

CURRENCY NEWS™

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CPS Managing Director Shawn Ashdown (left) and Head of Engineering David Hawkins (right) with the latest V-series compact high speed sorter.

CPS Returns, Launches Green Strategy

Just over a year ago, CPS announced that it was exiting the market for high-speed banknote sorting systems and pivoting to software and services (see CN January 2023). It then went very quiet but was back in force at the Banknote Conference in Fort Worth earlier this month, unveiling its new strategy for sustainability, flexibility and digitisation for the banknote fitness sorting and authentication sector.

According to the company, following a review of the negative carbon effects of manufacturing large high-speed machines, it made a conscious decision not to produce such machines for the sector – leaving that field to the main supplier, G+D – and instead offer customers a more sustainable solution. High investment, low margins and increasing commoditisation were also factors in its decision.

However, it recognises that large banknote inspection machines will still be needed due to the additional and extensive technical requirements of banknote production. So it will continue to produce Single Note Inspection (SNI) machines – albeit in the Indian state of Maharashtra via a joint venture with Stardust and its 'Make in India Partner'

Pigments & Allied, having closed its manufacturing operations in Texas and the UK.

This collaboration, it says, underscores the two companies' commitment to offering a comprehensive business solution in the banknote quality inspection market.

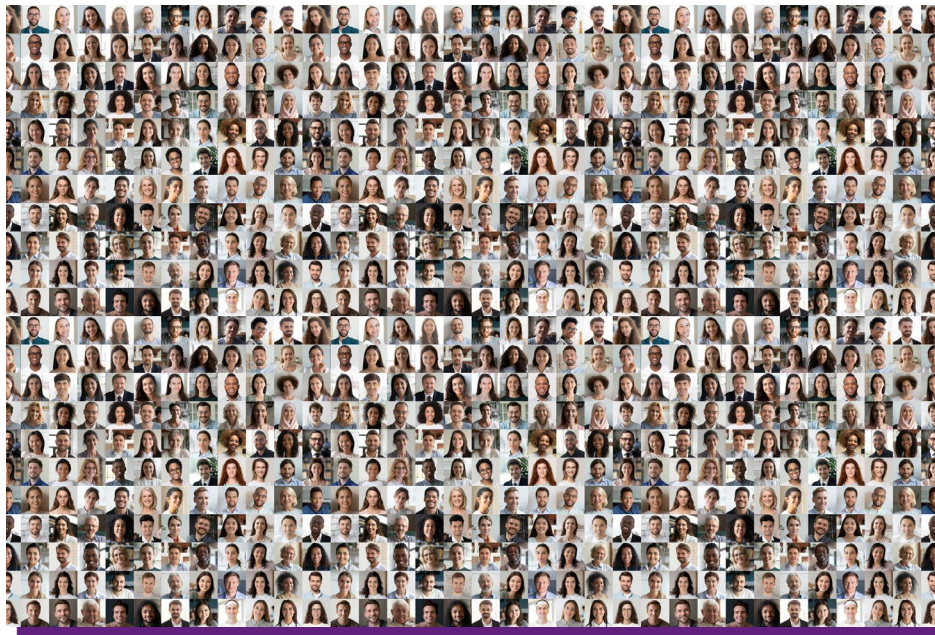
For the cash processing market, CPS is now focusing on assisting customers solve their business challenges, including costs and meeting their sustainability targets, and to this end is offering the market two options to fitness sort and authenticate banknotes.

The first is to not purchase larger machines but to implement an upgrade strategy that will install the

Challenging Manufacturing 'Truth': Is Small Beautiful?

■ By John Winchcombe, Editor, Cash, Payment & CBDC News

An unscientific rule of thumb taught to those entering the banknote industry used to be that a country needed a population of about 40 million people to justify having their own banknote printing works. That was when a line of printing equipment produced about a billion banknotes a year, working three shifts, which was about how many banknotes were typically needed by that population.



As of 2022, just 37 countries have a population of 40 million or more. Which means the majority does not.

In reality, modern banknote printing equipment can produce about 1.4 billion banknotes because the number of notes per sheet has gone up and the machines run faster. Even if we assume that the same number of banknotes per head are required, based on 1.4 billion banknotes per line of equipment, the population needs to be 56 million people to justify investing. Only 25 countries have that many people.

Building a state printing works in specialised premises with one line of equipment, and staffing it with qualified people, is no small undertaking. Modern banknotes are complex, involving lithography, intaglio, letterpress, silk screen printing, the application of foils, varnishing equipment and online and offline quality control systems.

Add in the design and plate making capability, the ink management, quality laboratory waste disposal and secure waste destruction, and mechanical support for all this. Finally, overlay the security systems. The cost will lie between \$50-120 million before you staff up and begin production. This is not small change.

However, money and national sovereignty go hand in hand. Many countries have their own print works not because of economics, but for resilience and national pride.

Just in time manufacturing

But what if you could buy a line of equipment capable of printing and finishing 500 million banknotes, with a price tag to match? Then a population of 20 million would be sufficient to justify the investment. 63 countries have a population of 20 million or more, and 18 of those don't have a banknote printing works. Another 11 countries have a population of 15 to 20 million, of which six have note printing works.

So even though banknote volumes are falling due to more digital payments and/or the adoption of longer lasting banknote substrates, there remains the perennial importance of resilience and national pride, which in many countries is gaining strength. So, should more central banks consider printing their own banknotes?

To make this work, the cost of the line needs to be low, but preferably incorporating modern on-line quality control systems. Staff will need to be trained to the necessary skill levels to operate the pre-press, platemaking

and printing equipment should be attainable within normal training periods. Waste management, quality control, production management and security need to be achieved in efficient and cost-effective ways.

An impossible brief? Perhaps. Perhaps not. If the footprint of the equipment was small, for example a mini-intaglio Orloff press linked to a digital or modern commercial litho press and with automated finishing equipment, the space, operator skills and the cost could be minimised. Some security features could be acquired as part of the substrate, others added or applied during printing.

If some of the more difficult elements were outsourced, for example design and origination and intaglio waste disposal, again the skill and site challenges could be made easier. Equipment is already available to manage quality control and packing (with no human intervention, which reduces the security risks) without requiring skilled labour.

Perhaps the vision is a central bank holding substrate stock, with or without built in security features, with printing on demand to meet the banknote denominational needs of their nation – resilience, pride and cost savings may be available that are way out of reach today.

It is interesting that Koenig & Bauer Banknote Solutions (KBBNS) is launching AKTINA® at its Equinox 2024 event, which is currently underway. While not exactly as described here, AKTINA is a major change to how banknotes are currently produced.

AKTINA offers a new manufacturing approach for the production of banknotes whereby printworks select manufacturing modules matching the specification of their banknotes, and then create a production flow. Printers can add to standardised feeder and delivery modules units such as litho, screen and inspection modules, allowing a continuous production flow. More printing processes are being made ready to be added to this list. If the specification changes, modules can be added or removed.

Size matters

In a similar vein, further along the chain of cash supply, we report in this issue of CPS's new strategy, which is to reduce the environmental and financial cost to central and commercial banks of banknote sorting by substituting large high speed sorters with smaller versions, two of which will do the same job for less money and a smaller carbon footprint.

According to the legendary Greek teller of fables, Aesop, 'good things come in small packages'. In the case of the banknote industry and in the context of this article, small is a relative term. But nevertheless, the adage could still hold true.

Glory Bounces Back

Glory – the Japanese developer of cash handling, management and automation systems for the financial, retail, vending, transportation and gaming sectors – has reported an impressive increase in sales for 2023-24 and a return to profit, driven largely by a resurgence in the domestic market. This follows an uncertain two years in which performance was hit by supply chain disruption and the global economic downturn.

The company posted net sales of ¥372.5 billion, a 45.6% increase over the previous year. Operating income increased tenfold – from ¥522 million to ¥51.2 billion and EBITDA increased from ¥18 billion to ¥72 billion.

Glory operates in three domestic markets – financial, retail and transportation, and amusement – which together accounted for just over 50% of sales (versus 41% in 2022). Overseas sales accounted for the other 50%. Sales and profits were up in all four business units – 116% for Financial, 64% for Retail, 86% for Amusement, and 18% for Overseas.

Outlook

Glory is predicting that sales and

profits will increase in both the financial institutions and retail industry as customers are expected to continue to make capital investments, mainly in the US, which is its main target.

In the domestic market, however, it expects a decline as the increase in net sales associated with the issuance of new banknotes has run its course, although the trend toward self-service solutions to address labour shortages is expected to continue, and demand for self-service products and services is expected to remain steady as a result.

Based on those factors, it is forecasting a fall of 11.4% in sales to ¥330 billion, of 57% in operating income to ¥22 billion and of 39% in EBITDA to ¥43.8 billion.

Future of Meta Materials in Doubt

The materials and nanotechnology specialist Meta Materials – which acquired the security features company Nanotech Security Corp in 2021 – has announced a workforce reduction of 80%. It is understood that most of the workforce of over 100 has already been let go.

The company is also pursuing a number of strategic options for the business, including the sale of assets, additional financing or the sale of the company, stating that without an influx of cash to support operations, it faces financial hardship that may result in shuttering facilities and/or bankruptcy proceedings.

An indication that the company was in financial difficulties came last year when, accompanying the announcement of its 2022 results and increasing losses, it raised ‘substantial doubt’ about its ability to continue as a going concern. It cited its main problems as being cash burn and over-reliance on one part of the business, namely Nanotech.

It subsequently put in place a Realignment and Consolidation Plan, involving a concentration on three core, and productive, areas – Photonic Materials (under a newly-created Banknote & Authentication business line), Electro Optics and Battery Materials. The plan also included the spin-off a number of other business lines, a reduction in overheads and the

elimination of non-essential workforce, in an effort to save c. \$20-30 million per year.

The company had revenues of \$10 million in 2022 (\$6 million of which came from Nanotech) and a net loss of \$80 million. It has yet to publish its year end results for 2023, but the figures for the first nine months showed a drop in revenues of 35% to \$5.62 million and a massive increase in net losses, from \$63 million to \$321 million (including \$282 million of goodwill impairment).

Nanotech’s security portfolio includes KolourOptik® Stripe and KolourDepth™, which offer effects combining multi-directional movement, 3D stereo depth and multiple colours based on nano-diffraction, along with LumaChrome colour shifting film for threads and patches, which is in use in 30 banknote denominations.

They also include QUANTUM stripe, its first fully animated nano-optic banknote security product based on plasmonics, launched last Autumn (see CN September 2023), which offers dynamic effects at all angles and under all lighting conditions.

... CPS Returns, Launches Green Strategy

latest technology on existing large machine installations. This will save at least \$1.5 million to purchase a new machine at today’s rate. It will also considerably reduce the carbon footprint. Using certified government data, 1 tonne of aluminium produces 11.5 tonnes of carbon to manufacture a large high-speed machine, producing 12,075kg of carbon.

The second option is to purchase low carbon compact high-speed machines, replacing the larger machines for banknote fitness sorting and authentication. The CO2 generated in running a large high-speed machine over a 15-year period is 205,275kg compared to 73,000kg for a pair of compact high-speed machines which, with a throughput of 72,000 notes per hour, deliver a comparable level of banknote processing capacity.

