ask for monthly reporting, if this was their practice prior to this Decision entering into force, or for quarterly reporting.

3.4. An NCB may decide, for monitoring reasons, to collect the data at local level, such as at branch offices.

3.5. An NCB may decide to exclude from the scope of the reporting requirements euro banknote handling machines only used to process euro banknotes distributed over the counter.

3.6. Data on remote branches specified in the template set out in Appendix 3 must be provided, although the NCB may require them to be provided in a different format.

Operational data

3.7. Data originating from the processing and recirculation of euro banknotes by cash handlers are classified as operational data.

3.8. An NCB may decide to exclude other economic agents, as referred to in Article 6(1) of Regulation (EC) No 1338/2001, from the obligation to report operational data if the number of euro banknotes they recirculate via cash dispensers is below a threshold determined by the NCB.

- 3.9. Data are provided on a six-monthly basis. The data are reported to the NCB at the latest two months after the relevant reporting period, i.e. end-February and end-August. Data may be provided using the template set out in Appendix 2. NCBs may for a transitional period ask for monthly reporting, if this was their practice prior to this Decision entering into force, or for quarterly reporting.
 - 3.10. Data are provided by cash handlers which physically handle euro banknotes. If a cash handler has outsourced the checking for authenticity and fitness to another cash handler, the data are provided by the cash handler designated in accordance with Article 3(2).
 - 3.11. Data are reported by cash handlers in terms of pieces (volume), aggregated at national level and broken down by euro banknote denomination. For remote branches of credit institutions, operational data is reported separately.
 - 3.12. An NCB may decide, for monitoring reasons, to collect the data at local level, such as at branch offices.
 - 3.13. An NCB may decide to exclude from the scope of the reporting requirements euro banknotes that are processed on euro banknote handling machines and distributed over the counter.
 - 3.14. Cash handlers which have outsourced authenticity and fitness checking to other cash handlers may be requested to provide detailed information to the NCB on the latter.
 - 3.15. Data on remote branches specified in the template set out in Appendix 3 must be provided, although the NCB may require them to be provided in a different format and may agree with cash handlers to collect more extensive data.
4. **Confidentiality and publication of data**
- 4.1. Both master data and operational data are treated as confidential.
 - 4.2. The NCBs and the ECB may decide to publish reports or statistics using data acquired under this Annex. Any such publication is aggregated in such a way that no data can be attributed to single reporting entities.
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APPENDIX 1

REPORTING TEMPLATE

Master data

This information is to be provided to:

[Name of NCB; contact details for queries; address]

1. Cash handler information

Cash handler's name:

Headquarters address:

Zip/postal code:

City:

Street:

Type of company:

- Credit institution
- Bureau de change
- Cash in transit company which is not a payment institution
- Trader (retailer)
- Casino
- Other, including payment institutions where not already categorised as one of the above (specify)

Contact persons:

Names:

Telephone Nos:

Telefax Nos:

E-mail addresses:

Outsourcing partner (if relevant)

Name:

Address:

Zip/postal code:

City:

2. Customer-operated machines

Type	Manufacturer (*)	Machine name (*)	Identification (*) (detector system/ software versions)	Total number in operation
CIMs				
CRMs				
CCMs				
COMs				
TARMs (**)				
TAMs (**)				

(*) These entries are completed following the corresponding entries on the ECB website, unless a unique identification number is made available by the ECB.

(**) Used as customer-operated machines.

3. Staff-operated machines

Type	Manufacturer (*)	Machine name (*)	Identification (*) (detector system/ software versions)	Total number in operation
BPMs				
BAMs				
TARMs (**)				
TAMs (**)				

(*) These entries are completed following the corresponding entries on the ECB website, unless a unique identification number is made available by the ECB.

(**) Used exclusively as staff-operated machines.

4. Cash dispensers

Type	Total number in operation
ATMs	
SCoTs	
Others	

APPENDIX 2

REPORTING TEMPLATE

Operational data

1. Cash handler information

Cash handler's name	
Reporting period	

2. Data

Please provide data aggregated at national or regional level, as decided by the NCB — excluding remote branches.

	Total number of euro banknotes processed ⁽¹⁾	Of which sorted as unfit ⁽¹⁾	Of which recirculated ⁽²⁾
EUR 5			
EUR 10			
EUR 20			
EUR 50			
EUR 100			
EUR 200			
EUR 500			

⁽¹⁾ This item covers both staff-operated and customer-operated machines.

⁽²⁾ Euro banknotes that are returned to NCBs, and euro banknotes recirculated over the counter which are not processed on a staff-operated machine, are excluded.

Number of euro banknotes distributed via customer operated machines and cash dispensers	
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These data are mandatory for credit institutions.

APPENDIX 3

REMOTE BRANCHES OF CREDIT INSTITUTIONS

This information is provided only by credit institutions which have remote branches as referred to in Article 7(1).

1. Credit institution information

Credit institution's name	
Reporting period	

2. Data

Name of remote branch	Address	Number of euro banknotes distributed via customer-operated machines and cash dispensers