

CURRENCY NEWS™

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De La Rue Authentication Sale Secures Finances and Future

De La Rue has announced that it will sell its Authentication Division to Crane NXT for a cash consideration representing an enterprise value of £300 million. The sale will enable it to pay off a revolving credit facility due for repayment next July and significantly reduce the deficit in its legacy defined pension benefit scheme, leaving it focus on its core currency business.



De La Rue Authentication has been the company's fastest growing business, having increased its revenues by almost 200% over the last five years. It generated £102.9 million in revenue in the last financial year (33% of the total), with projected revenues from existing contracts expected to surpass £350 million over the next three years.

Its portfolio includes labels and films incorporating surface-relief micro-structures and holographic technologies, as well as digital solutions that track and authenticate unique items across global supply chains. In addition to government revenue solutions (including tax stamps), it also holds brand protection contracts with Microsoft and a number of leading brands in

personal care and spirits, along with the supply of data pages for the Australian passport.

Crane first entered the brand protection market in 2020 with a range of security labels based on its micro-optics technology PROFOUND™. Earlier this year it concluded the acquisition of one of the market leaders in brand protection, OpSec, for \$270 million, and has just announced the acquisition of the smart packaging assets of TruTag. The two companies will be combined within the newly created Security and Authentication Technologies business segment, consolidating its position as a leader in a notoriously fragmented field.

Of the £300 million purchase price, 5% will be held in escrow for up to 18 months following the completion of the sale. £30 million will be paid into the pension scheme, which comes on top of the £12.5 million De La Rue has committed in deficit repair contributions up until 2027, by when the deficit is expected to be eliminated. The debt of around £160 million will be repaid in full. Even allowing for other costs associated with the transaction, including fees and the separation of the Authentication and Currency operations, De La Rue will be cash positive.

Estonia Drops Lowest Denomination Coins

Estonia is set to introduce new rounding rules next year, with the country also planning to stop minting 1 and 2 cent coins. As cash transactions will be rounded to the nearest 5 cents, the lowest denomination coins, although remaining legal tender, will essentially become obsolete. Surpluses of these coins, featuring Estonia's national reverse design, will be sent to other European countries where they are still in use.

As is the case in many countries, Eesti Pank documented a lack of recirculation for low denomination coinage, despite ordering truckloads of the 1 and 2 cents coins each year. Estonia is hardly the first country to introduce coin rounding, with the Falkland Islands and Lithuania also set to introduce the same rules next year. A few recent examples where coin rounding has been established include Belgium, Ireland, the Bahamas, Ukraine, Peru, and Slovakia, amongst others.

The central bank launched a coin collection campaign last year, in response to the issue, collecting over €1 million worth of coins in the first week via two coin collection machines situated in post offices. Collection volumes have since slowed, although Eesti Pank's project partner, Omniva, noted that deposits varied widely, from 17 cent returns to customers exceeding the maximum daily allowance of 3kg deposits.

Recycling the 1 and 2 cent coins would be expensive due to their plated nature, with metal separation likely to cost more than the value of coins, said Rait Roosve, Head of Eesti Pank's Cash and Payment Systems Division.

Interestingly, Estonia was previously the only euro area country able to produce 1 cent coins below face value, 'yielding a small theoretical profit', noted Roosve. However, the overall costs of processing and transporting the coins still resulted in a loss, albeit one with a minor financial impact.

'We'll definitely find a use for the coins... as there's still demand for these coins elsewhere', he said.

All Change at the Royal Australian Mint

Titled 'Change', the Royal Australian Mint's (RAM) 2023 annual report is aptly named for an organisation that experienced multiple significant changes over the course of last year, including the introduction of the new royal effigy on its circulating coins and the extensive renovation of its visitor centre.

Banks requested a total of 47 million circulating coins over the course of the year, a 57% decrease from 2022-23. The RAM noted that sales to commercial banks remained inconsistent to historical trends – with sales no longer considered regular, and total volumes also considered low. Reduced orders from the banks was attributed to the work of the Australian Banking Association and key retailers, who engaged with the CIT sector to ensure the continued provision of cash to the community. Commercial banks then drew on their coin reserves rather than ordering new coins, resulting in a significant reduction in revenue for the RAM.

The coin pool, managed by the commercial banks, was 166.6 million pieces with a value of \$92.1 million at the end of June 2024. A much larger pool, at 219.8 million pieces with a value of \$118.7 million, was noted at the same time last year.

The value of circulating coin sales was \$32.66 million, a 49% increase on the previous year. Seigniorage fell by 98%, at a modest \$0.4 million compared to \$26.8 million in 2022-23. Demand for 2023-24 circulating coin was 100.2 million pieces, with a value of \$55.99 million.

In contrast to the decrease in Australian circulating coin, sales of foreign coins increased. The RAM produced 73.3 million circulating coins for five countries – 56.9 million for Papua New Guinea, 10.4 million for Timor-Leste, 2.8 million for Vanuatu, 3 million for Samoa, and 0.2 million for the Cook Islands.

4.05 million Donation Dollars, which are counted as circulating coins, were shipped during the year.

Following extensive trials, the new effigy of King Charles III was minted on the \$1 circulating coins. Over 7 million of these coins were produced during the year, with the first new coins issued in December 2023.

Looking ahead

The RAM is forecasting revenue of \$154 million for 2024-25, a surplus of \$8 million, and a return on net assets of over 30%. Circulating coin revenue has been forecast at \$43 million with seigniorage of \$7 million.

The RAM progressed its programme to replace aging material handling equipment within the circulating coin hall during 2023-24, with automated guided vehicles expected to be commissioned towards the end of 2025, and a new industrial robot scheduled for 2026.

... De La Rue Secures Finances and Future

According to Clive Whiley, Chairman of De La Rue 'completion of the sale will allow us to repay our existing revolving credit facility in full ahead of its maturity on 1 July 2025 and will provide a springboard to unlock further intrinsic value as we move to find a long-term funding solution for the Group's legacy defined benefit pension scheme. In addition, we will be able to focus fully on building and growing our world-leading Currency business'.

The news of the sale is undoubtedly a positive development and brings certainty for De La Rue. The Currency division had sales of £207.1 million and

an adjusted operating profit of £6.4 million in 2023/24, reporting a strong order book, which more than doubled from £105 million (September 2023) to £239 million (30 March 2024), with £60 million secured since then. It will now, it says, be stronger, even more resilient and fully focused on serving its customers and driving innovation.

The deal is subject to shareholder and customary anti-trust approvals, and is expected to be completed in the first half of 2025.

