

# Code of Conduct for the Authentication of Machine- Dispensed Banknotes

Feedback on the Code



BANK OF ENGLAND



Published May 2018

# Responding to feedback on the Code of Conduct for the Authentication of Machine-Dispensed Banknotes

## Foreword

The likelihood of receiving a counterfeit banknote in the United Kingdom is low, and this can be credited to the range of anti-counterfeiting strategies employed by authorities and businesses to protect members of the public from receiving a worthless counterfeit note. Cash dispensing businesses are at the front line when it comes to preventing circulation of counterfeit notes, and some organisations consider it their Corporate Social Responsibility to ensure notes in circulation are genuine.

The Code of Conduct for the Authentication of Machine-Dispensed Banknotes ('the Code') was launched in July 2013 to help maintain confidence in the currency, and it is contributing to the UK's anti-counterfeiting strategy. Code sponsors currently include The Association of Commercial Banknote Issuers, The Bank of England, British Retail Consortium, Cash Services and LINK. The Code has helped ensure that the risk of a member of the public receiving a counterfeit banknote from a banknote dispensing machine (like an ATM or self-service checkout) is not increased by growth in a practice called 'local banknote recycling', whereby banknotes tendered by the public (e.g. those paid into a bank branch or shop till) are used to re-fill these machines.

The Code requires that Bank of England and Scottish and Northern Ireland banknotes dispensed through these machines are tested for authenticity by an approved authentication device, prior to being dispensed to members of the public. By following the principles listed in the Code, businesses can protect their reputation and integrity by being certain their customers only receive genuine banknotes, particularly when they are locally recycling, which some consider a cost-saving practice. The full Code can be viewed on the [Cash Services website](#).

Since the Code was launched in 2013, the Bank of England has begun issuing banknotes printed on polymer. This is another strand of the Bank's anti-counterfeiting strategy. The polymer banknotes have additional security features and therefore provide enhanced counterfeit resilience; they also increase the quality of banknotes in circulation. However no banknote is counterfeit proof. Hence, the Code is still an important tool in the fight against counterfeiters. The Code allows businesses to stay one step ahead by ensuring they are operating machines with the latest software to detect and reject any suspect banknotes, whether they are printed on paper or polymer.

Local Recycling Codes are in place in other countries also. For example, the European Central Bank adopted [regulation](#) which mandates that credit institutions and cash handlers can only recirculate euro banknotes if they have been machine checked for both fitness and authenticity. In the UK, the Code is currently voluntary. It was launched with a staggered implementation timetable which sought full compliance for Bank of England banknotes by March 2017<sup>1</sup>.

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<sup>1</sup> The Code was extended in March 2017 to include Scottish and Northern Ireland (S&NI) banknotes following the publication of the Association for Commercial Banknote Issuers' (ACBI) Machine Testing Framework.

This deadline has now passed, with 94% of self-service checkouts and 85% of ATMs being compliant in 2017.

We are pleased to have achieved these levels of compliance, and thank everyone who has assisted us with inhibiting counterfeiters. However, 100% compliance has not yet been achieved and we recognise there is still a way to go. This document sets out ways we can work together to achieve this.

A handwritten signature in black ink that reads "Victoria Cleland". The signature is written in a cursive style with a large, looping initial 'V'.

Victoria Cleland

Chief Cashier

Bank of England

30 May 2018

## Introduction

The Code of Conduct for the Authentication of Machine-Dispensed Banknotes (the Code) aims to ensure every banknote dispensed from customer operated cash dispensers (e.g. ATMs or self-service checkouts) is genuine. Maintaining confidence in the UK's currency is an important objective of the Bank of England, and the Code is helping to achieve that. In 2017 94% of self-service checkouts and 85% of ATMs were compliant.

In September 2017 Code sponsors sent a survey collecting feedback on the Code to help us continue its effective operation, to learn about industry's experience of Code implementation, and to capture the reasons why full compliance had not yet been achieved.

This response document answers the key issues raised in the feedback, details the changes we are making as a result, and provides further clarity on the ways of becoming compliant with the Code.

The survey was sent to 37 firms who operate ATMs or self-service checkouts. Areas asked covered;

- The transition to Code compliance
- Business support for the principles/purpose of the Code
- Start-up and ongoing costs to industry
- The clarity of the Code
- Reporting compliance with the Code
- Further data collection

Annex 3 contains all questions asked, and a short summary of the results, which are based on responses received from the 19 firms who replied.

