

Raising Awareness of Thread Harvesting

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The anti-counterfeit team at De La Rue regularly works with central banks and has nearly 50 years of combined experience examining counterfeit banknotes, analysing counterfeit trends and providing anti-counterfeit training. In recent years there has been a small increase in the number of counterfeit banknotes that have been produced by 'harvesting.'

In the context of the relative risk of encountering counterfeits in other industries (eg. luxury goods) or the cybersecurity risks associated with mobile/electronic payments, the threat from counterfeit banknotes globally is very low.

When hobbyists counterfeit banknotes they tend to produce only a small number of notes that are often of low quality. However, even a low number of counterfeit banknotes can be a cause for concern for central banks and risks undermining confidence in the national currency and the broader economy. Therefore, the more that is understood about counterfeit banknotes the more currency security feature suppliers like De La Rue can design banknotes and security features that stay ahead of future threats.

'Harvesting' is a technique employed by certain counterfeiters to remove all (or portions) of a security feature from a genuine banknote and reuse the genuine elements on a copy of a banknote, thereby making the counterfeit more convincing and increasing the likelihood of it passing as a real note. These types of counterfeits are typically produced by a 'hobbyist' who will scan and print banknotes and then carry out additional work (often involving craft store resources) to simulate public security features.

One feature particularly susceptible to harvesting is the security thread, albeit that the threat is low: the embedded nature of any thread makes it inherently secure because it is very hard for a hobbyist to simulate threads that look like they are properly embedded in paper.

One recent example of harvesting seen within the anti-counterfeit team concerns higher value counterfeits that used inkjet-printed copies (based on plain UV-bright paper) that were made to look more authentic by incorporation of a section of a thread from a lower denomination banknote of the same series.

The sections of thread harvested from the lower denomination banknotes were applied to the counterfeits over the position of the original thread in the copied images. The donor banknotes received for examination later in the year showed carefully cut, printed images, used to replace the part of the banknote that had been removed in order to get at the embedded part of the thread.

Using this type of technique it was possible to generate one low value banknote plus a high value counterfeit from every single low value denomination.

There are some precautions that central banks can take to mitigate the threat of thread harvesting. Any action needs to be carefully weighed to consider the potential disruption to the status quo against the size of the threat of thread harvesting. Banknotes are more at risk of harvesting if a common security thread is used for all denominations, if the banknotes are all the same height or if the effect is similar across all denominations.

Varying the banknote height, window layout and increasing the thread width for higher value denominations can help mitigate the threat.

Using different threads in different banknote denominations can also mitigate the threat, as can using threads that can be highly personalised; for example, De La Rue's Kinetic *StarChrome*[®] can be completely bespoke for every single banknote denomination by designing it to contain different images, shapes and alphanumeric characters. When selecting threads for a new series it is also useful to look at threads used in low value denominations in countries nearby and avoid those for higher value denominations.

While overall the threat of counterfeit banknotes generated by thread harvesting around the world is low, with some increases observed in recent years central banks may nevertheless want to consider this angle when thinking about future thread choices.

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