(See page 6 for an interview with Ruth Euling of De La Rue on the sale)

RBI Plans to Revamp India's Currency Management Infrastructure

The Reserve Bank of India (RBI) has announced a comprehensive plan to revamp its currency management infrastructure over the next 4-5 years, mainly to ensure adequate storage and handling capacity to cater to the growing economy's future cash needs.

The plan was detailed in an expression of interest (EOI) released on 12 September, titled 'Procurement of Consultancy and Project Management Services for the Modernization of Currency Management Infrastructure in India'.

According to the EOI, the plan includes establishing greenfield currency management centres (CMCs), introducing warehouse automation, installing security and surveillance systems, and developing an inventory management system. A centralised command centre is also being proposed to modernise the existing infrastructure.

Currency in circulation

India's Notes in Circulation (NIC) have significantly increased over the past two decades. As of 31 March 2024, NIC stood at 146.87 billion pieces, up from 136.21 billion the previous year. Coins in Circulation (CIC) have also grown, reaching 132.35 billion pieces.

Although NIC growth has slowed in recent years, it remains positive, with projections for further expansion. Concurrently, the number of soiled notes is expected to rise. Therefore, says the RBI, its infrastructure must be updated to manage these demands efficiently, safely, and sustainably.

Current currency management system

India's banknotes are printed at four facilities jointly by Security Printing Minting Corporation of India Ltd (SPMCIL) and Bharatiya Reserve Bank Note Mudran Ltd (BRBNML). Coins are minted in four mints under SPMCIL supervision at its Mumbai, Hyderabad, Calcutta, and Noida bases.

These are distributed to 19 Issue Offices (IOs) and over 2,800 Currency Chests (CCs) nationwide. Currency management involves

receiving, storing, distributing, and processing soiled notes through the Currency Verification and Processing System (CVPS) and the Shredding and Briquetting System (SBS).

About EOI

In this context, through this EOI, the RBI wants to engage an entity having requisite expertise in offering consultancy services, resulting in a Detailed Project Report (DPR) to be delivered with a timeline of four months followed by its finalisation (over the next two months), onboarding of vendors for the work and project management through to final implementation of the work. The expected timeline for the whole project is 4-5 years. Currency News™ subscribers can view the full details in the tender section: <https://currency-news.com/tender-alerts/>.

Since the EOI is national expression of interest, applicants must be entities incorporated/registered in India for consultancy services to external clients. However, there is no restriction on the engagement of foreign technical partners, subject to the areas specified in the EOI document.

Per the schedule in the EOI document, the pre-bid meeting was held online on 30 September 2024. Representatives of several entities attended the list of which can be seen at https://www.rbi.org.in/Scripts/BS_ViewTenders.aspx?Id=11076. The last date of submission for the EOI is 13 November 2024.

The RBI initiative follows a global trend: central banks and monetary authorities have proactively modernised their infrastructure by adopting suitable re-engineering of their currency management processes and setting up separate facilities for handling banknotes regarding receipt, storage, retrieval, and processing.

People in the News

■ The Brazilian President has nominated **Gabriel Galipolo** to be the next Governor of the Central Bank of Brazil. He has been the Deputy Governor and Director for Monetary Policy since 2023 and was previously Deputy Finance Minister. If his appointment is confirmed by the Senate, he will take over from **Roberto Campos Neto** next January.

■ The Spanish government has appointed Digital Transformation Minister **Jose Luis Escrivá** as Governor of the Bank of Spain for a six year term, replacing **Pablo Hernandez de Cos**.

■ **Dr Aleta Richards** has been appointed President of the Crane Currency business, covering banknote, security features, and paper. She was previously Executive Vice President at Covestro, a leading supplier of polycarbonate and polyurethane technologies, where she led the global films business that provides films for passports and other applications. In her new role, she reports to **Sam Keayes**, Crane NXT's Senior Vice President of Security and Authentication Technologies.

■ Two new members have been elected to the Board of the International Association of Currency Affairs (IACA) – **Dominic Owusu**, Head of Currency Management Department at the Bank of Ghana, and **Eric Boissonnas**, CEO of Koenig & Bauer Banknote Solutions.

■ The International Currency Association (ICA) has elected a new Board following the conclusion of its conference, the Global Currency Forum, in Oman. The new ICA Board is composed of **Etienne Couëlle** of Oberthur Fiduciaire as Chairman, **Annette Holdermann** of Giesecke + Devrient (Vice Chair), **Dieter Merkle** of Schuler (Treasurer), **Marilou Arends** of Canadian Banknote Company, **Barna Barabas** of Jura, **Fergus Graham** of SICPA, **Heath Thomas** of De La Rue, **Roberto Salgari** of PARVIS, and **Martin Bergsmann** of Hueck Folien.



In addition, the Director General, **Jutta Buysse** has left the ICA after four and a half years to join the Brussels Agency for Entrepreneurship. A recruitment process is currently underway to appoint her successor.

■ **Goran Paladin**, former Director of Production and on the Supervisory Board of Croatian Mint, and then Director of Operations at PayComplete, has joined coating specialist Inorcoat.

Spectra Reports Half Year Revenue and Profit Increase

In the first half of 2024, Spectra Systems achieved sales of \$22.74 million, an increase of 96% compared to the first half of 2023. The increased revenues came from additional security printing sales, pre-production sensor development contracts, sales of covert materials and initial revenue recognition on the \$39.6 million sensor manufacturing contract for a central bank customer.

Profitability also increased – adjusted EBITDA by 33% to just under \$7.85 million and adjusted PBT to 6% to \$6.22 million.

In addition to the financial gains over the previous year's first half, significant operational highlights have included completion of the balance of an order for supply chain mitigation with a central bank customer, successful completion of printing and durability tests of Spectra's polymer substrate with a Middle Eastern central bank, approval from a significant polymer banknote printer to incorporate their proprietary polymer banknote window security feature into Spectra's polymer substrate, and the development of faster and easier to use smartphone technology, for which patents were filed.

CEO Nabil Lawandy noted that the company had already achieved a profit (PBT) equivalent to 50% of the market expectations for the year, albeit that the interim results included the contribution for the first time from Cartor Security Printers (CSP), which was acquired at the end of last year.

With regard to the company's strategy and prospects, he said that the focus continues to be on selling more products to existing customers as well as leveraging CSP's long relationships with tax stamp, passport, and postage stamp customers and partners.

He also stated that 'with the expected cash build-up when sensor sales are underway, we continue to evaluate synergistic and profitable businesses for possible acquisition.'