The introduction of online shredding and strapping to CPS’s compact high-speed V-Series (described as a gamechanger by the company) lowers the cost of banknote fitness sorting and authentication over a 15-year period to \$23/million banknotes compared to the larger high-speed cost of \$76/million banknotes.

CPS is targeting four markets for the V-Series – central banks (with the shredder and third-party detector modules) as well as commercial banks, CIT cash centres and casinos (for which the strapper module has been designed).

It also offers the X-Range of smaller desktop counters and sorters for the commercial banking, CIT and casino sectors.

Whilst the company is based in the UK, and its research and development department remain there, both product ranges will be manufactured in a new facility in India (separate from the partnership with Stardust) and maintained and serviced by a network of 14 CPS subsidiary companies.

According to Barrie Foley, Group Chief Executive, in addition to sustainability, also central to the company’s strategy is flexibility (with more, smaller systems offering scalability and manoeuvrability), and leveraging the power of data. In particular, regarding the latter, the ability to collect, analyse and utilise data from both its machines and those of other manufacturers to manage and enhance operational efficiencies. Critically, and unusually, that data belongs to the customer.

As part of this data-driven strategy, CPS has worked with its sister-company ECM (which was formerly part of CPS but has now been spun out as a separate, software-focused company), to develop a new product called Centralised Control. This was also launched at the Banknote Conference and will be covered in next month’s edition.

News in Brief

■ Crane NXT Restructures Currency Business

Further to the completion of the acquisition of OpSec Security for \$270 million, Crane NXT has announced a restructuring of its business segments.

Subsidiaries Crane Currency and Crane Authentication now form part of the new Security and Authentication technologies segment, along with the acquired OpSec business. The position of Crane Payment Innovations (CPI) remains unchanged and it will not form part of the new segment.

According to Crane NXT, this structure better aligns with the company's strategy to expand its portfolio of technology solutions and serve its customers. The updated segment presentation will be effective in the second quarter of 2024 and will not affect the first quarter's financial results.

As part of the restructuring, Sam Keayes, previously the President of Crane Currency, has been elevated to Senior Vice President. In this role, he will oversee the Security and Authentication Technologies segment and report directly to Crane NXT CEO Aaron Saak. Dr Selva Selvaratnam will continue leading OpSec and report directly to Mr Keayes.

■ Sales of BPS X9 Hit 100 Milestone

Giesecke+Devrient has announced a significant milestone in the deployment of its BPS[®] X9, Single Note Inspection (SNI) system, with an additional order from the Banque de France bringing to 100 the number of systems sold in 36 countries since its introduction 10 years ago.



The BPS X9 has processing speed of 44 individual banknotes per second, corresponding to a throughput of more than 150,000 banknotes per hour, enabling more than one million banknotes to pass through the inspection process within an eight-hour shift.

Every banknote is inspected for even the smallest deviation or inaccuracy according to strict criteria before it is allowed to enter circulation. The BSP contains specifically developed sensors to detect and verify the printing quality and security features such

as UV properties, magnetism and threads. The evaluation standards and tolerance limits can be adapted to the specific requirements of a currency, ensuring that the issuing banks retain full control over the quality criteria of the product.

'Over the years, G+D has supplied Banque de France with systems of the highest quality and reliability,' said Pierre-Yves Boissinot, Deputy Director General Currency and Retail Payments at Banque de France. 'The dedication to developing robust solutions has truly made a difference in our operations.'

The Banque de France order follows on the heels of an order from Note Printing Australia, which took delivery of its BPS X9 late last year, describing it as the 'Ferrari' of the banknote processing world.

■ US Mint to Drop Mutilated Coin Program

The US Mint is seeking public comment on the announcement in the Federal Register that it plans to close its Mutilated Coin Redemption Program relating to the face value exchange of bent and partial coins.

In the announcement, on 3 May, the Mint explained that not only does the program operate at a loss, but it is too cumbersome to practically manage because the sheer volume of coins submitted for replacement is in the millions. Some of the submissions have included numerous counterfeit US coins, resulting in lawsuits and an indefinite suspension of the program.

The US government established the Mutilated Coin Program in 1911 to serve the public and businesses for the redemption of small amounts of damaged coin. For over 100 years, the program rolled along with most coins submitted in small quantities from private citizens.

However, in more recent years it has been overwhelmed by large submissions coming from commercial entities, including recyclers from China who flooded the program with coins totalling millions of dollars in face value, including counterfeits.

The program was suspended in 2015, reinstated in 2018 and then suspended again in 2019. A consultation by the US Mint in 2021 suggested imposing monthly limits on deposits by weight, prohibiting redemption if the coins came from outside the US, or precluding the redemption of coins damaged by industrial processes.

To that should be added the fourth option getting rid of the program altogether, with the US Mint stating that it has found no practical way to expand resources to handle such demand.

Anyone seeking to comment on the plans has until 2 July via the Federal eRulemaking Portal – www.regulations.gov.

■ Missing the Mark

A post about the Bank of England's new King Charles notes on X – formerly known as Twitter – has prompted a flurry of responses – all along the same lines.



'Met with @bankofengland today to view the first banknotes with HM King's portrait', tweeted Penny Mordaunt, Leader of the UK's House of Commons and Lord President of the Privy Council, not to mention the bearer of the state sword at the King's coronation last year.

'Gonna need a bigger wallet' said one response. 'I reckon you're going to need to make them smaller' said another.

'Who has a wallet this size? Can't the government get anything right?' was another example, as were 'now they've got to replace every cash machine in the country with a jumbo one' and 'couldn't they have made them smaller?'

Perhaps not the reaction she had in mind when she took part in the photo opportunity.

■ People in the News

■ ATMIA (the ATM Industry Association) has announced a new Board of Directors for 2024. The Executive Directors are **John Clatworthy** of Cash Connect[®] (President), **Karina Zambrano** of EuroTechzam (Deputy President), **Peter Kulik** of FCTI (Chairman) and **Sandra Hartfield-Papie** of Monex (Treasurer).

■ **Simon Lake**, formerly Sales Director of The Royal Mint until it announced its decision to exit the export business, has joined the Mint of Poland as Advisor.

■ In addition to his existing duties, Koenig & Bauer's CFO and Deputy CEO, **Dr Stephen Kimmich**, has assumed responsibility for the company's Special segment, which includes the Banknote Solutions business.

Some Ups, Some Downs for Mints

Three of the main mints have recently published their annual results for 2023. It's something of a mixed bag, with overall positive results, but not necessarily driven by circulating coins.



Mint of Poland growth, but not in coins

Reporting on 2023, the Mint of Poland Group announced that revenues from sales exceeded PLN 1.2 billion (US\$307 million). Operating profit was more than double year-on-year, amounting to PLN 110.6 million. Earnings before interest, taxes, depreciation, and amortisation (EBITDA) were PLN 60 million more than the previous year, amounting to PLN 130.6 million.

The increases were due to the company's non-mint activities – namely electronic payments and real estate. For the minting business, sales fell by 19% to PLN 858.7 million and EBITDA by 20% to PLN 49.7 million.

The production and delivery of circulation and collectors' coins for the National Bank of Poland earned the Mint PLN 131 million. It produced more than 985 million circulation coins and 150,000 collectors' items.

The company is focusing on the export market, during the year winning tenders in Uruguay, the Dominican Republic, Argentina, Guatemala, Armenia, Colombia, Albania, Nicaragua, Turkmenistan, Georgia and Costa Rica. In 2023, it won 11 tenders for the production and supply of circulation coins, collector coins and investment products. Some of these were completed last year, while others will be implemented or continued this year.

In total, the Mint produced 1.6 billion coins in 2023, compared with 941 million the previous year.

Recovery for French Mint

Monnaie de Paris reported a 9% increase in turnover from the previous year, at €162.1 million for 2023 – the highest figure since 2007. Growth was driven by all business segments - French circulating currency, foreign circulating currency (export), collectors coin programmes, art products, and operations at the 11 Quai de Conti site (museum, exhibitions and space rentals – and also the headquarters of the Mint).

Circulating coin production topped 1.3 billion coins, up 23% from the previous period. The operating result, at €5.6 million, is up sharply compared to 2022 – an increase of 65%. The Mint said that this underlines the efforts made in terms of cost control. This corresponds to 3.4% of turnover against 2.1% on average over the years 2020- 2022. The net result amounts to €4.4 million, positive for the fourth consecutive year following three years of losses (2017-2019).

Euro coin orders increased by 5% from last year, generating a turnover of €39.3 million. This comprises a quarter of the total turnover, compared to a third of the total turnover five years ago.

Export figures show a turnover of €34.5 million, close to the highest level achieved in 2007, and an increase of 13% compared to 2022. This was attributed to both historic and new customers. 800 million foreign coins were produced in 2023 (+50% compared to 2022).

Monnaie de Paris also reported on the first year of its implementation of the 'Ambition 2027' strategic plan, which contains four pillars:

- **Develop activity:** after €162.1 million in 2023, the 2024 budget expects sales of more than €170 million.
- **Provide better service to customers:** the 'service rate' improved from 77% of orders delivered on time in 2022 to 86% in 2023.
- **Accelerate ecological transition:** ongoing decarbonisation of metal purchases, acceleration of the energy sobriety plan (11% reduction in energy consumption between 2021 and 2023), and a 'zero plastic' policy.
- **Be a good place to work:** the year saw the deployment of initiatives aimed at making the Mint more inclusive, developing equality between women and men and fighting against all forms of discrimination.

Bullion hits RCM performance

The Royal Canadian Mint (RCM), by contrast, saw sales drop by 34% to C\$2.16 billion. Profit before income tax and other items was \$24.1 million - 46% lower than in 2022.

The main reason for the decline was a sudden and significant decline in global bullion demand in the second half of 2023, combined with a planned higher level of operating expenses to support the Mint's on-going operations. Of the RCM's four businesses – Canadian Circulation, Foreign Circulation, Numismatics and Bullion Products and Services - the latter is the largest by far in terms of sales, comprising nearly 90% of all revenues. Sales here fell by 37% to \$1.9 billion.

Revenue from the Canadian Circulation programme decreased by \$7.3 million to \$88.3 million. This was mainly because fewer coins were required to replenish inventories and ensure an adequate supply due to an increase in deposits with the financial institutions, and an increase in recycled coins from the coin recycling programs. The RCM is responsible not just for production but also circulation of Canadian coin: in the year it supplied 2 billion coins for circulation (much the same as 2022), of which 1.66 billion was from financial institution deposits, 141 million from recycled coins, and 249 million new coins.

Foreign Circulation fell sharply, by 56% to \$27.6 million in 2023. According to RCM, the decrease reflects 18% lower volumes produced and shipped year on year, and changes in the mix of contracts for coins and coin blanks.

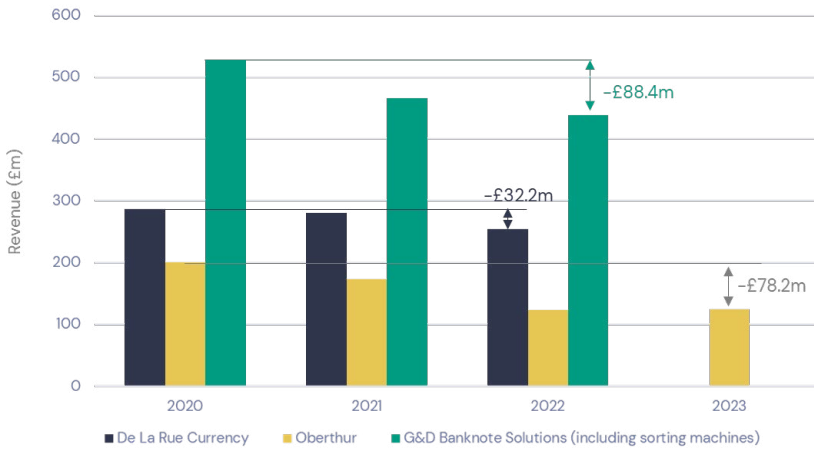
Numismatics revenue increased by 20% to \$140.7 million. The increase was mainly due to the interest in the products celebrating the late Queen Elizabeth II's reign and King Charles III's coronation.