If you did not respond to the survey but would like to still provide feedback, please contact [Local.Recycling@cashservices.org.uk](mailto:Local.Recycling@cashservices.org.uk).

## Common themes from the survey feedback

A summary of the results for all sections of the survey can be found in Annex 3. Areas identified which required a more detailed response, and information on what we are doing to address the issue, can be found in sections a-e below.

### a. Code compliance levels

100% compliance has not yet been achieved. The survey asked firms who had instances of non-compliance, why this was. Matters of non-compliance were largely attributed to 3 reasons;

- 1) Cost, particularly for lower transacting sites
- 2) Polymer banknote implications
- 3) Administration and enforcement

Addressing these in turn, cost is not something Code Sponsors are able to directly reduce. To minimise costs, businesses should consider all the ways in which they can achieve Code compliance as some may be more cost effective for their business than others. For example, by keeping notes tendered by the public separate from those purchased from (and checked by) a note supplier, there could be fewer notes requiring authentication which could have financial and time savings. Annexes 1 and 2 show the different ways in which you can become compliant with the Code, and we encourage businesses to share their best practice with each other, which in turn can help reduce the level of counterfeits in circulation, and hence will have a benefit to businesses.

On polymer, we understand and empathise that the launch of these banknotes placed additional requirements on the cash industry. The Bank first consulted with cash industry stakeholders in 2013, and we are thankful to businesses for their contributions in making the launches a success and for the continued efforts ahead of the polymer £20 launch in 2020. Polymer banknotes are cleaner, safer and stronger, meaning they last longer and are more environmentally friendly than paper banknotes. Whilst the Bank of England has not yet seen a good quality sterling counterfeit polymer banknote, no banknote is counterfeit proof and by putting measures in place now to protect the system from counterfeits, we reduce the risk of being in a vulnerable position in the future. If you are unsure of the implications polymer, or any future, upgrades could have on your equipment we recommend discussing this with your Banknote Equipment Manufacturer.

Finally, when looking at reasons for non-compliance, some feedback suggested respondents did not have control or sight over whether the authentication devices provided were being used – for example, the large scale roll out of authentication devices to stores hosting self-fill ATMs. As such, they could not be 100% sure if they were Code compliant. We are very grateful for the honesty received in these responses, and it has enabled us to think of ways in which we can help communicate the importance of the Code to those who are responsible for filling the machines.

What we are doing: Code Sponsors have formally met and discussed these issues. We have decided to increase our communication and engagement programme to reach those who are filling the machines. We are putting together a training package which will include adverts to feature in industry/trade magazines, banners for webpages, and leaflets to distribute to machine operators. We are available to speak to businesses on the importance of the Code,

and we are in the process of developing a video to assist with this. We hope that by communicating the importance of the Code and the reasons for its existence to those who are responsible for filling the machines, we can achieve a greater level of compliance and normalise banknote checking.

If you would like to receive these materials, please contact [Local.Recycling@cashservices.org.uk](mailto:Local.Recycling@cashservices.org.uk). Further clarification on who is responsible for Code compliance, and the ways in which a firm can achieve compliance are available on the [Cash Services website](#).

Annual monitoring of Code compliance will remain. The effectiveness of the Code will be reviewed again in 2021, following the launch of the £20 polymer banknote and the enhanced communication programme. Should this prove ineffective Code Sponsors will consider alternate options to achieve 100% compliance.

#### b. Methods of measuring compliance

The Code measures compliance based on the number of compliant machines, irrelevant of their level of dispense. A minority of respondents suggested lower transacting sites (often merchant-fill ATMs) should not be subject to Code compliance.

Code sponsors aim for 100% of banknotes dispensed from machines to have been machine authenticated first, and our analysis has indicated that it is these lower transacting sites which are at the highest risk of allowing a counterfeit note to enter circulation.

In response to the feedback, we asked those who commented to send data for their compliant and non-compliant sites, split by transaction values. We analysed the data received, and whilst we appreciate removing lower transacting sites could dramatically increase compliance levels for some firms, this is not the intended purpose of the Code. We are not seeking only to achieve artificially high compliance levels, but instead to eliminate the likelihood a counterfeit note could enter circulation.