CIT Monopoly in New Zealand Risks Repeat of Problems in Australia

New Zealand's Commerce Commission has cleared the way for Evergreen NZ Holdings to acquire 100% of the shares of ACM New Zealand. Evergreen already owns Armourguard, the country's dominant supplier of CIT and related service, and the acquisition of ACM from its parent Linfox Armaguard will create a monopoly.



In clearing the acquisition, the Commerce Commission accepted that it is very likely that either Armourguard or ACM would cease to operate in the near future, resulting in a single national provider of wholesale cash-in-transit services, along with retail CIT, ATM maintenance, and precious cargo services.

In Evergreen's application, it noted that the relevant businesses of both Evergreen and ACM have suffered significant cash losses.

'An ongoing decline in the use of cash and reduced demand for cash-in-transit services – accelerated during the COVID-19 pandemic, and the rationalisation of bank branches – coupled with inflationary increases in costs makes it difficult for two national wholesale cash-in-transit providers to be financially viable', it said.

Given the likelihood that ACM in particular was likely to exit the market, the Commission said it was satisfied that there wouldn't be a substantial loss of competition or material impact on the price and/or the quality of cash-in-transit services with the proposed acquisition.

'While not a relevant consideration to our decision to grant clearance for the proposed acquisition, we also considered that there would likely be public benefits to the proposed acquisition. These include the ongoing stable supply of cash-in-transit services to the market and the orderly transition from two cash-in-transit providers to one, outcomes unlikely to be realised without this acquisition', it concluded.

According to Evergreen, both organisations' CIT assets, liabilities, employees and operations will be merged into a newly formed and wholly owned subsidiary called Armourguard Logistics Ltd.

'The new entity will continue to be managed locally leveraging Armourguard's 85 years of New Zealand security

knowledge, expertise, and CIT experience. We will continue to provide the same great level of service with the added strength of the combined knowledge and expertise of both Armourguard and ACM,' it said.

'It will be business as usual as we seek to complete the transaction in February / March 2025'.

Similar situation in Australia

Without wanting to rain on their parade, one doesn't have to look too far to see how the best of intentions can come unstuck.

Much the same happened in Australia last year, when Armaguard acquired Prosecur, creating a near monopoly in wholesale CIT, with 90% of the market.

The same reason was given by the Australian Competition and Consumer Commission for clearing the acquisition – namely, it would avoid the probability of one or other of them shutting down and leaving businesses stranded. The merger was approved on the condition that Armaguard continue to transport cash to all the locations that had previously been served by both companies and not hike up prices.

But within months of the merger, Armaguard advised that its wholesale cash-in-transit business was unsustainable and unless it received a bailout, it would be unable to continue operations. The continuing decline in cash usage was blamed.

Following months of emergency talks between Armaguard, its customers, the Reserve Bank of Australia, and the Federal Treasury Department, a rescue package of \$50 million was agreed. This is being paid by Armaguard's eight largest customers (including the four Australian retail banks), subject to certain conditions, over the course of a year to keep cash circulating while longer-term solutions for sustainable access to cash are sought.

News in Brief

■ Sesami Acquires Self-Service Solutions Provider

Sesami Cash Management Technologies Corporation, a subsidiary of security services firm Gardaworld, has acquired the UK-based Consillion Group (previously known as Banking Automation), a provider of cash automation systems which also operates in Australia, New Zealand, and Singapore.

Sesami describes itself a global cash ecosystem integrator and fintech company and supplies the retail and financial sectors. It was formed in 2022 following the acquisition of US-based cash automation specialist Tidel and the cash management business of Swedish-based Gunnebo. Further acquisitions that year included the teller cash recycler (TCR) manufacturer ARCA and the German cash optimisation software company planfocus.

According to the company, the acquisition of Consillion significantly enhances Sesami's presence in the Asia-Pacific region.

■ Honeywell to Spin out Authentication Business

Honeywell has announced a plan to spin off its Advanced Materials business into an independent, publicly traded company, targeted to be completed by the end of 2025 or early 2026, leaving it to focus on the so-called megatrends of automation, aviation, and energy transition.

The Advanced Materials business includes Honeywell Authentication Technologies, which supplies fluorescent and phosphorescent pigments and taggants, along with detection devices, for the authentication of security documents, including banknotes, as well as coins.

According to Vimal Kapur, Chairman and CEO of Honeywell, the spin-off of the business, which has nearly \$4 billion in annual revenues, is part of a simplification of the group's portfolio around the above megatrends.

■ New UK Cash Campaign

At the ATMIA Europe and Emerging Markets conference in London in early October, Martin Quinn launched the Campaign for Cash, building on the work he has been doing for a number of years promoting cash in the UK.

The campaign draws attention to increasing refusal of cash by retailers alongside a decline in bank branches. Cash payments dropped 7% in 2023. Although legislation aims to maintain cash access, the campaign argues this doesn't

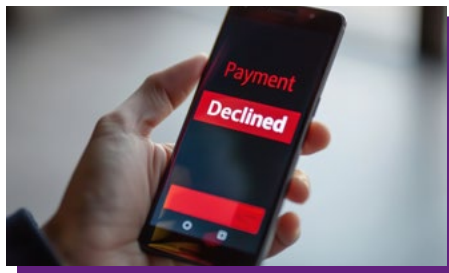
go far enough. The campaign wants the role of cash to be safeguarded in law requiring cash to be accepted everywhere, ATMs to be free and widely available and cash providers such as the Post Office to be protected.

France, Spain, Norway and Ireland are given as examples of countries that have taken some of these steps. The Netherlands could also have been added given that its Parliament has unexpectedly included a requirement for cash acceptance in a bill which is about to go to the upper house for ratification.

The campaign asks people to pay with cash where possible, to discuss with friends and colleagues why cash use matters and to advocate for branches to stay open.

■ Norway's Cashless Journey Hits Roadblock

Norway's journey to becoming one of the world's first cashless countries has hit a roadblock under new rules passed by Parliament that oblige shops to accept cash payments alongside other mobile payment and card options.



Currently only 3% of consumers in Norway use cash to pay for their shopping, according to a survey by Norges Bank, which believes that many more would do so, but are frustrated by the proliferation of 'cash not accepted here' posters in Norwegian retail premises.

A recently introduced amendment to the Central Bank Act, promoted by the government and Norges Bank, clarifies consumers' right to pay with cash up to an amount of NOK 20,000 (€1,670). It states that consumers must be offered the option to pay with legal tender and to receive change, unless there is a clear discrepancy between the banknote offered as payment and the amount to be paid.