Demand for Canadian circulation in 2024 is expected to be similar to that of 2023. The RCM expects foreign circulation tenders for approximately 3 billion coins and blanks, of which it estimates 2-2.5 billion to be within its capabilities. It noted that while cash demand in advanced economies has reached a relative plateau, demand in emerging economies remains consistent as everyday trade and commerce is highly dependent on cash.

The RCM has also just published its 1st quarter results for 2024, and has made a good start to the financial year. While revenues are below those of the first quarter of 2023 due to ongoing weak demand for bullion, and sales of numismatic products fell back, revenue from the Circulation business increased to \$28.4 million in 2024 (2023 – \$22 million). This was driven by Foreign Circulation, where business increased almost threefold.

Stop Press - De La Rue for Sale?

As Currency News™ went to press, De La Rue provided a strategic update which states that a sale of one or both divisions could be on the cards. The Board is in discussions with a number of parties who have made proposals in relation to, or expressed interest in, either of the divisions – Authentication and Currency.



Revenue by year for De La Rue and two other major currency business units

A further announcement will be made with the publication of the company’s annual results, which has been pushed back to the end of July as a result.¹

This article is a further statement from De La Rue.

Putting the announcement in context

For over two centuries, De La Rue has been a trusted partner for governments and central banks. Its customer base includes 64 currency issuing authorities that it has supplied for over 20 years (including 31 it has supplied for over 50 years). De La Rue is proud to lead the industry in banknote design and to be the only entity in our industry recognised by the Financial Times as a European Climate Change Leader.

De La Rue today put out a positive strategic update, which included a trading update confirming no change to the previous guidance in relation to its FY24 outturn. It also highlighted positive momentum in the order books of both divisions, confirmed a total of four substantial contract renewals for De La Rue Authentication (with anticipated future revenues of over £350 million) and emphasised the strong Currency contract win-rate in a market currently experiencing increased banknote demand. The order book for Currency is the strongest it has been in five years.

The De La Rue Board has also announced it has received multiple expressions of

potential interest for the Group’s two divisions (Authentication and Currency) and it will explore the opportunities that this creates. The timing of the announcement is in line with the Chairman’s commitment at the time of the interims in December, and again in April that an update would be provided by the end of May.

The Board must consider the long-term needs and the futures of all stakeholders: employees, customers, shareholders and pension trustees. This article aims to provide a clear, fact-based perspective on current and future-looking implications.

De La Rue has a long history of nurturing new businesses to a level of maturity where they become attractive to others – the ID Solutions business, Cash Processing Systems and now the Authentication division are all examples of this. De La Rue has also established and run multiple state printing works in their early years. At the heart of these new entities was the contribution of the Currency business over its long and established history.

The business has proven itself extremely resilient during recent years. The financial results of the Currency division speak for themselves when set in the context of industry performance. Figure 1 shows how De La Rue experienced a relatively minimal drop in revenue during the major industry downturn post-COVID. Its high win rate has protected its revenue and the division has remained profitable during a period where others have not.

Today De La Rue’s sites are more standardised than ever. By streamlining its manufacturing footprint, reducing the number of banknote print sites, scaling SAFEGUARD® polymer substrate and optimising its paper sourcing strategy, De La Rue has significantly lowered costs and improved its ability to respond swiftly to market demands.

The value of cash in circulation continues to grow at 4-5% CAGR and the demand for banknotes is increasing again following its post-COVID slump. De La Rue continues to achieve its high win rate, with an order book that has more than doubled from £105 million (September 2023) to £239 million (30 March 2024), with £60 million secured since. The design department is also reporting an exceptionally busy period as more issuing authorities plan their next series of banknotes. New banknote designs are typically associated with larger volume orders and new polymer or security feature sales.

Innovation will also support future growth. De La Rue’s SAFEGUARD® polymer has provided a platform for new design and technology approaches, and there is a strong pipeline of development projects which will continue to drive new sales. The recently launched ASSURE™ covert taggant for polymer has already been adopted by two currency issuing authorities. De La Rue has a strong portfolio of fundamental IP to support exciting and unique security features and effects that cannot be produced commercially and which will provide market leading competitive edge.

Looking ahead Ruth Euling, Managing Director Currency, commented: ‘our commitment to serving currency issuing authorities remains unwavering. We understand that stability and reliability are paramount, especially in an industry as critical as ours. Our statement today reflects our ongoing efforts as responsible leaders to continuously consider how to best serve all our stakeholders, and especially our customers.’

‘Nothing in this announcement affects our current or future plans for deliveries, product developments or commitments. I am extremely confident in our ability to navigate market challenges and capitalise on emerging opportunities. Our strong order book, efficient operations, and diverse product portfolio position us well for success. We remain committed to delivering exceptional value to currency issuing authorities, ensuring that De La Rue continues to be synonymous with trust, quality, and reliability’.

¹ Published results. G&D and Oberthur results published in Euros and converted to GBP using exchange rates 0.87 (31 December 2023), 0.88 (31 December 2022), 0.84 (31 December 2021) and 0.91 (31 December 2020) respectively. Crane Currency results excluded as non-representative of the industry because the US\$ forms a large proportion of revenue. G&D didn’t report revenue for its Banknote Solutions business in its 2023 annual report and De La Rue FY24 results are due to be published during the summer. Financial year end 31 December for Oberthur and G&D. Financial year end of March for De La Rue.

Celebrating 20 Years of MOTION®

It was 20 years ago that the micro-optics technology behind MOTION® first made its appearance – first at the Optical Document Security conference that year in San Francisco, and then a few months later at the Currency Conference in Rome. A year later, Crane Currency – already a thread manufacturer who had licenced the technology from its inventors (Nanoventions) – fully acquired the IP and unveiled its first commercial product, a security thread which it called MOTION. The following year, that thread made its debut in a circulating note – the Swedish 1,000 kronor.

MOTION was a game changing level 1 security feature. Hitherto, optically variable features had been limited to colour shift and diffraction but MOTION brought a third element to party – namely movement. It has, as a result, spawned a whole new generation of optically variable features for banknotes by the wider industry.

Currency News™ spoke to Crane Currency's Eric Ziegler (VP of Global Markets, Product Growth and US Government) and Tod Niedeck (Marketing Director) about the background and foundations of MOTION, developments over the subsequent 20 years, and what the technology has meant both for company and for the security of banknotes more broadly.



Eric Ziegler (left) and Tod Niedeck (right).

Q: How did the micro-optics technology come about, and how did Crane come to acquire a licence to use the technology (and subsequently buy it)?

A: Crane and Nanoventions began transforming laboratory scale exemplars into a validated security feature about 21 years ago.

Nanoventions' Mark Hurt and Rick Steenblik had developed ingenious approaches and wrote excellent IP on how to create synthetic images and the use of moiré magnification on a micron-scale suitable for use in banknotes. The difficulty in making the leap from prototypes to robust public security features cannot be underestimated. As an entirely new type of security feature, all aspects of production needed to be created and scaled.

Crane already held a leadership position in security thread innovation and manufacturing and this was key to the success of MOTION.

Q: Where did the name MOTION come from?

A: Karin Mörck-Hamilton and I (Tod) were working with the earliest first samples of what would become MOTION. These were delivered to us by Tim Crane, who at the time was the Crane's Director of Business Development and one of the company's leading security thread experts along with others like Paul Cote.

We wanted a name that was both simple and sensible. To those seeing the feature for the first time, its three-dimensional qualities were also striking and novel, but in the end it was the feature's fluid movement that won it its name, MOTION.

CN: The first MOTION thread was for the Swedish 1,000 kronor. Was this used to launch MOTION as a thread technology, or did you expose MOTION to the industry prior to this?

A: Due to its novelty, MOTION micro-optics caught the attention of several central banks even before it first issued in the Swedish 1,000 kronor. Central banks that specified the feature right after Sweden provide a clue to those who were watching closely its development.

The US Bureau of Engraving and Printing and Board of Governors of the Federal Reserve System, Banco de México, Danmarks Nationalbank, Bank of Korea, to name a few, were all early adopters, for the most part securing their new high denomination banknotes with MOTION security threads.

CN: Did this response exceed your expectations? When did you realise that MOTION would have such an impact on the industry?

A: We didn't find the success of MOTION surprising, but it took time. When something very, very new is launched, it's not uncommon for there to be strong reactions, both proponents and strong opponents. New things, big changes to conventional approaches, elicit emotional responses.

It took a number of years for many in the industry to warm up to MOTION micro-optics, but by the time RAPID® was launched at the Banknote Conference in 2014, MOTION was well established.

We also knew how difficult it was to produce MOTION with consistently high

quality. That was the cost of achieving a visual effect of a completely different origin. But it seemed to be exactly what central banks were looking for.

Additionally, we saw in MOTION micro-optics not just a feature, but a new technology platform.

Q: There have been a number of advances to the MOTION technology since then – both technically/optically and in terms of application (stripe, patch). Can you describe these?

A: The evolution of MOTION micro-optics continues with new visual effects and feature forms.

RAPID, as noted earlier, was launched in 2014. It has smaller lenses displaying faster movement and lower angles of tilt. Also, its visual effects are registered. This allows us to create still easy to use, and yet difficult to simulate, movement effects that can be included in threads of 3mm in width or even narrower.

RAPID Detect (with an IR element for machine readability) followed in 2019 and then RAPID HD (with high colour definition). RAPID Vision, a machine-readable, multicolour version of high-definition RAPID was launched last spring (see sidebar). That met with an enthusiastic response and it is specified in seven denominations already.

Meanwhile, we also launched a stripe version – MOTION SURFACE® – in 2018 that is suitable for both paper and polymer. It is applied in the printworks and offers all the advantages of MOTION lenses and ultra-micro printing, but over a larger area. We will soon be releasing a new version of MOTION SURFACE that can be applied across a large number existing application equipment both in printing works and paper mills.

Q: What has been the uptake of MOTION and subsequent derivatives? How important were the developments/new designs and functionality in driving the market?

A: As part of a publicly traded company, Crane regularly announces the number of banknotes using its MOTION technology, that number is today at approximately 150 denominations and well over 50 countries.

The durability and high soil-resistance of RAPID security threads is well known in the industry, and more and more we're seeing central banks extend the use of it into lower value denominations, eg. the 20 and 50 som banknotes just issued in Kyrgyzstan, and Ghana 5 and 10 cedis circulating since 2018 (these each have values of less than US\$1). It's notable that the particular designs of these RAPID security threads are in 2mm and 3mm widths.

... Celebrating 20 Years of MOTION®



CN: But didn't you offer a specific product at one point – BREEZE® – for low denominations. What happened to this?