What we are doing: The Code was implemented (from 2013) in tranches to acknowledge lower transacting machines, and it was implemented to ensure controls are in place, particularly for merchant-fill machines. As such, Code sponsors agreed to maintain the existing method of measuring Code compliance, and require that every banknote dispensed by a machine is machine authenticated first, to protect the public, regardless of the scale of usage of the machine.

#### c. When to authenticate banknotes

The majority of respondents agreed with the Code principles. Two felt the right place to check banknotes was at point of sale, when banknotes are received by merchants. This is an important part of the Bank of England's anti-counterfeiting strategy, and they have introduced a 'Banknote Checking Scheme' to help with this, which many organisations have signed up for.

The Banknote Checking Scheme offers a range of education and training materials to help shape banknote checking within businesses. This includes leaflets, posters, online

computer-based training, targeted advice and regular webinars as well as updates on relevant banknote topics such as the issue of new-style banknotes and withdrawal of old-style banknotes. To find out more, visit

<https://www.bankofengland.co.uk/banknotes/counterfeit-banknotes/banknote-checking-scheme> .

However, the scheme should not be seen as a replacement for machine authentication of notes before they are dispensed to consumers by machines. It is separate to the Code. Without Code compliance there is still the risk of human error. By checking both at point of sale and again when filling a machine which dispenses banknotes, you can be sure you are giving your customers genuine, authentic notes that they can trust.

What we are doing: To improve our communication and acknowledge this feedback, we have published a reference to the Banknote Checking Scheme in the Code, on page 6.

#### d. Ways in which to achieve Code compliance

We understand from feedback that some firms are unsure of the ways in which Code compliance can be achieved, or the types of authentication machines that are available to help achieve Code compliance.

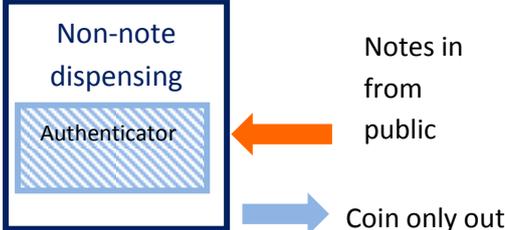
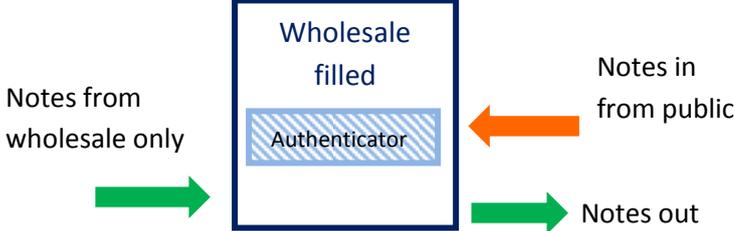
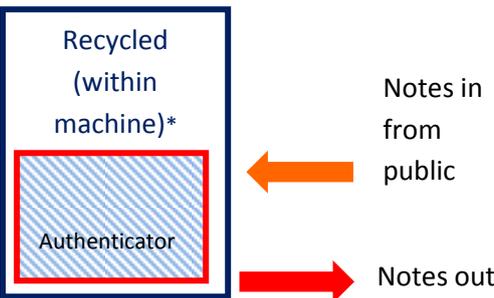
What we are doing: You will find in Annex 1 and 2 of this document some diagrams which indicate ways to achieve Code compliance. If you would like to discuss this with Code sponsors, please contact [Local.Recycling@cashservices.org.uk](mailto:Local.Recycling@cashservices.org.uk).

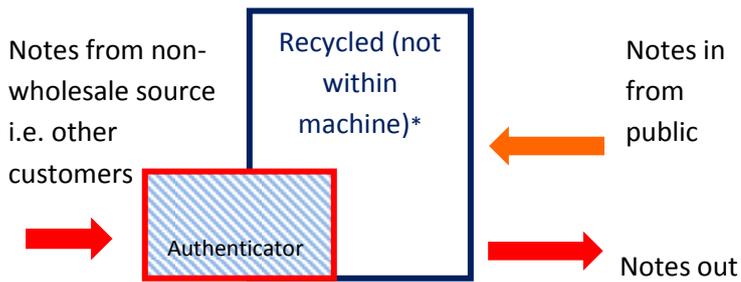
#### e. Upgrades to authentication machines

Some respondents felt they did not receive clear communication from their Banknote Equipment Manufacturer on when their authentication machines needed updating. We would encourage businesses to contact their manufacturer to discuss this with them, and/or to sign up to the Bank of England's Machine Testing Framework [mailing list](#) (select Automatic banknote handling machines frameworks results) which will provide you with monthly notifications of (all) machine upgrades. It is advised you provide your Banknote Equipment Manufacturer with the most up to date contact details.