The government is pledging enforcement of fines against businesses that 'wilfully or negligently violate the rules'.

■ BEAC Addresses Coin Shortages

The Bank of Central African States (BEAC) is taking action to address a shortage of coins in circulation in Douala, the economic capital of Cameroon, inviting local businesses such as pharmacies,

supermarkets, bakeries, and shops to swap banknotes for coins.

According to local reports, this move comes directly from an order by the central bank's governor, Yvon Sana Bangui, who has instructed BEAC's branches to push more coins into the economy throughout the Central African Economic and Monetary Community (CEMAC). This is to counteract the coin scarcity that has been plaguing many cities in the region.

He said that even though the BEAC has been well-stocked with coins – following a request for 150 million coins from the 2006 series – they are not getting into the hands of the public as expected. He has urged the banks to speed up and target the distribution of these coins to the people.

Coin shortages in CEMAC have been a recurring issue for years. One of the main reasons is the existence of networks that collect coins then export them to Asia, where they are turned into jewellery. To put an end to this practice, BEAC has announced plans to introduce a new series of coins this year, made from material less likely to be used for such purposes.

■ SICPA Adapts

Security ink specialist SICPA has launched a consultation process with its staff on restructuring that could result in up to 120 redundancies out of a total of 1,000 people employed at its headquarters and factory in Lausanne, Switzerland. Overall, SICPA employs around 3,000 people in 40 countries.

According to the company, the structuring is necessary to adapt to 'international economic context and geopolitical tensions, (which) have considerably worsened in many regions of the world in recent years and even more so in recent months.' It cited in particular rising prices of raw materials, inflation, unfavourable exchange rates and other effects of international sanctions.

In spite of this, SICPA has also stated that its business volume remains substantial, and its project pipeline is full and continues to grow.

Few details of the restructuring have been provided, but it is being designed for 'greater agility'. In addition to banknote security inks and varnishes, SICPA is also a market leader in enhanced tax stamps, integrated fuel marking systems, brand protection, and identity solutions.

And it is investing in the digital ecosystem, as evidenced by the opening of its unlimitrust campus in Lausanne in 2023 that, it says, marks a 'rise in power in the fields of digital and data science to conquer new market segments with a promising future'.

The company is also positioning itself in digital identity and CBDCs.

A Brighter Future as Currency Goes it Alone

Further to the news that De La Rue has agreed a sale of its Authentication business to Crane NXT – a move that will alleviate the financial pressures that have hung over the company in recent years (see page 1) – Currency News™ spoke to Ruth Euling, Executive Director and Managing Director of the remaining Currency division, to find out more about the sale and what it means for the company in terms of production, investment, and its customers.

Q: *Was it always the intention, or rather preference, to sell off the Authentication division rather than Currency and/or both?*

A: We had multiple options open to us. However, we knew we had to remove De La Rue's net debt and minimise our pensions deficit whilst finding a solution that was good for our customers and employees. The deal we have agreed with Crane NXT did just that and our Currency customers will continue to get what they need from a strong Currency business.

Q: *The financial and focus advantages aside, do you see any other benefits in not having Authentication?*

A: Currency has long been at the heart of De La Rue so many aspects of this deal are liberating and exciting. Reporting becomes simpler, prioritisation decisions can focus on the best interests of the Currency business only. Equipment can be 100% utilised by Currency. Our business and culture can be fully optimised for the Currency industry.

Q: *How will the separation of the functions relating to both divisions be achieved, including intellectual property?*

A: Both divisions operate with a relatively high level of autonomy so many areas, such as sales, won't be impacted at all. Most of our attention will be spent separating IT systems and our Malta site. For IP, Crane NXT are acquiring what they need to run and grow their Authentication division (with no rights to leverage into Currency), whilst De La Rue retains what is needed to run and grow its Currency business.

Q: *With regard to the Malta site, it is home to production for both of your divisions, and also home to Crane's printworks. Will DLR's currency printing continue there?*

A: In short, yes, Malta continues to be an essential site for De La Rue Currency as it has been since we first moved there in 1975. We will complete our state-of-the-art new banknote manufacturing site there in 2025 and it will continue to be our largest manufacturing facility.

We do however have some work to do to separate out the Authentication manufacturing in Malta from our existing site, which is already underway.

Q: *How much cash will the sale of the Authentication business release for investment in the Currency business? How do you intend to spend it?*

A: We have invested significantly in the Currency business in the last five years. Malta will soon have the afore-mentioned new facility, we expanded our polymer and security features site in the UK and added a second line to meet increasing polymer demand, all our banknote factories now benefit from new and upgraded equipment equally matched in capability, and we've built bespoke security features equipment to realise the potential of our technology platforms.

Looking ahead, I'm looking forward to sharing the exciting new products that will soon be available from our evolving technology platforms and to continuing to invest in innovation.

However, we will also be responsible; the Currency business is capital intensive and unpredictable, we have worked hard to ensure we are competitive and profitable in the face of market fluctuation and we are proud of that resilience, which is essential to give customers certainty in their supply chain.

Q: *The revolving credit facility has obviously been a millstone so a great relief to pay it off. But what about the legacy pension issue? How does DLR intend to address this going forward, eg. is further investment, profitability, or a sale being sought to address this?*

A: We'll be paying £30 million as an accelerated contribution on completion of the sale of the Authentication division, along with an additional £12.5 million in deficit repair contributions to the Pension Scheme over the period to April 2027. We're committed to closing the deficit by 2027 and will find a solution for the benefit of all of those in the scheme.

Q: *DLR is the only banknote supplier among its peers to have been historically listed as a public company, and many have commented that this has put it at a disadvantage in terms not just of disclosure requirements, but the necessity to go for short-term profitability to keep shareholders happy at the expense of long-term growth and investment. Can you comment?*

A: The facts speak for themselves here – we have invested and we have set ourselves up for long-term growth despite being a PLC. We are now well positioned to meet the growing demand for polymer banknotes, provide a range of security features (including proprietary machinery we designed to scale our latest security features technology platform) and have three highly capable banknote manufacturing sites, including our supersite in Malta in which we are investing.

In terms of disclosures, it can feel unfair knowing that other suppliers are also impacted by market conditions but only De La Rue is required to report about the impact. However, we pride ourselves on being transparent and open with our customers.

I also think we are incredibly fortunate to be trusted by central bankers, who will always take the time to understand the reality behind any disclosure statement and know that we have a track record of finding solutions to issues.