A: We still offer BREEZE, but what we have found is that it is akin to a learning vehicle, or an entry point, for discussions that almost inevitably lead to the decision to go for MOTION or RAPID instead.

BREEZE is available in a number of different colour and four different patterns, and it was developed as a lower cost option for the lower denominations.

But it isn't customisable, and this aspect of our technology is very important to most of our customers, for whom icons of national symbols, for example, are very important as visual cues for public acceptance and authentication. Many central banks desire features that reinforce the overall design of the banknote. So what starts out as a conversation about secure movement effects and BREEZE more often than not ends up with the central bank deciding to go for one of our customisable options.

That said, there are a number of banknotes featuring BREEZE, and another one will be issued next month.

Q: Were you concerned when polymer began to have a significant impact as a substrate for banknotes that the demand for threads would decline?

A: As already noted, the technology isn't just used for threads, but for surface-applied features as well, and the first series of banknotes using MOTION SURFACE on polymer is already in the making.



MOTION SURFACE on the Bank of Mexico's 'Jalisco' house note.

We believe that central banks recognize that every type of substrate must be secured with overt public security features. No one today believes that a plastic or paper banknote of even modest value is fully secured by printing alone. We think your readers will appreciate the interesting work Banco de México presented at the Banknote Conference in fully customizing and integrating MOTION SURFACE into its polymer Jalisco House Note. As a reminder, they are a long-time user of MOTION and RAPID and a high-volume printer and issuer of three types of banknotes: 100% cotton, durable-paper and polymer.

For this reason, Crane continues to invest in its capabilities and capacity, as 150 denominations is about 15% of the world's active denominations. MOTION and RAPID technology address the central bank demand for secure visual effects like no other.

This is why Crane is expanding its production capacity in Nashua in New Hampshire by nearly 60% this year.

CN: MOTION et al have been reserved for banknotes. But you also offer a variant for the brand protection market. Were you not concerned that this would dilute the perceived security value of MOTION?

A: Crane prioritized MOTION and RAPID as solutions for banknotes. That still dominates our thinking; however, Crane has been producing PROFOUND™ security films and labels since before MOTION was used in a banknote. Central banks, like companies and many consumers, are aware of the growing, global need for better product security.

This is a big change since MOTION was launched, and it is different in form and visual effects from what Crane provides to brand owners.

Q: Following on from that point, your parent company Crane NXT recently concluded the acquisition of OpSec Security, a leader in the brand protection sphere. Do you see any cross-over benefits for currency?

A: OpSec now sits alongside Crane Currency under a new business segment – Security and Authentication Technologies, and Sam Keayes will now be over both.

OpSec is clearly very complementary to what Crane Authentication provides to the product authentication market. But it's very early days and we will be working together to see how to leverage our respective capabilities.

CN: How important is being a paper maker and a printer to introducing security features such as MOTION?

A: Scaling up production of the technology was a real challenge, and creating a robust

product has taken years, with ups and downs along the way.

But one of the biggest advantages of having design, security feature development, papermaking and printing in one company is that we have been able to launch features that are fully ready for use in banknotes, that meet the security and production needs of the central bank and provide strong public engagement. MOTION, RAPID, and MOTION SURFACE provide that strong level of value, simultaneous security and ease of use.

As to commercialization, there are new features offered every year. Some look interesting, but what is their path to confident use by central banks to secure a national currency for years into the future? How are the risks identified and mitigated before these new features are specified? This is a major challenge that a vertically integrated company is well positioned to address.

We don't think that any central bank should specify a new feature without extensive evidence that it is ready.

CN: Having said that, does the fact that you are a papermaker (and printer) limit the opportunities in terms of other papermakers and feature suppliers?

A: Not at all. The starting point is that central banks specify the feature (thread or MOTION SURFACE) and it's up to the suppliers to make it happen. Not just us, but others too. We work with the industry's leading printers and papermakers, and have qualified over 20 paper mills, including supplying sample materials to ensure that our features are integrated effectively and competitively.

Moreover, we proactively work with papermakers and substrate providers, their designers and central banks on the design, window patterns and approaches to integration to ensure that together we deliver the highest value to the central bank.

Q: You were making threads long before MOTION. Do you still produce other threads?

A: We do for US currency, but threads like colour shift are now commoditised, and demand is so high for our MOTION and RAPID threads that we need to focus on those.

Q: Crane is part of Crane NXT, as is CPI. Has this proved beneficial for the development of MOTION?

A: CPI has been instrumental in creating highly secure, machine-readable MOTION and RAPID Detect security threads. CPI is the far and away leader of point-of-sale currency validation, authenticating 4 billion transactions a week. CPI knows exactly what materials and sensor technologies

are used, from POS validation and up every rung of the cash processing ladder including those at the central bank.

Q: *And are there new technologies in the wings to partner or replace MOTION since it is nearing the end of patent protection?*

A: Although the initial base patent is nearing the end of patent protection, this does not concern us greatly. Take for instance, the MOTION Switch thread used to secure the \$100 banknote, the current series of Swedish banknotes, even the recently withdrawn British £50 note – these all use MOTION threads which have patents that extend into 2028, so there is some time still to go on these features' published IP.

Furthermore, like many security feature technologies, MOTION is the product of a litany of materials and processes that are all trade secrets to Crane. MOTION remains still a very challenging feature to produce.

And as you might imagine, we have continued to invest well beyond the original MOTION offering and have a significant patent portfolio protecting RAPID, DETECT, MOTION SURFACE, and most recently, RAPID Vision.

Q: *MOTION was revolutionary and has led to a large number of competitive alternatives. What is the next revolution likely to look like?*

A: That's a crystal ball question. Who knows! What seems assured is that central banks will demand features that are easy to use and very secure, difficult to simulate and counterfeit. Counterfeit-resilience is one of the key attributes of the MOTION technology, as is ease of use, with its movement and the ability to be recognised in under two seconds. Not many other features can offer that.

Looking ahead, however, there is still much more that MOTION can provide in meeting these dual requirements.

Q: *Finally, how important has the micro-optics technology been to Crane in the banknote market, and to banknote security more generally?*

A: MOTION, RAPID and MOTION SURFACE – even Crane Currency – are synonymous with the security features the industry today refers to as 'micro-optics'. That speaks to the importance the MOTION technology has had on Crane Currency and the industry.

That impact also extends into how banknotes are designed. The big trend in our industry now is the customization of feature effects for each central bank, and integrating those features into the overall banknote design. Crane's micro-optic design software provides banknote designers with a user interface and refined tools to create visual effects linked directly to what is created during the manufacturing process.

It is this holistic approach, from design software to proprietary manufacturing processes that fuel innovations like the multicolour visual effects of RAPID Vision, and that's just the first feature using the Vision technology.

Central banks can expect to see more from Crane Currency soon.



Three of the denominations in the new Bahamas series feature Crane's technology - MOTION SURFACE on the \$100 and RAPID HD on the \$50 and \$10 notes - all of which were produced on Landqart's Durasafe.

■ Combining Colour and Movement with RAPID Vision

Bahaa Al Sayegh, Commercial Director of Crane Currency, took delegates at the Banknote Conference through the benefits and attributes of RAPID Vision, the latest iteration of the company's RAPID technology which was launched at the company's Public First event in Malta last year.

Up until then, all the MOTION and RAPID micro-optics features have been in single colours, the security effects resting on the counter-intuitive movement of the graphics (icons). The key to RAPID Vision is that it exhibits different real time colour effects that are perfectly synchronised with the movement, micron by micron. This is a combination that has never been achieved before, says Crane, resulting in big, bold, unmistakable movement along with high contrast colour.

The main benefit is that the thread can be recognized even more quickly by the public. According to Bahaa, there are four key steps to public authentication – find, recognize, check and decide – all of which need to be achieved in well under 2 seconds. As tested and validated by Secure Perception Research, RAPID Vision knocks 160 milliseconds off the time taken to authenticate it.

RAPID Vision made its debut in Kazakhstan's 5,000 tenge banknote, part of its new Saka series, which was issued in December last year. By the end of this year, four more denominations will include the feature.



RAPID Vision in the new Kazakhstan 5,000 tenge.

Kusters' Latest Insight into Recycling End of Life Banknotes

Towards the end of 2023, Royal Dutch Kusters Engineering (Kusters) carried out an extensive survey involving central banks globally, in partnership with Reconnaissance International¹.

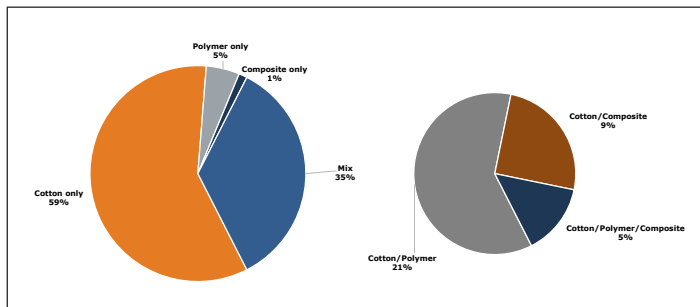
This follow-up study builds on Kuster's 2022 research, focusing on the disposal methods for unfit banknotes once they have been withdrawn from circulation and need to be destroyed. The pressing question remains – how are these shredded banknotes handled, considering the variety of disposal methods available?

Types of banknotes in circulation

The shredded banknote recycling process is often arranged depending on:

- The volume of the banknotes
- If notes are shredded centrally or in decentralised locations
- The maturity level of local recycling markets
- The variety of substrates, inks and security features used.

There is significant variety in the way notes are re-used around the world. There isn't one right way to dispose of notes and each country has a different approach driven by their regulations, circumstances, costs, options and which type of banknotes they have. For example, pure polymer, cotton or composite banknotes or a mix of these.



Substrates in circulation worldwide – percentages (by country).

A total of 83 countries across six continents participated in the survey. The majority of central banks have cotton banknotes in circulation, with a small percentage using only polymer or composite notes. In cases where there is a mix of substrates, the majority consists of a combination of cotton and polymer. The consistent trend observed in the data from the 2023 survey, as in 2022, is a steady distribution of banknote substrates among central banks globally.

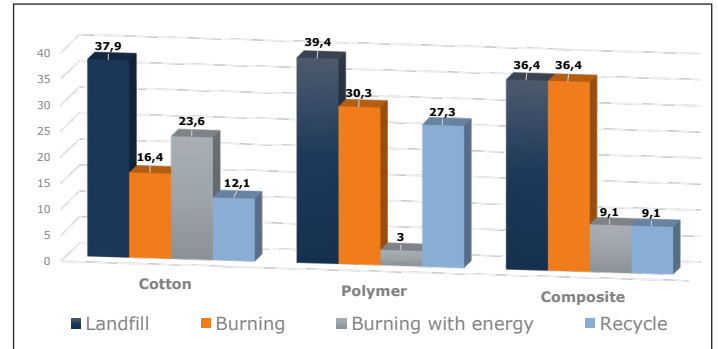
This stability suggests an opportunity to learn from others how they are recycling and disposing of their different substrates. The knowledge of the diverse range of substrates, inks and security features present in different currencies can be helpful in developing effective and sustainable solutions for the disposal of shredded banknotes, ultimately contributing to a more circular economy within the cash cycle.

Out of the participants surveyed, 16% expressed interest in transitioning to a different substrate. Among those considering a change, the majority showed a preference for switching to composite (44%) or polymer (44%).