## Annex 1 - Note-dispensing self-service checkout terminals: How to be compliant

Compliance with the [Code of Conduct for the Authentication of Machine Dispensed Banknotes](#) (the 'Code') requires that all notes which are dispensed through self-service checkout terminals must be authenticated, either by a wholesale cash supplier or, if the notes are not wholesale-sourced, locally by an authenticating machine listed on the relevant Machine Testing Framework (MTF).

Type of Self-service checkout	Application of Code
	Not applicable
	<p>Not applicable</p> <p>For their own benefit, retailers may wish to ensure the authenticator and software version are listed on the MTF.</p>
	<p>Compliant with Code. Retailers must self-certify compliance annually.</p> <p>For their own benefit, retailers may wish to ensure the authenticator and software version are listed on the MTF.</p>
	<p>Retailers must ensure that the authenticator and software version are listed on the MTF. This includes installing software or firmware within agreed timescales as and when these are updated on the MTF website.</p> <p>Notes may be authenticated on receipt, on dispense, or both.</p> <p>Retailers must self-certify compliance annually.</p>



Retailers must ensure that the authenticator(s) and software versions are listed on the MTF. This includes installing software or firmware within agreed timescales as and when these are updated on the MTF website.

Notes may be authenticated before being loaded into the self-service checkout, within the self-service checkout, or both.

Retailers must self-certify compliance annually.

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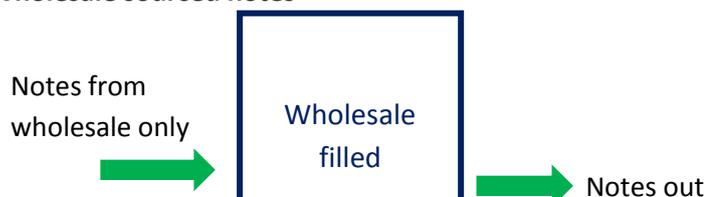
*\* Retailers may operate self-service checkouts that recycle notes within the machine and are also filled from a non-wholesale source (combining the final two scenarios). These self-service checkouts must comply with both sets of requirements i.e. retailers must ensure that all locally recycled notes are authenticated before being dispensed.*

## Annex 2 – ATMs: How to be compliant

Compliance with the [Code of Conduct for the Authentication of Machine Dispensed Banknotes](#) (the 'Code') requires that all notes which are dispensed through ATMs must be authenticated, either by a wholesale cash supplier or, if the notes are not wholesale-sourced, locally by an authenticating machine listed on the relevant Machine Testing Framework (MTF).

Type of ATM	Application of Code
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### Wholesale sourced notes



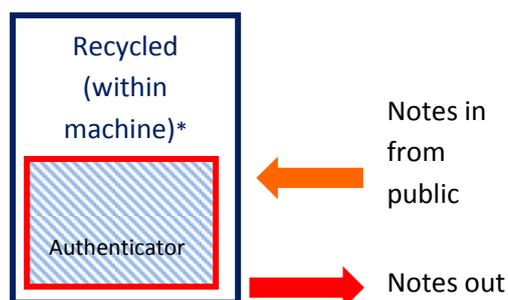
Compliant with Code (wholesale supplier must confirm to the ATM operator that they are Code compliant). ATM operator must self-certify compliance annually.

### Locally sourced notes



ATM operators must ensure notes are machine authenticated before being loaded into the ATM. The authenticator and software version used must be listed on the MTF. This includes installing software or firmware within agreed timescales as and when these are updated on the MTF website.  
ATM operators must self-certify compliance annually.

### Internally recycled notes (Cash and deposit machines - CDMs)



CDM operators must ensure that the authenticator and software version are listed on the MTF. This includes installing software or firmware within agreed timescales as and when these are updated on the MTF website.  
Notes may be authenticated on receipt, on dispense, or both.  
Operators must self-certify compliance annually.