Q: *The security feature market has become increasingly competitive in recent years. Is this an opportunity for De La Rue to increase its investment, and, if so, in what areas?*

A: Yes, it is an opportunity. Our paper and polymer offering has also become increasingly innovative and competitive in recent years. De La Rue is the only supplier to offer a covert taggant in a polymer substrate in a proven solution; our ASSURE™ product is also the only durable level 3 feature for polymer.

We have a range of security feature technology platforms and a strong IP portfolio to ensure that customers have the appropriate solution for their needs. Our IGNITE® thread is the only dynamic colour shifting thread that is resistant to photocopying. We also offer a comprehensive range of micro-optic features and related effects for foil stripes/patches, enabling virtually any image to be designed into a security feature and to be brought to life via a range of secure effects.

Our established effects like Depth™ have never been convincingly counterfeited (commercial machines cannot replicate what we do) and we have continuously advanced this technology.

The next wave of security features will tap into the trends for combinational, intuitive, integrated, image-based and distributed/free-form effects. Because we have a range of technologies to draw upon, we have an exciting opportunity to invest more here to scale-up more quickly and to make effects more impactful.

Q: *DLR's focus now is just on currency. What opportunities do you see for development and expansion within the currency sphere?*

A: We expect the current trend of paper banknotes converting to polymer to continue, with polymer itself unlocking the potential of the three major technology platforms. With polymer, security features are no longer restricted to a simple thread or applied feature. They can instead play an active role in the windows and integrate more fully into the final banknote. Combinational technologies and advances in micro-structures will unlock the next wave of features.

From a product perspective there may be merits in the interplay of digital and physical money. However, this shouldn't become a distraction from physical banknotes, which have a core role to play globally for the foreseeable future and need to be designed to meet the needs of the central bank they serve.

Beyond products and features, we see opportunities in expanding the support provided to central banks. Our #MadeOfMoney initiative helps issuing authorities transform end-of-life polymer banknotes into stylish, sustainable products, whereas our cash cycle analytics platform offers central banks data and insight to support evidence-based decisions.

Q: *Is DLR looking at a long-term plan to diversify the business into new areas?*

A: The culture and history of De La Rue is one of creativity and innovation – we have a track record of creating and growing a diverse range of new businesses.

However, for now, we believe in the Currency market and the ongoing demand for banknotes so our absolute top priority is continuing to deliver exceptional banknotes and components thereof whilst continuing to demonstrate best-in-class design and security features.

Q: *This has been an uncertain period for DLR. What message do you have for your customers going forward?*

A: De La Rue remains committed to ensuring we get every customer the best solution for their unique needs. We'll continue to focus on you and your needs and to offer world-leading design and the widest selection of security features, with more banknote manufacturing sites than any other entity in the industry.

We'll continue to run an efficient business, keeping costs low and investing appropriately for innovation and growth.

And we'll continue to put our customers first.

We are confident that the De La Rue brand, skills, relationships, know-how and customer commitments will continue in whatever form the future will take. Thanks to all of our loyal and supportive customers for continuing to place their trust in De La Rue.

SICPA's Pushes Forward with Sustainability

SICPA recently issued its 2023 Sustainability Report. Given that it issued its first Corporate Social Responsibility report in 2013, adopted United Nation (UN) Sustainable Development Goals (SDG) in 2019, and in 2022 committed to getting to net zero emissions by 2050 (and to be carbon neutral by 2035), what is new in this report?

What is not new is its explanation of its systematic approach across the whole spectrum of Environmental Social and Governance (ESG) activities – its materiality assessment which has fed through to its adoption of eight of the UN SDGs. Its use of key standards such as the Green House Gas Protocol for carbon accounting and the Global Reporting Initiative standards for what it measures and how it reports them. All this has driven what it has done and how it reports that in a comparable, standardised way.

Extending excellence

- Four more sites now have the ISO14001 environmental management system, bringing the total to 16 entities on 21 sites
- Data collection has been increased, standardised and monitoring improved
- 30 new materials are now being sourced locally rather than being shipped to SICPA's production sites
- SICPA's installed base of photo voltaic power generation has increased 63% since 2022, to 1,086MWh
- The supplier code of conduct was updated
- The EcoVadis assessment was extended to 11 sites. Spain, Switzerland, the SICPA's STA subsidiary were awarded the Gold standard
- All sites are certified with LQRA for the ISO37001 anti-bribery standard.

Carbon emission progress

- Scope 1 emissions, direct energy, were 5% of the company's total emissions, down 9.9% on 2023
- Scope 2 emissions, indirect energy, were 8% of total emissions, down 7.5% on 2023
- Scope 3 emissions, which account for 87% of SICPA's emissions, were down 0.7%, excluding the new campus being built by the company.

SICPA's CO₂e emissions have reduced from 130,307te in 2021 to 105,510te in 2023, down 19%.

The importance of focus

Beyond the overview, the report is full of detailed examples of work done, changes and progress. Sometimes

change comes from focusing on the small things.

SICPA Thailand set itself the goal of reducing quarter-on-quarter the fuel it used by 20%. The business focused on optimising inventory management, predicting operational consumption, monitoring logistics and looking to combine the delivery of orders wherever possible. The result for the last quarter of 2023 was a 59% reduction in fuel usage.

A move from fuel powered alternators to electric motors is another example of small changes making a difference. In this example the change reduces carbon emissions, increases energy efficiency, allows the precise control of engine simulation, eliminates a combustion hazard and improves safety in confined laboratory areas. Environmental and safety benefits in one change.

Exploring packaging options

Packaging is a difficult area given the nature of inks. Historically inks have been packaged in steel drums. SICPA is encouraging customers to move to larger drums, but it is also offering alternatives, for example recyclable cardboard boxes which are lined with removable plastic liners.

In Mexico, SICPA is promoting a change to using cardboard boxes rather than wooden boxes, because these save 20kg per box.

Changing ink formulations

In 2023, the transition from cobalt-based to cobalt-free offset inks was completed. In addition, cobalt- and octoate-free intaglio inks are allowing the phasing out of cobalt containing compounds from oxidative drying systems.

SICPA has introduced a vegetable-based 3VF offset series of inks which contain a minimum of 60% bio renewable content. This ink was used for the first time in 2023 on issued banknotes in Lesotho and Tajikistan.

Final word

The overarching strategy, which SICPA lays out at the start, needs to be coherent, logical and relevant, but once that is in place the reality is of working the detail across every area of the business, in every business and at every site.

Will the Swan Really Sing?