Methods of disposal

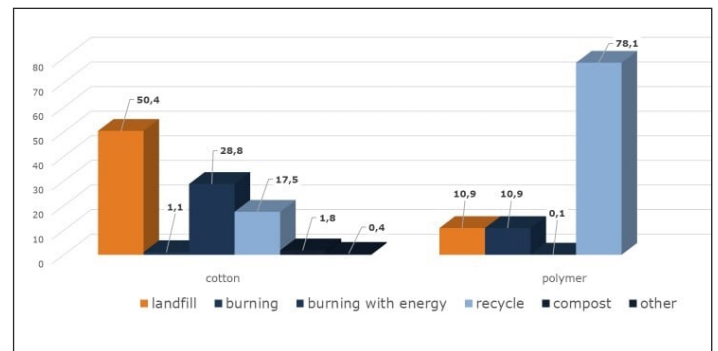
The data on the main disposal methods per substrate reveals a continuing reliance on landfill and burning for banknote disposal. Alternative methods such as composting and fuel usage were also considered.

The study examined the number of central banks involved, rather than solely focusing on the quantity of banknotes requiring disposal on an annual basis. Another 10% of cotton disposal also fell into various other categories like fuels and compost.



Top four methods of disposal for per substrate.

This chart gives a distorted view of polymer which does not reflect the fact that in terms of the number of banknotes nearly 80% are recycled. One reason that the number of banks compared with number of tonnes data is so different, is many central banks have only relatively recently adopted polymer as a substrate. Because of its long note life, very few notes have returned and so the central banks don't have sufficient volumes to send them for recycling. As the notes reach the point where there is a steady flow of unfit notes, then recycling becomes an option.



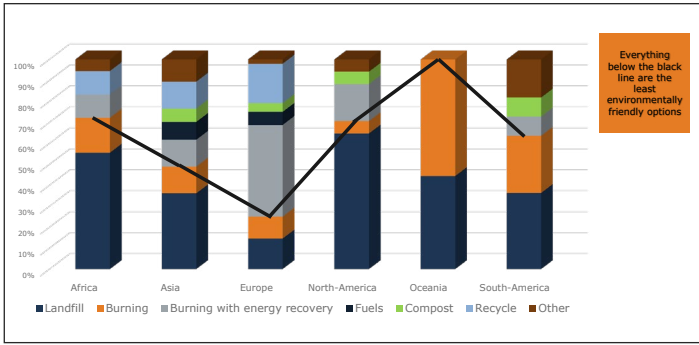
Disposal methods – percentage for each substrate type.

Dumping shredded banknotes in landfill or burning them without energy recovery is not only harmful to the environment but also goes against sustainable practices. Despite the known risks, these methods continue to be prevalent due to their perceived convenience, the lack of proper infrastructure for alternative disposal methods and the cost-effectiveness they offer in the short term.

If central banks are to avoid these harmful disposal methods, they must prioritise sustainable solutions for the disposal of unfit banknotes, ideally finding ways to create a more circular economy within the cash cycle.

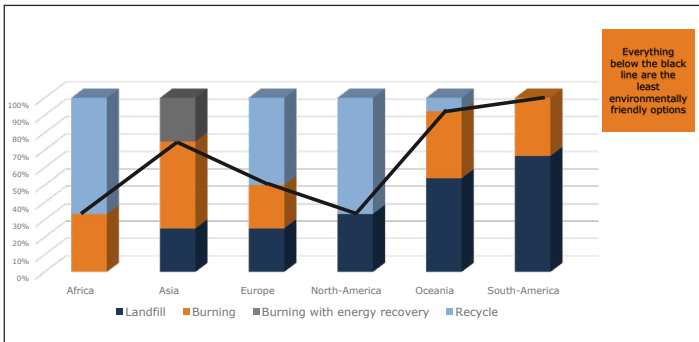
The data on how central banks across different continents are disposing of unfit banknotes reflects a rising awareness of sustainability practices in general, and an increasing adoption of methods such as burning with energy recovery, composting and recycling.

¹ <https://www.royaldutchkusters.com/blog/summary-banknote-recycling-study-2024>



Cotton disposal per continent.

Several continents still opt for landfilling or incineration as their preferred method of disposal. However, there is a growing interest in recycling, with some also exploring innovative alternatives such as using organic waste for fertilisation and animal bedding.



Polymer disposal per continent.

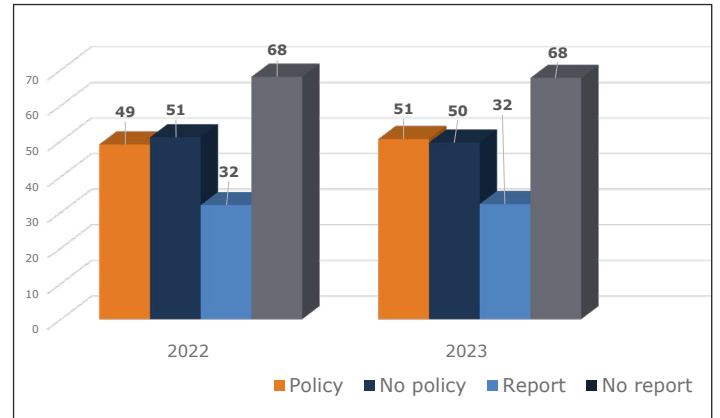
During the 2022 survey around two-thirds of respondents indicated no desire to alter their disposal methods. However, 37% expressed a willingness to make a change, with 7% of participants actually implementing some adjustments in 2023.

In the 2023 survey 56% expressed interest in adopting a new approach, and an additional 25% showed some level of curiosity. Surprisingly, 19% remained unmoved by the idea of altering their disposal practices. Among those who consider a change, 51%

have yet to establish a time frame, while 35% aim to transition to a different disposal method within the next 2-5 years.

Sustainability

The data provides a valuable insight into the diverse range of sustainability practices adopted by central banks across the globe. While some are committed to sustainable practices, others are yet to make this commitment. There is the opportunity to integrate sustainability into procurement procedures and tender evaluations.



Percentage of central banks with a sustainability policy and/or report.

Around half of the surveyed central banks have established sustainability policies and about one-third of central banks publish sustainability reports.

The inclusion of sustainability criteria in procurement processes varies, with a significant portion of organisations seldom or never taking sustainability into account.

Final word

Kuster's survey has to be one of the most comprehensive data sets collected offering real insight into who is doing what on sustainability amongst central banks. The level of landfill and uncontrolled burning being used demonstrates how early in the journey towards environmental stability we are as an industry.

To obtain a copy of the complete outcome of the survey, fill in the request form at www.royaldutchkusters.com.

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CURRENCY NEWS

Counterfeit Corner

■ By Kerre Corbin, Currency Counterfeit Specialist

What should I do with the foreign counterfeits I receive?

I am frequently asked this question, especially when statistics are being discussed. Many countries receive counterfeits from neighbouring countries as well as global currencies (such as US dollars and euros), but are these notes included in the counterfeiting statistics reported by central banks?

First, someone must examine the foreign note to determine if it is counterfeit, which should be done by an expert with the proper training in printing processes and security features.

Any high-quality counterfeits, such as offset or intaglio, should be sent to the country responsible for issuance, to determine authenticity. This is important for two reasons: accuracy and investigative information. The suspect counterfeit note may in fact be genuine or have a production defect that should be corrected. Does the counterfeit contain a new technique for simulating a security feature that should be examined and recorded? The counterfeit may be a note that the issuing country has not seen yet.

This is all vital information that not only assists with the counterfeit investigation but can contribute to the central bank's assessment of how the security features are being simulated and how the public authenticate banknotes.

Second, countries should be reporting their foreign counterfeit statistics to Interpol, which is in turn shared with each respective country to include in their annual statistics. This will ensure a more accurate indication of the counterfeits that are circulating outside of your country.

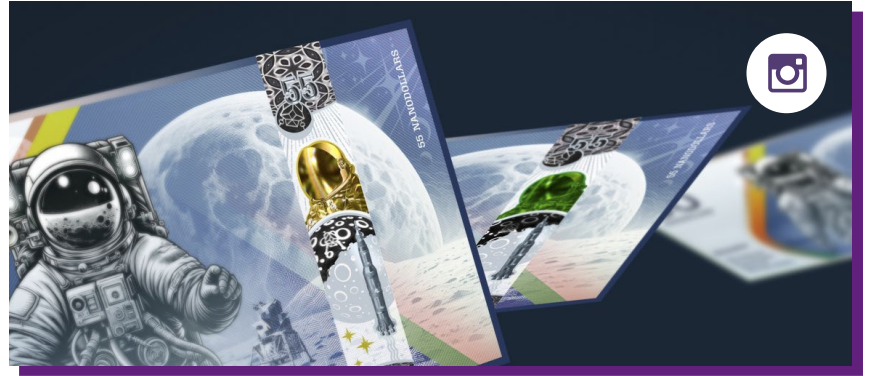
If you aren't reporting statistics to Interpol, contact the respective central bank to inform them of the counterfeits. But that is easier said than done... the central bank may not even be the institution that examines/ documents the counterfeit information, as is the case in the US, where the US Secret Service compiles all the counterfeiting statistics.

My question to all the counterfeit banknote examiners out there – would you like to join a private LinkedIn group specifically designed for you to share information? Contact me to join the Counterfeit Banknote Examiners Discussion Group.

www.KerrecurrencyLtd.com

IQ Structures and Hueck Folien Launch Nanoswitch™

On July 20, 1969, more than 500 million people around the world watched the Moonlanding, the 'great leap for mankind' - a technical feat that opened new horizons for humanity.



55 years later, IQ Structures (IQS) and Hueck Folien have paid homage to this historic event with a unique design to ring in a new era of banknote security stripe solutions - Nanoswitch™, which was launched at the Banknote Conference in a highly entertaining presentation, against a backdrop of the iconic David Bowie soundtrack of 'Ground Control to Major Tom', by Michael Ritschewald, Business Development Manager at Hueck Folien, and Robert Dvořák, Managing Director of IQS.

The two companies also announced Nanovista™, the brand name for a portfolio of high security features which will be launched by IQS and Hueck Folien, Nanoswitch being the first.

Humans' senses have always been the elementary tools for our perception of reality, say the two companies. The more senses we involve, the more intense the perception. Nanoswitch addresses the two most distinctive ones – sight and touch – combining colour with a 3D object. The visual attraction of the transforming 3D-colour object together with the unexpected haptic experience gives Nanoswitch unique authentication properties.

'The authentication is entertaining, fast and unambiguous, with great potential for attractive designs', says Robert Dvořák. 'The integration of nanofabricated optical security elements with partial ColorSwitch™ provides Nanoswitch with extraordinary resistance to counterfeiting and imitation, creating the highest level of banknote protection'.

ColorSwitch by Hueck Folien offers six vibrant colour shift variations that

provide an intuitive security feature in movement as design elements are highlighted. The shades are based on high-precision thin-film technology and change colour when the banknote is tilted. Nanoengineered optical structures, developed by IQ Structures, provide a distinctive visual appearance and maximum security.

When the partner of the most secure currencies collaborates with the most innovative technology partner, and 30 years of experience meet advanced nanofabrication, the result is Nanovista, say IQS and Hueck Folien – with unique features and support right from the design stage to the finished banknote.

'Our aim is to create the most advanced and safest banknote solution in the world', stated Michael Ritschewald.