\* Operators may have ATMs that recycle notes within the machine and are also filled from a non-wholesale source (combining the final two scenarios). These ATMs must comply with both sets of requirements i.e. operators must ensure that all locally recycled notes are authenticated before being dispensed.

## **Annex 3 – Aggregated responses to survey questions**

### **SECTION 1 – Transition to Code compliance**

1. [Have you changed your cash handling or business practices as a result of the introduction of the Code?](#)

The majority of respondents (63%) had not had to make any changes to their cash handling or business practices to be compliant. Those that had, had introduced new equipment and/or new processes/training for staff. This is a positive impact as a result of the Code.

2. [Have you removed any cash dispensing machines, ceased dispensing notes or moved to a wholesale filled model solely as a result of the Code? For what reason\(s\)?](#)

One respondent had moved to card only machines in stores.

3. [Did you experience any issues or barriers to Code compliance during implementation?](#)

The majority of respondents (63%) had not experienced any issues or barriers to Code compliance. Those that had, noted costs incurred and authenticators not being used correctly/at all as issues. See section a for more detail.

4. [What has been the impact of the Code on staff time?](#)

95% of respondents had not noticed an impact of the Code on staff time.

5. [Have you noticed an increase in the identification of counterfeits as a result of the Code?](#)

No increase identified.

6. [Any other feedback on transition?](#)

Some feedback on cost was received (see section a)

### **SECTION 2 – Business support for the principles/purpose of the Code**

7. [Do you agree the Code principles are the right ones to reduce the level of counterfeits received via machines?](#)

84% of respondents agreed that the Code principles were the right ones to reduce the level of counterfeits dispensed via machines. Sections b and c above address the issues raised by the 16% who did not agree.

8. [Are there any additional areas you think the Code should address to reduce the likelihood of a counterfeit note being circulated via machine?](#)

84% of respondents did not identify any additional areas the Code should address. Sections c and d above address the issues raised by the 16% who felt there was.

9. [If you have machines which are not yet compliant with the Code, please provide reasons on why this is;](#)

See section a, above.

### **SECTION 3 – Start-up and ongoing costs to industry**

This section focused on costs to businesses. The responses to these questions were firm specific, and as such results will not be published.

### **SECTION 4 – The clarity of the Code**

13. How clear is the Code of Conduct for the Authentication of machine dispensed banknotes document?

100% of respondents marked the Code greater than 7/10 for clarity, with the majority of respondents indicating 9/10 or higher.

14. Are there any sections you would like clarification/further information provided on?

No respondents requested any further clarification to the Code.

15. Are you aware there is literature to support the Code on the Cash Services website?

The majority of respondents were aware of the literature to support the Code. Those that were not have been forwarded the materials. Materials can be found on the Cash Services website.

16. If yes to above, how useful do you find the literature (provided on the Cash Services website) which supports the Code?

All respondents stated the literature on the Code was either 'very helpful' or 'somewhat helpful'.

17. Do you have any other comments on the clarity of the Code?

Nil response.

### **SECTION 5 - Reporting compliance with the Code**

18. How easy is it to collect the information internally, required to self-certify with the Code?

The majority of respondents rated information collection as easy. However there were also responses rating this towards the difficult end of the spectrum.

19. If you responded >5 (difficult) why is this?

Responses indicating difficulty were due to internal systems, and not directly linked to the Code.

20. How easy is it to report your annual self-certification with the Code to Cash Services/LINK using the current data collection process?

Responses to this question ranged from 1 (easy) to 8 (difficult).

21. If you responded >5 (difficult) why is this?

Responses indicating difficulty were due to internal systems, and not directly linked to the Code.

22. Would you prefer to report Code compliance in another way?

95% of respondents selected 'no' or 'don't mind'.

23. Would you like public recognition that you are compliant with the Code?

95% of respondents selected 'no' or 'don't mind'.

24. Do you agree measuring compliance by the number of compliant machines is the correct method?

90% of respondents agreed that measuring compliance by the number of compliant machines was the correct method. Section b addresses the respondents who replied otherwise.

#### **SECTION 6 - Further data collection**

This section was collected for information only, and the results will not be published.