■ By Francisco Mandiola, FMA Secure

On 3 October, the Argentinean media went wild announcing that Milei's never-a-dull-moment government would be restructuring and, possibly closing, the Argentine Mint (Casa de Moneda República Argentina – CAMOAR).

Although shocking to many, the news could not be so surprising after the Argentine government announced during a press conference at the presidential palace, Casa Rosada, on the previous day, that Trenes Argentinos Capital Humano (DECAHF), a state agency with almost 1,400 workers, had been closed and all its employees terminated.

The government explained its decision with a statement stressing that the agency did not operate any trains and was only a duplication of activities and responsibilities already in place at other state-owned railway companies. Moreover, it was mentioned that the government was only continuing to follow through with campaign promises to eliminate what the Ministry of Economy deems 'unnecessary expenses,' and that closing said agency is estimated to save ARS 42 million per year (US \$43 million).

Federico Sturzenegger, Minister of State Deregulation and Transformation, after announcing the closure of DECAHF, further commented that the Ministry of Economy was also evaluating the closure of five or six other state companies for the same reasons. And the news went viral when he said, '...any minute now, it will be CAMOAR's turn.'

He further inflamed passions by saying that the functions performed by CAMOAR, 'could be resolved by public tenders,' to private companies and/or the central bank could, 'import the banknotes.'

Later that same day, Manuel Adorni, official spokesperson for Milei's government, confirmed Sturzenegger's comments about CAMOAR by posting on his X account, although minutes later he erased this without further explanations.

CAMOAR's mission

CAMOAR is legally under the aegis of Luis Caputo, the Minister of the Economy since Milei's election. Like many state mints and printers, CAMOAR has been traditionally responsible for the manufacture of security documents, license plates, fiscal stamps and other related products, in addition to publishing and managing public tenders for additional banknote and coin needs as per the cash requirements of the Central Bank of Argentina (BCRA).

CAMOAR currently has two locations, with its main offices in the Buenos Aires neighbourhood of Retiro, and a newer

plant in Don Torcuato, also within the capital region.



Despite the company's incorporation of new technology last year, 75% of the banknotes in circulation are imported and only the remaining 25% is produced by CAMOAR at an estimated cost of \$90/thousand, according to some sources.

Sturzenegger's comments and Adorni's eliminated post followed the much-commented recent tenders by the BCRA for two tranches of 240 and 300 million 20,000 peso banknotes which are to be delivered between March and July of 2025. Bidders were Oberthur Fiduciaire, De La Rue, Crane, Casa da Moeda do Brasil and China Banknote Printing and Minting Corporation (CBPM), and the BCRA awarded the purchase of the banknotes to the latter. Surprisingly, CAMOAR was not even invited to bid, let alone assigned some banknotes to print, something that the BCRA has done in the past.

Sources have different opinions as to why CAMOAR was not invited; there are two competing theories in the market. The first being CAMOAR's mismanagement of its finances and its banknote production. The second theory is that the Chinese government has been given unfair advantages due to its investments in the country.

Showing a deficit

CAMOAR showed its worst deficit in 2023, due to the previous government administration's refusal to issue higher denomination banknotes so they would not have to publicly admit inflation. CAMOAR printing presses were working 24 hours a day, seven days a week, to continue printing 1,000 peso and subsequently, 2,000 peso banknotes. The 2,000 peso commemorative banknote, announced in February of 2023, was released for circulation in May of 2023 and the rest of the 2,000 peso banknotes were finally circulated in November of 2023.

Given Argentina's inflation, the value of both notes had been significantly reduced by this delay. To further complicate matters, the commemorative banknote and the circulation banknote, although very similar, showed different visible security elements, namely a green colour-shift stripe that was not present in the non-commemorative notes, causing public confusion as to the validity of both notes.

In April of 2024, the first of 700 million 10,000 peso banknotes began arriving in Argentina, a bid that CAMOAR had been invited to, but which had been also awarded to CBPM due to CAMOAR's inability to comply with delivery dates.

According to official data, banknote production accounted for 90.7% of CAMOAR's revenues, closing that year with a negative result of ARS 423 billion (\$432 million). These losses surpassed those of the national airline, Aerolíneas Argentinas of ARS 385 billion (\$393 million) and the state company in charge of potable water concessions and related functions for greater Buenos Aires, Aysa, with losses of ARS 384 billion (\$392 million).

As of writing, CAMOAR's number one spot in terms of losses has improved somewhat, as it is currently at number three. In contrast to – or perhaps as a factor in the content of – the 2 October government announcements, official transfers (subsidies) to CAMOAR have grown by 60% as of August of this year. The transfers began with the reception of funds in May of 2024 and there is a notable difference with the 2023 year-end transfers which were at -70%.

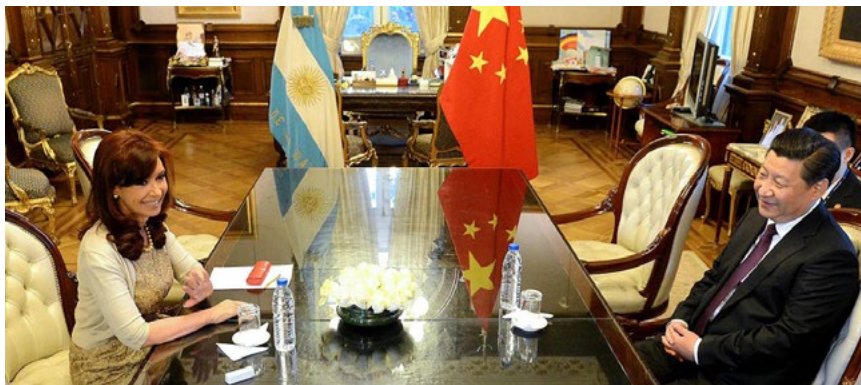
However, following the 2 October announcement, a protest was staged in front of CAMOAR by the union of Argentine state employees (ATE).

ATE leader, Rodolfo Aguiar threatened: 'when we went on strike at the airports, the government spoke of a wildcat strike. This government has no idea what a wildcat strike is, but if it insists on closing CAMOAR, it will start to realise.'

Daniel Méndez, who is currently head of CAMOAR and whose contract is valid at least until the end of 2024, had already reduced headcount in August of this year by 5%. Since he was hired as part of Milei's government renewal, some hope that he will be able to streamline CAMOAR.