'There is hardly anything more valued by a country than its national currency. One third of the world's currencies already bear the high-security solutions from Hueck Folien. Together with IQ Structures, we are breaking new ground in banknote protection', added Martin Bergsmann, CEO of Hueck Folien.

IQ Structures, located in the Czech Republic is a supplier of anti-counterfeiting protection based on nanostructures and its technologies protect more than a billion documents every year. As for Austrian-based Hueck Folien, it has been working with central banks and security paper mills for more than 30 years and one third of the world's currencies already carry its high-security threads and foils, including the euro and the Swiss franc.

A New Polymer Enters the Market

There was a time when the market for polymer substrates, albeit small, was dominated by one supplier. The market grew, and so did the number of suppliers, CCL Secure and GUARDIAN™ being joined by De La Rue with SAFEGUARD®.

The two still dominate, but others are spreading their wings too, amongst them China Banknote Printing and Minting, Spectra Systems with FUSION and Q&T Hi-Tech Polymer with POLYSECURE® (see CN April 2024).

To this list should be added Covestro, which has developed a polymer substrate for banknotes made from thermoplastic polyurethane.

Covestro, formerly Bayer MaterialScience, is already active in the security market through the supply of polycarbonate films for ID cards and passport data pages. It is now showcasing a new substrate for banknotes that, it says, offers significant benefits over conventional polymer materials.

The product is a thermoplastic polyurethane which is created through extrusion, during which the addition of white pigments (or, potentially, other colours) take place as opposed to the route for other polymer substrates, which are coated through opacification. No surface printing is required either before or after printing.

The result, it says, is a highly durable substrate which offers an optimised carrier to which ink (offset and intaglio) bonds strongly, with deep embossing properties up to 160 microns. It has worked with Cattaneo to prove the properties of intaglio printing.

As coatings are not involved, the process does not allow for the creation of windows – one of the key security features of polymer. Instead, windows are punched into the substrate, much like they are with paper for, eg. the euro. But the difference is that, whilst in paper the process weakens the substrate, there is no impact on the strength of the polyurethane.

Moreover, the substrate has been tested for crumpling (unaffected) and folding (the effects of which can be easily reversed). And it has been proven to withstand washing – tests have demonstrated virtually no degradation of ink after one and half hours when washed at 90°C, compared with both conventional polymers and paper, where the effect ranges from significant deterioration to complete removal of the ink.

In terms of recycling, the company claims that the substrate offers advantages over other polymer substrates in that, whilst 20% or so of their composition is in coatings, which impede their ability to be recycled, in the case of its substrate, this is only 3-4%.

According to Covestro, it is already working with a number of central banks, with very positive feedback. And in the next phase of development, it is working on the integration of level 1 security features within the substrate, including watermarks.

Every Little Bit of Sustainability Helps

Gary Spinks of Security Fibres introduced his presentation in one of the Innovation Sessions at the Banknote Conference with the acknowledgement that, in the great scheme of things, security fibres are an infinitesimally small element of security paper, and therefore the impact of more sustainable fibres is limited. Even so, he said, everyone needs to do their bit.

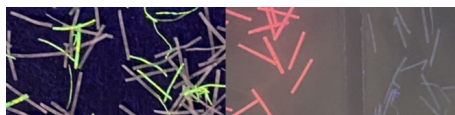
That bit for Security Fibres is the development of a new technique that cleans fibres of pigments, enabling paper 'broke' to be better recycled.

Security fibres comprise around 0.01% per tonne of paper, and 1kg of fibres is enough for 1 million banknotes. But roughly 5% of security paper produced ends up as broke – ie. the waste from trims and offcuts – which is then returned to the production line. However, because this broke already contains fibres, their presence can cause specks and defects in the resulting recycled paper.

The answer, says Gary, is a technique whereby the paper from which the fibres are made is coated with a barrier prior to the addition of the pigment(s). This

has no impact on the fibres' durability or performance. But when it comes to recycling the paper broke containing those fibres, this can be immersed in a proprietary detergent solution for two hours that lifts away the barrier, taking the pigments with it.

So whilst the fibres remain in the broke, they are colourless and have no impact on the subsequent paper produced.



Showing how these new sustainable fibres, through a simple 2% detergent, can completely remove the pigment of the red fibres, whilst keeping the yellow ones intact (yellow fibres have not been treated with this detergent)

Secure Innovation Launches Remote Planet

Secure Innovation Group, the global technology company specialising in cash protection and security solutions (formerly known as Spinnaker), has launched its latest brand – Remote Planet.



The new brand offers a customisable solution to monitor, manage, protect, and control critical assets and infrastructure remotely. The applications for this new technology are vast, says the company, offering solutions for secure transport, logistics, utilities and renewables, vulnerable infrastructures, as well as safeguarding people in high-risk locations.

Developed in collaboration with the European Space Agency (ESA), the technology harnesses multiple satellite networks, optimising Low Earth Orbit (LEO) and proprietary hardware to offer reliable and secure remote access for customers, who have real access to their assets around the world, without physical presence, via a secure online interactive portal.

Accessing remote assets efficiently is a challenge that many industries are facing today. When shipments, buildings, and vehicles are in remote locations, it can be difficult to find ways to monitor and protect these valuable assets. According to Secure Innovation, from tracking valuable assets in transit to monitoring remote locations for safety purposes, Remote Planet provides real-time data and insights for effective decision-making, enhancing security, as well as improving operational efficiency which can reduce carbon emissions.

Remote Planet has already started making an impact, protecting more than 1,000 journeys every day and over £100 billion in assets every month.

IACA Awards – the Winners Are...

The IACA 2024 Excellence in Currency Technical Awards, which are sponsored by Currency News, were presented at the dinner on the last evening of the Banknote Conference, 15 May.

■ Best New Banknote Features, Product or Process

The winner of this category was Louisenthal for its Green LongLife™ banknote.



The substrate is, of course, the starting point for a banknote, the base material on which all else is then built. Louisenthal introduced the Green Banknote concept last year, the logic being to replace fossil materials with bio-based materials wherever possible and to reduce the carbon footprint of banknotes and facilitate their repurposing at end of life.

The Green Banknote was engineered for both durability and the minimal use of plastic. The Green LongLife banknote, launched last year, has a life twice that of standard cotton and a high bio-based contend, taking sustainability to a new level.

The Green LongLife banknote consists of:

- 50% FSC C1388716 wood pulp
- 100% certified organic cotton
- Soil repellent paper coating based on renewable raw material
- Fluorescent fibres made from sustainable wood pulp
- Mineral oil free use of Simultan inks
- Transfer foil with 70% recycled content (Galaxy® thread and RollingStar® LEAD Mix)
- TOPnote® varnish.

The use of recycled polyester in the thread and foil reduces CO2 emissions by 45%. Overall, the Green LongLife banknote has a carbon footprint of 6.1g CO2, 30% less than the 8.3g CO2 for the standard LongLife banknote substrate.

The other finalists in this category were CCL Secure for its Effect™ Cameo feature, De La Rue for the ASSURE™ covert feature in the core of a polymer banknote substrate, Jura and OEBS for their stainless steel intaglio plate making process, and Meta Materials for its 'Inspired by Nature' QUANTUM™ stripe feature.

■ Best Limited Circulation/ Commemorative Banknote

The Eastern Caribbean Central Bank (ECCB) won this award for its commemorative \$2 note, issued to celebrate its 40th anniversary.

Designed and produced by De La Rue in close collaboration with the ECCB on SAFEGUARD® polymer, it is intended to present the hope of a new, confident and exciting future with a colourful and eye-catching design combining sports with an environmental motif.

The front of multi-colour yellow, red, blue, and purple note features legendary cricket star Sir Viv Richards, also known affectionately as 'The Master Blaster' in a set of islands that is passionate about cricket, as well as the 40th anniversary bank logo, turtles, and fish. The back of the vertically designed note combines fish, coral, turtles and a map of the islands in contrasting bright blue.

The banknote's visual impact is enhanced by features including the first appearance of an aqua-blue tinted holographic foil, turtle imagery, along with the silver of the ARGENTUM™ feature within the note's window.



The note is legal tender and can be used for transactions throughout the eight member countries of the East Caribbean Currency Union

It was the second award for the banknote in as many days. The previous day, the International Bank Note Society (IBNS) announced that the \$2 note had won its Banknote of the Year 2023 award. The IBNS reported that out of nearly 100 new

banknotes released in 2023, only 15 were deemed of sufficiently new design to be nominated by its members, and from the onset of voting the ECCB \$2 was the overwhelming favourite.

The other finalists in the commemorative note category were the Bank of Guyana \$2,000 and National Bank of Kazakhstan 10,000 tenge.

■ Best New Cash Cycle Innovation

The winner of the Best New Cash Cycle Innovation was Bangko Sentral ng Pilipinas (BSP) for its Coin Deposit Machine (CoDM) programme, launched last June in partnership with several retailers to promote efficient coin recirculation in the country. To date, 25 CoDMs have been installed in the Greater Manila area.



According to BSP, coins in circulation have significantly increased over the years. As of December 2023, there were 40.3 billion coins in the country, with each Filipino holding approximately 357 coins. This is almost three times the average of 121 coins per capita in 2005. While the quantity of coins is more than adequate, says BSP, the fact that two in five coins are not circulating properly is resulting in an artificial coin shortage. As a consequence, businesses frequently give customers insufficient or no change. Hence the introduction of the programme.

The machines provide accessible, convenient, and efficient coin deposit facilities, enabling coins to be brought back into circulation. They accept all denominations of both the BSP Coin series and the current New Generation Currency Coin Series. The value of coins deposited is directly credited to users' e-wallets. Alternatively, users can choose to redeem the value of the deposited coins in the form of shopping vouchers.

As of 31 December 2023, 105.7 million coins with a value of PHP 350.1 million had been collected from the CoDMs. The project is expected to contribute to significant coin production cost savings, estimated at PHP 38.2-162.9 million in the first year.

The other finalists in this category were the ECB in cooperation with the euro area NCBs for the Product Environmental Footprint (PEF) study and Giesecke+Devrient Currency Technology for its Banknote Fibre Extraction system.

Time for Confidence in Cash

The Banknote Conference took place 13-16 May in Fort Worth, Texas. Organised by Currency Research, it was attended by nearly 425 delegates from 72 countries and 183 organisations. Of those, 92 were central banks and/or printworks.

The conference was opened by the Treasurer of the US, Chief Lynn Malerba. Her speech laid out a number of themes that recurred throughout the event – investing in cash for the future, the importance of resilience and the need for environmental sustainability. Kathleen Young, from the Federal Reserve, picked up on these themes, explaining that in the US cash transaction demand is stable and total cash in circulation continues to rise.

Investment in cash and the cash cycle

Against this background the Fed is investing in new processing centres in Miami and New York. It has a major project renewing its sorting machines and sensors and it is investing in automation and in its data and digitisation in the cash cycle. It has engaged a third party consultancy to review coin operations and it continues research into all areas of banknotes and is working on new currency design. It is increasing its inventory held based on lessons learned over the pandemic.

In addition, following the completion of major expansion of the Western Currency Facility in Fort Worth (a tour of which formed part of the programme), the BEP is building a new currency facility in Beltsville, Maryland, to replace the existing facility in Washington DC, which is due to be completed in 2027.

This investment recognises both that cash will continue to be a major payment instrument for a long time, and that the payment changing landscape means reinventing how things are done.

The Riksbank then explained that it is investing in cash, building two new cash centres and with work on two more to be ready by 2026. Resilience is key and

Sweden is changing its laws to require cash to be accepted and accessible.

Uruguay's central bank is also seeing cash usage steady, although against a background of rising digital payments. It is rethinking its cash cycle as a response to the commercial sector changing its behaviour as cash volumes fall. It is increasing its buffer stocks of notes because of the time lag between ordering and receiving new notes.

Central bank papers

The Bank of Mexico presented detailed research carried out on microorganisms on banknotes. More work is required but it already provides valuable evidence about the small risk of viruses found on banknotes.

The European Central Bank presented a perception study it carried out based on the €20, Mexico's 500 peso and Sweden's 100 kronor notes. The outcome provided evidence of how people look at banknotes and some do's and don'ts.

South African Reserve Bank explained its Intelligent Cash management approach based on data sharing. This linked in neatly with presentations from the Bank of Lebanon and Glory, who also spoke about data.

The Reserve Bank of India gave a tour de force of its payment landscape from cash to digital, starting with a detailed explanation of its own coin, paper and banknote printing evolution.

New designs

The central banks of Denmark, Georgia, Mexico and Mongolia presented their work on their new designs, as did Casa de Moneda Chile, Bundesdruckerei and

PWPW on commemorative and house notes they have produced.

Sustainability

Environmental sustainability was a topic touched on in many presentations.

The Dutch National Bank, Bank of Canada, ECB and ControlTek presentations covered, respectively, sustainability in tenders, approaches to getting to net zero, the Product Environmental Footprint measurement and moving to genuinely recyclable plastics.

Innovation

In addition to the cash cycle innovations covered by central banks, a wide range of suppliers presented on a range of innovations from features to processes.

Amongst other presentations, Spectra Systems and Q&T Hi-Tech Polymer introduced their polymer substrates. Crane explained its RAPID® Vision feature, IQ Structures and Hueck Folien the work of their joint venture, Nanovista, and its new Nanoswitch™ feature and Meta their Quantum™ feature.

Authentix introduced its work on CDI2 and how this is changing the landscape of machine readable features on high speed sorters.

Final word

The conference was packed with presentations and workshops, and it was interesting to see investment, resilience and sustainability as such big themes and with evidence of significant innovation in all areas.

Only some of the topics are covered here or elsewhere in this issue. Others will be covered in more detail in subsequent issues of Currency News™.

Currency Research's next global event, the Currency Conference, will take place in Hanoi, Vietnam, from 26-29 May 2025. The Banknote Conference will return to the US in 2026.

... IACA Awards

■ Best House Note

The three awards were voted on by IACA members in advance of the Banknote Conference. In a departure from tradition, the voting for the new category of Best House Note was carried out by conference delegates. The winner out of a shortlist of seven nominations was Bundesdruckerei for its Ignis house note (see page 18).

There were seven finalists in all. The others were Banco de Mexico for the commemorative house note for the 5th anniversary of the printworks in Jalisco, Casa de Moneda de Chile for its 279th

anniversary house note, Komori for the Phoenix 100th anniversary note, KURZ for its KINEGRAM® Around the World note, Landqart for its 150th anniversary house note, and Louisenthal for the Jump™ – Camera house note.

(Several of these notes are covered in detail in the 2nd edition of Concept Notes, issued earlier this year by the publishers of Currency News).

The focus now moves to the 2024 IACA Excellence in Currency Awards for Coins, nominations for which will be opened shortly. These will be announced and

presented at the Coin Conference in Lisbon this October.



The award winning team from Bundesdruckerei and the Ignis house note.

DENARIA – Ensuring Fair Access to Cash

The third DENARIA Conference took place in Madrid on 24 April, hosted by the Spanish Federation of Municipalities and Provinces (FEMP). The focus was how cash can ensure a fair, inclusive and secure digital transition, particularly in a country where cash continues to be the main payment method for a very significant number of citizens.

The conference was developed around the contents of three round tables.

The first, 'Reflection on the Cash Situation in Spain: Needs for Effective Action and Best Practices', was attended by the presidents of three Provincial Councils. As a result of the closure of bank branches and ATMs, councils are getting involved in guaranteeing access to cash, opting for different public-private models depending on the needs, economy and idiosyncrasies of their inhabitants.

Options include subsidising ATMs in some, or even in all, municipalities of the province; other councils have designed programmes involving a mobile office with a financial professional to maintain the personal client-entity relationship. The results have been a success, with a high number of operations being both scalable and replicable.

The second panel discussion revolved around digital payments and privacy and included interventions by the Spanish Data Protection Agency and FNMT-RCM. Highlighted was the accessibility, universality and capacity for reflection when paying cash, in contrast with the risks associated with digital payments, such as cybersecurity problems, data protection, and the impact on cognitive development, compulsivity and mental health, especially for children and young people.

Finally, the panel on 'Different Payment Methods and their Effect on the Environment' featured the ECB and the Spanish Association of Data Centres. The former's PEF score for the average annual value of cash payments for a Euro Area citizen in 2019, of 101 micro points, is low. Data centres, meanwhile, are the backbone of both digital and cash payments and a more sustainable generation of payment methods requires traceability and transparency between data centres and the public sector.

The conference closed with the conclusion that cash is crucial for a fair, inclusive and secure digital transition, and policies such as the recognition of the right to use cash included in 2022 in Spanish legislation are needed.

Additionally, it is essential that public administrations become involved in the preservation and access of cash through public-private collaboration actions.

The Value that Cash Brings to Society: Global Currency Forum 2024

■ By Jutta Buyse, Director General of the International Currency Association (ICA)

In an era marked by rapid digitalisation and evolving payment methods, the enduring role of physical currency remains a cornerstone of economic stability and financial inclusion. It is within this context that the upcoming Global Currency Forum (GCF) in Muscat, Oman, assumes paramount significance.

Scheduled from 30 September-3 October, the GCF serves as a nexus for industry leaders, central banks, and state print works representatives to converge, exchange insights, and chart the course for the future of cash. Under the theme 'The Value that Cash Brings to Society', the conference promises to explore the multifaceted contributions of cash to economies worldwide.

The GCF is the conference by the industry for the industry and our stakeholders.

This event is organised by the currency industry through its association, the ICA. It offers the only opportunity to engage with all supplier companies at one event. The 18 partner companies contain all the important suppliers. The entire currency industry will be there because it is their conference. Central banks and state printworks should not miss this opportunity to engage with all the industry players in one location.

Reinforcing the vital role of cash

At the heart of the GCF lies a fundamental recognition: cash is more than a medium of exchange—it is a symbol of trust and economic resilience. As ICA Chair Gianni Santoro, Chief Commercial Officer of SICPA puts it: 'the GCF is where the future of cash is shaped. It's where we bring together leading experts to share their knowledge and explore new strategies to ensure the continued relevance of cash.'

This sentiment underscores the imperative for central banks and print works representatives to actively engage in discussions with the industry that reaffirm the strategic importance of cash.

Expert panels and technology workshops

The GCF will feature Technology Workshops where suppliers present their latest innovations and Expert Panels discussing major

societal questions.

Ruth Euling, Managing Director, Currency at De La Rue and Vice-Chair of the ICA, highlights the significance of these sessions. 'Cash is the most inclusive form of payment. It does not discriminate. By attending the GCF, central banks and printworks representatives can better understand the social value of cash, including where it touches on the next generations and new developments such as AI and work towards ensuring that it remains available and secure for all.'

Collaboration and networking

Central to the ethos of the GCF is the spirit of collaboration and knowledge exchange. The conference offers a unique opportunity for central banks, printworks representatives and industry stakeholders to forge partnerships and share best practices. The relationships and networks built at the GCF are invaluable. They foster cooperation and innovation that benefit the entire industry.

Sam Keayes, President of Crane Currency and Treasurer of the ICA, emphasises the significance of cash in times of crisis. 'In times of crisis, cash is a critical asset. It provides a reliable fallback when other systems fail. The GCF is a forum where we can discuss how to maintain this vital component of our financial infrastructure and ensure its availability under all circumstances.'

As we look ahead to the Global Currency Forum in Muscat, it is clear that the conversations and collaborations fostered at this seminal event will shape the future trajectory of the cash industry. From reinforcing the strategic importance of cash to exploring the latest technological advancements, the GCF offers a platform for stakeholders to collectively chart a course towards a more inclusive, resilient, and innovative cash ecosystem.

Cash Sustainability Forum Draws Close

A forum is a meeting where ideas and views on a particular issue can be exchanged, and that is the aim of the Cash Sustainability Forum. The opportunity for all stakeholders involved in cash to meet, share, understand and learn. This is a global forum and there will be speakers, and delegates, from around the world to ensure a breadth of views.

In that spirit, the Forum has been developed in association with ATMIA, the MDA and Security Ligue, and starts with a cash cycle session on the first afternoon focused on how to optimise cash management in the changing world that we face. This session is built around the white paper due to be launched before the Forum on cash recirculation and recycling.



Brinks, Oberthur Cash Protection, Diebold Nixdorf, NatWest, central banks from Europe, South Africa and the Philippines and a number of industry suppliers will take part in this interactive session.

The European Central Bank's Product Environmental Footprint study found that 87% of the environmental impact of cash happens after issue, so there will also be a cash cycle session as part of the main agenda.

Getting an external perspective

The programme contains a mix of external speakers alongside speakers from central banks, mints, substrate makers, printer, cash management companies and cash in transit companies. Rewired Earth will share their innovative approach and ambitious plans which are bringing together a cross-section of UK businesses to work co-operatively. They also have an unusual app used for getting consumer feedback on attitudes to environmental matters.

Verco, a consultancy, will address the question whether Europe's new Corporate Sustainability Reporting Directive is an opportunity or burden for carbon reporting. MyCarbon, also a consultancy, will review how organisations should choose which targets to shoot for. Npower will give an energy supplier's view of how to 'save the planet'. EcoVadis will talk about the work of ratings agencies.

Fresh thinking from outside the industry should help give an end-to-end perspective and understanding.

Key themes

In addition to the cash cycle, sessions will address a number of key themes:

Metrics

Deciding what to measure and how to measure it is critical in terms of driving change. In addition to the European Central Bank (ECB), MyCarbon and EcoVadis, De La Rue will also talk about how it has ended up near the top of the Financial Times annual list of Europe's Climate Leaders. Intergraf will explain its print carbon measurement tool.

Tendering

Purchasing is an opportunity to work with suppliers to achieve organisational goals such as environmental improvements. With the need to know your Scope 3 impacts, this becomes even more important. A panel discussion will review best practice in this area.

Manufacturing excellence

Oberthur, CCL Secure and G+D will review what they are doing for customers, their green credentials. The ECB will explain its work planning a possible future euro series and how designing for sustainability is being considered.

Coin management

Bangko Sentral Pilipinas and the South African Reserve Bank will talk about coin recirculation. The Royal Canadian Mint and the Royal Mint will talk about the full Environmental Sustainability Governance agenda and Leftover Currency will explain their coin repatriation work.

Unfit banknotes

Blend Paper/Casa da Moeda, Landqart and Louisenthal will cover new initiatives that address recycling cotton based substrates, moving beyond energy recovery.