The China connection

Although no official confirmation exists, CBPM was rumoured to have successfully bid \$11.5 million for the first 240 million banknotes and \$14.7 million for the following 300 million. Since bids from competitors started at over \$55/thousand, the Chinese were adjudicated the entire contract. On first inspection, having the lowest price in a public tender and being adjudicated production seems to belie



Cristina Fernández de Kirchner and Xi Jinping during the signing of the bilateral agreement.

the rumour that the new banknotes are being produced by CBPM due to an undue obeisance to the Chinese government on behalf of the current Argentine government.

The rumours about Chinese government intervention in Argentine national affairs are not new and the historical reality cannot be judged as evidence of any spurious agreement for banknote production by CBPM.

In 2010, an agreement was signed that would give the Chinese government 200 hectares in the Neuquén province of Argentina for 50 years for research in the field of 'science and technology'. While this agreement did not explicitly and strictly prohibit the performance of military tasks at this location, the benefit would be the increased investments by China in public infrastructure projects under the Kirchner, and later, the Fernández administrations.

Some Argentinians saw this agreement as the installation of a secret Chinese military base. In 2016, when Mauricio Macri's opposition government took power, Macri signed an addendum that stated that Neuquén 'will be implemented exclusively for civilian use in the field of science and technology, and the information resulting from its research will in no way be used for military purposes'. Chinese investments continued to increase but the rumours died down.

However, when Milei took office, his negative and very public comments with respect to China's economic policies came with a logical reaction from the Chinese government. Saddled with an almost reserve-less BCRA and the freezing of a \$5 billion existing swap credit line, Milei's ability to implement reforms was immediately weakened.

Some months after, and one week prior to the 2 October press conference, the Chinese government published information about an unexpected meeting. Three of Milei's top economic aides had met with

Wang Yi, the Chinese chancellor, to discuss mutual economic cooperation between China and Argentina. The meeting had not been publicised in Argentina, but clearly, some kind of rapprochement by the Argentine economic team was necessary for the renewal of the swap credit line, Chinese support with the IMF and approval for additional and pending investments in mining, specifically for lithium and copper.

The publishing of this apparent reversal in public policy by Milei's team in exchange for continued Chinese investment in the country, CAMOAR's lack of invitation to a national banknote tender, the subsequent adjudication of banknote production to a Chinese company, and the announcement of CAMOAR's imminent closure were all ingredients for the perfect storm of rumours of China's influence.

What comes next?

The most likely conclusion for CAMOAR's current uncertain situation is probably closer to Milei's original goal of downsizing the Argentine government. And the BCRA has probably seen that its best hope for survival is to make its cash requirements in the most timely and efficient manner, choosing a company that has lower prices and has complied with delivery dates promptly rather than insist on CAMOAR.

A few days after his first announcement, Adorni confirmed the closure of the ex-Ciccone plant in Don Torcuato (acquired by the government in 2010), stating during his regular press conference that, 'the National Government is going to move forward with the dissolution of the South American Securities Company, the former Ciccone Calcográfica, as it is popularly known, remembered for surely one of the biggest corruption cases of the last decades.'

Although serious, this is not yet a lethal blow, leaving the swan to mend its wounds and fly onward, or possibly, to sing.

Tenders and Contract Awards

In this new periodic feature for **Currency News™** we report on the latest tenders and contract awards for banknotes, coins and related services.

- Crane Currency has won the contract from Danmarks Nationalbank for the technical design of Denmark's new series of banknotes, which are due to enter circulation from 2028. The contract is valued at \$108 million.

- The Reserve Bank of India (RBI) has issued an Expression of Interest (EOI) for the procurement of consultancy and project management services for the modernisation of the currency management infrastructure in India (see page 3).

- The Pakistan Security Printing Corporation has invited expressions of interest from consultancy firms for prequalification for consultancy relating to the establishment of a security paper manufacturing and banknote production facility in Pakistan. The deadline for applications was 23 October 2024.

- Security Printing Corporation Bangladesh has issued a tender for security thread for the 10, 20, and 50 taka denominations.

- China Banknote Printing and Minting (CBPM) has been awarded two contracts from Nepal Rastra Bank to produce 350 million 5 rupee and 340 million 10 rupee banknotes, valued at \$5.1 million and \$7.1 million respectively.

- The Royal Dutch Mint has signed a contract with the Finnish Ministry of Finance for the production of Finland's circulation and commemorative coins.

- Bangko Sentral ng Pilipinas has signed an MOU with German banknote printer Bundesdruckerei to collaborate on currency management and production; securities management and production; digital payments infrastructure; and research and development on digital payments and banknote substrates.

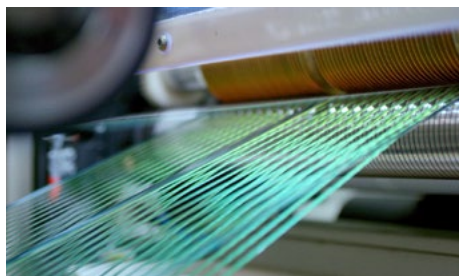
The MOU, which runs for five years, also covers technology exchange, staff exchange and training, information-sharing on legal aspects relevant to payments and currency management, and other areas to provide support, assistance, sharing of best practices and expertise, and capacity-building or technical assistance to one another.

CBPM's Green Alternatives for Thread Production

China Banknote Printing and Minting (CBPM) has been implementing a series of clean production and carbon reduction measures in the production of raw materials such as paper, thread, and ink, such as using-toxicity auxiliary materials and reducing pollutants, in order to make the production of the renminbi and other currencies more environmentally friendly,

This article shares the efforts made by CBPM in developing environmentally friendly materials for the production of threads.

In the early days of its thread production, to ensure product performance and quality, CBPM's technology involved the use of large amounts of highly volatile, toxic, and hazardous solvent-based coating materials which generated volatile organic compounds (VOCs) that can result in atmospheric pollution.



Although CBPM adopted advanced regenerative thermal oxidation (RTO) technology to collect and treat the VOCs, ensuring that pollutant emissions complied with national standards, it says that this approach was passive, uneconomic, unsustainable, and did not align with the fundamental principles of pollution source control and substitution in clean production.

To control pollutant generation at the source, CBPM has invested in the transition of adhesives used in thread production from solvent- to water-based alternatives, creating a solution that significantly reduces VOC emissions at the source, and has achieved notable results.

The route to substitution

Indeed, CBPM had recognised early on the deficiencies of solvent-based adhesives in safety and environmental protection and, as far back as 2010, began developing water-based adhesives. However, the substitution of water-based adhesives not only required preparation processes and costs to be taken into account, but also required good printing properties and drying performance.