Not all presentations fit neatly into these themes. The Reserve Bank of New Zealand is giving its first report on its trials to ensure cash is resilient in areas where the commercial banks have withdrawn completely. New Zealand is working with retailers to fill the gap.

Who should lead?

The Forum will end with a discussion, phrased as a debating question, about who should be leading on environmental issues. 'This house believes that central banks need to lead on cash cycle sustainability.'

The agenda is end-to-end, for all stakeholders, and every part of the world.

www.cashsustainability.com

First Speakers Announced for the CBDC Conference 2024

The CBDC Conference take place from 10-12 September in Istanbul. The conference organiser has now published the first tranche of confirmed speakers, 15 of whom are from central banks, as well as the International Monetary Fund.

While those central banks include Eurosystem members such as France, the Netherlands, Slovenia and Spain, and other European countries such as England, Georgia, Hungary and Switzerland, there is a good geographical spread including countries from Africa, Asia and the Americas – Canada, the Bahamas, Thailand, Ghana, Zambia, Chile and Uruguay will all speak.

The commercial bank sector will be represented by Standard Chartered Bank, the European Savings and Retail Banking Group and the Association of German Banks. Other speakers now announced include IDEMIA, Saïd Business School, Oxford University, Kiffmeister Consulting and Payments Innovation Consulting.

In total some 60 speakers will present and speak in panels, workshops and from the stage, sharing their insights, knowledge and perspectives on the future of digital finance, and a comprehensive exploration of key issues surrounding CBDCs.

CBDC Academy

As in previous conferences, the CBDC Academy, which consists of a series of hands-on workshops, will kick off the conference on the morning of 10 September, the first conference day. The academy will provide attendees with a comprehensive overview and the fundamental concepts of CBDC, ensuring they are equipped with the knowledge needed to navigate the conference discussions.

www.cbdc-conference.com

Ignis House Note – Out of Darkness Comes Fire

As noted on page 15, the winner of the IACA Best New House Note at this year's Banknote Conference was Bundesdruckerei (BDR), which launched its new note – Ignis – from the ExNihilo series during the conference.



Heuberger-Lewerenz (BDR designer and one of the founders of the ExNihilo concept, who gave the presentation in Fort Worth), is mankind's greatest invention. The designs and motifs on the note all celebrate different aspects of fire – from the dazzling sun on the front and the temperature at which it burns (6000°C) to the flames in a foil stripe on the reverse, and a three-dimensional representation of the alchemic symbol for fire.

BDR worked with the Swiss printer Lorenz Boegli – the inventor of a technique new to banknotes through printing light on dark substrates, where light is absent – to create the effects of the sky at night on the front of the note. Silk screen printing with iridescent pigments that reflect light instead of absorbing it (as conventional pigments do) were used, along with a special additive four-colour screen print.

Luminescent inks that are excited by black light can also be used to print light on a black substrate. SICPA's RGB trichromatic luminescent inks blend into photo-realistic images of carbon, whilst white intaglio is used to print light accents.

To serve as a bridge between physical banknotes and digital payments, a chip from Infineon with a thickness of just 70 microns has been incorporated into the Durasafe layers in the cavity of a half window. The chip uses NFC to access a full range of digital payment services that central banks may wish to offer. The functionality of the house note can be tested by holding a smartphone against the chip.

Protecting the chip is an Applied Patch Label (APL) from KURZ, with dynamic diffractive effects that are set perfectly against the black background. As such, the APL serves the dual function of protecting the chip and the banknote itself.

A KINEGRAM COLORS® laminating foil from KURZ has been applied in register to the reverse of the note, showing the image of flickering flames to their best advantage against the dark background.

The fiery theme concludes with a three-dimensional triangle which is the alchemical symbol for fire, created with SICPA's SPARK Flow®.

Finally, the serial number serves as unique identification. It is achieved via conventional letterpress or an innovative perforation method.

According to BDR, three characteristics in particular make the Ignis note unique. First is the colour of the substrate. Second is the embedded micro controller (chip). And third is the RGB print on black.

BDR worked in partnership with SICPA, Landqart, KURZ, Zeiser, Infineon, Gietz and Koenig & Bauer Banknote Solutions to create the Ignis note.

This concept was first unveiled at last year's Currency Conference, as the name of the initial banknote series from the SIRA innovation hub (SIRA stands for Sustainability, Innovation, Recycling, Action), a platform for partnership-based development of innovations for banknotes of the future (see CN May 2023).

The philosophical starting point for the concept has roots that reach back to Parmenides, Melissus of Samos and Aristotle in Ancient Greece, with the Latin 'ex nihilo nihil fit' often translated as 'from nothing comes nothing'. With the rise of digital payments worldwide, says BDR, the concept of money becomes more and more independent of its material construct, and approaches ever nearer to nothingness. Yet, from this 'nothing' the banknote industry must innovate and discover new paths.

Thus was born the concept of the ExNihilo series – with new ideas centred on new

technologies germinating from the starting point of 'nothingness', a state where everything is absent, including light.

The physical embodiment of this, as relates to the Ignis banknote, is its most distinctive feature – namely that it is black, defying banknote convention.

The substrate is Landqart's Durasafe® paper-polymer-paper composite, with the paper layers dyed directly at the papermill with the blackest black ever used for banknotes. This in itself is a new level 1 'anti-copy feature because copies will always appear grey in comparison to the original.

Furthermore, dark banknotes can be made even more secure through the use of a whole new spectrum of colours and effects.

The name Ignis is derived from the Latin name for fire, denoting brightness and passion. And fire, said Dr Adrian

Note and Coin News



Kyrgyzstan Completes New Series

The National Bank of the Kyrgyz Republic (NBKR) has issued the new 5,000 som banknote, the seventh and last banknote of the fifth series, completing the modernisation that started in May 2023. The new series includes denominations ranging from 20 to 5,000 som – all featuring RAPID HD® Detect from Crane Currency.

The banknote design was created by the Bank in collaboration with Crane Currency and Oberthur Fiduciaire. The front features a portrait of Kyrgyz actor and artist S

Chokmorov and the reverse side shows the Ala-Too cinema in Bishkek.

Other security features include a multi-tonal watermark of the portrait along with an

electrotype of the denomination numeral, a see through images, intaglio ink, a latent image, a gold-to-jade SPARK® Live patch which include three-dimensional concentric rings and, on the reverse, an iridescent stripe featuring the diamond-shaped logo of the NBKR and the denomination.

The previous banknotes in the new series – the 200, 500 and 1,000 som – were introduced in May 2023, followed by the 20, 50 and 100 som in February 2024. The principal design of the new banknotes are broadly unchanged from the 4th series, remaining a reflection of Kyrgyzstan's historical and cultural heritage, with the portraits of representatives of art and culture preserved on the front of the banknotes and notable sites on the reverse. The main colour and size of the banknotes also remained unchanged, but all have been upgraded in terms of security, including the use of the RAPID HD Detect thread with its IR signal.

The NBKR has also launched an app - Kyrgyz Som – in order to demonstrate and familiarise the public with the series' security features in an interactive format.

In Other News...

■ The Bank of Canada has issued a progress update on the new \$20, which will feature King Charles III as the portrait subject, replacing that of the late Queen Elizabeth II. The back will continue to feature the Canadian National Vimy Memorial.

In another significant change, the new note will be vertical like the current \$10 note issued in 2018 and, says the Bank, will incorporate enhanced security features.

The \$20 banknote is described by the Bank as Canada's 'workhorse note', with more than a billion in circulation. The current \$20 note, which was first issued in 2012, is the only note in the Frontier series to feature the monarch, who is Canada's head of state. The new note is expected to go into circulation in 2027.

■ Danmarks Nationalbank has invited to citizens to voice their opinion on what should feature on the country's new banknotes, which will go into circulation in 2028 and 2029. People have been invited to go online and rate the themes, people and achievements suggested by the central bank based on input from cultural institutions and a panel of external experts.

The Bank is in the initial concept phase of developing the new banknotes. The starting point was specific suggestions from more than 40 educational institutions in the fields of art, culture and natural sciences.

The survey closes on 2 June. Danmarks Nationalbank will then decide, together with external experts, which motifs will feature on the new banknotes. Requirements for security features and options in the production process will also be taken into account when considering what the new banknotes will ultimately look like.

The new series will include 50, 100, 200 and 500 krone notes. A new 1,000 krone will not be issued, and the current version will be withdrawn from circulation in May 2025.

■ A new commemorative 50 emalangeni banknote has been issued to mark the 50th anniversary of the creation of the Monetary Authority of Swaziland, now the Central Bank of Eswatini. The new note was launched by HM King Mswati III, whose portrait appears on the note, as it does on all the country's notes.

The new note is similar to the circulating version issued in 2018 but features a magenta-to-green RollingStar® i+ thread on the front, along with a RollingStar Patch with a special flip effect replacing the green shield and spears on the circulating version. A new image of the country's international airport features on the reverse (replacing the central bank headquarters on the 2018 note).

■ The National Bank of Georgia has announced the winner of its contest to design a new commemorative polymer banknote marking the 30th anniversary of the creation of the lari. 11 firms and individuals participated, and the winner was Koenig & Bauer Banknote Solutions.



The 50 lari design features a vertical layout instead of the traditional horizontal format. According to the Bank, this symbolises Georgia's progress towards a sustainable future, whilst the bright colours metaphorically represent the nation's rich cultural diversity. One side of the note showcases Georgia's modernity, highlighting its current achievements. The other side depicts the nation's rich history and cultural heritage.

The collector's banknote will be issued in 2025.

... In Other News

■ Following the release of the first circulating coin, the \$1, to feature the effigy of King Charles III at the end of last year, the Royal Australian Mint has confirmed that all six updated coins have now entered circulation.

■ The Central Bank of Argentina (BCRA) has now introduced the new high denomination 10,000 peso. The main image is of Manuel Belgrano – creator of the Argentine flag and commander of the so-called ‘Ejército del Norte’ (Army of the North) in the early 19th century – alongside fellow independence heroine

María Remedios del Valle. The reverse illustrates the scene of Argentina’s Pledge of Allegiance held in February 1812.

Security features include a watermark containing the two portraits, with their initials, a stylised sun with a human face and the denomination in gold-to-green SPARK Flow®, and a red windowed RAPID® HD Detect micro-optic security thread with a dynamic motion effect and ‘BCRA’.

Raised diagonal lines both the left and right edges on the face of the banknote serve as a feature for the visually-impaired.



BCRA has confirmed that a 20,000 peso note will be issued later this year.

Events

3–5 JUNE 2024

HIGH SECURITY PRINTING
LATIN AMERICA

Santiago, Chile

hsp-latinamerica.com

24–26 JUNE 2024

CASH SUSTAINABILITY FORUM

Frankfurt, Germany

cashesustainability.com

9–11 SEPTEMBER 2024

SECURITY DESIGNERS FORUM

Warsaw, Poland

securitydesignersforum.com

30 SEPTEMBER–3
OCTOBER 2024

GLOBAL CURRENCY FORUM

Muscat, Oman

globalcurrencyforum.com

28–30 OCTOBER 2024

THE COIN CONFERENCE

Lisbon, Portugal

thecoinconference.com

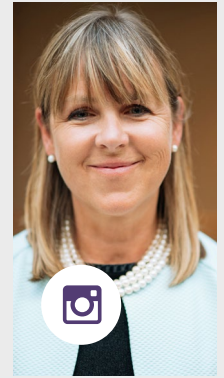
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