Furthermore, as a critical component of banknote paper, threads have very high requirements for stability, quality consistency, and physicochemical resistance indicators; thus, the transition to water-based adhesives faced significant difficulties and challenges.

From 2017-2019, CBPM carried out nine development projects on water-based adhesives and successfully applied water-based coating technology, effectively resolving the environmental issues and safety risks associated with organic

solvents. This resulted in a reduction of VOCs by over 90% in the primary products and the adhesives used in their production. CBPM is continuing with further research to achieve a complete transition to water-based alternatives for thread coatings.

With the implementation of the project, all raw and auxiliary materials used to produce threads (with the exception of a few results that are still in the verification stage), have now achieved environmentally friendly substitution from solvent-based adhesives to water-based (or solvent-free) adhesives.

Among the water-based coatings produced, 12 types have achieved environmentally friendly production, of which seven meet the low VOCs standards (<10% standard requirement), including six that comply with the '0 VOCs' standard (not detected or less than 1%).

During the application of the water-based adhesives, CBPM compared the VOC concentration in the exhaust gases. After the substitution, the concentration in the inlet of the exhaust gas treatment facility was reduced by 98%, which greatly reduced the generation of VOCs at the source and alleviated emission pressure. Furthermore, the exhaust gas treatment facilities can now operate with low power consumption, further reducing energy consumption.

Next steps

CBPM is now focusing on the replacement of the remaining solvent-based adhesives and further reducing VOC emissions. Certain products have already achieved fully water-based and environmentally friendly substitution; coatings with VOCs exceeding 30% in thread production will be further reduced; and water-based inks will achieve solvent-free status to reach '0 VOCs' levels (<0.2%).

And the Happy Winners Are ...

In last month's issue of Currency News, we provided details of Oberthur Fiduciaire's new house note series, on the theme of the Art of Butterflies, comprising five different designs and five different security threads printed on one sheet.

The sheets were unveiled at the Global Currency Forum, and a prize draw was held, with 10 lucky winners each receiving a full-size sheet of the new notes. Pictured here are two of those winners – Jing Xiong Thing of the Monetary Authority of Singapore (left) and Natasha Nuvul of Bank Negara Malaysia (centre), with Victor De Sousa Passos of Oberthur (right).



From High Quality Banknotes to High Quality Packaging

Giesecke+Devrient first unveiled its new Banknote Fiber Extractor® (BFE) in July 2023, which extracts fibres from banknote waste that is suitable for high end repurposing. It has now announced the achievement of another milestone – namely the successful conversion in the first real-life test case of fibres from old banknotes into high quality cardboard at an industrial scale.

G+D introduced the BFE as a response to the challenge of decomposing banknotes at the end of their life and repurposing them sustainably.

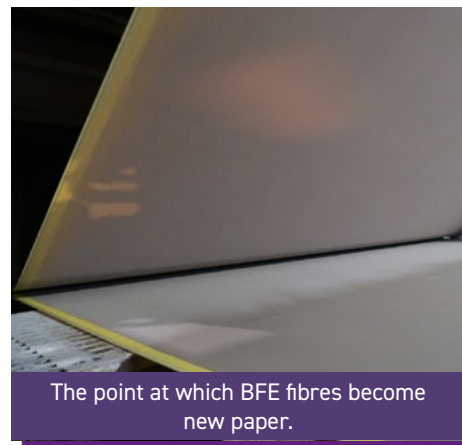
Unlike conventional banknote destruction systems, which ‘only’ shred banknotes, G+D’s BFE decomposes paper banknotes down to the fibres. The mechanical technique, which uses no water or chemicals but pure physics, decomposes the material using pressure shear stress, pressure changes and air turbulence/microturbulence. The solution offers the same throughput rates as G+D’s banknote destruction systems – starting from less than 100kg/h to almost unlimited with the combination of multiple systems.

The output from the BFE machines can be formed into briquettes for transportation without the need for additional packaging materials. More importantly, the resulting pulp can be used to make other non-

banknote paper or be used to create moulded products, for example using natural fibre injection. It can also be used for nearly all types of packaging – not just cartons for storage and logistics, but even aesthetically pleasing product packaging.

‘The fact that we can now scale this process to an industrial level, turning the highly complex product of a banknote into regular paper and carton, fills me not only with immense pride for G+D and everyone involved in the project but also with bright optimism for the future’, said Ferdinand Storek, Head of Life Cycle Solutions at G+D. ‘I am confident and convinced that we are on the right path to creating greener solutions for a greener cash cycle and ultimately a more sustainable world.’

The results of the trial, according to the company, exceeded its expectations in terms of the quality of paper cardboard produced from the banknote fibres. In the



The point at which BFE fibres become new paper.

very near future, central bank customers will receive G+D products in cardboard boxes made from banknote material they supplied, with G+D Currency Technology also set to utilise the significant amount of boxes they have for their own logistics, eg. shipping of spare parts.

‘This giant step is not only a major boost for the circular economy, ensuring resource efficiency and environmental conservation by reducing waste and giving new life to materials that were previously deemed unusable,’ Ferdinand Storek added. ‘It opens up new possibilities in recycling and repurposing unfit cotton-based banknotes, such as creating sustainable packaging solutions and beyond.’

Made of Money – Literally

The saying ‘made of money’ is often used as an idiom to describe wealthy people. In the case of De La Rue, its interpretation of the term under its new #madeofmoney campaign is literal – namely, consumer items that are made out of recycled polymer banknote waste.

The blinding sun of Oman at the Global currency Forum was the perfect backdrop for the launch of the #madeofmoney initiative, which aims to leverage the unique properties of polymer banknotes to engage people and encourage them to look beyond the waste management aspect of recycling. In particular, it focuses on different options, including consumer products, that can be created from banknote and other polymer waste, and provides pathways to achieving this.

One of the first examples to be produced under this initiative is sunglasses, which were very useful for those lucky enough to obtain a pair at the conference.

#madeofmoney is essentially a social enterprise for issuing authorities, guiding them towards the transformation of end of life polymer banknotes into stylish, innovative and socially responsible new products.

One of the main attributes of polymer banknotes is the ease with which the

(bi-axially oriented) polypropylene film (or BOPP) can be recycled. And De La Rue is now demonstrating how easy it is to create new items from polymer banknote waste that support local recycling efforts.

Hence the social dimension of the campaign – supporting community

initiatives that support job creation in the recycling and manufacturing sectors, creating distinctive items from a unique resource (such as those sunglasses), and championing changing attitudes to plastic waste.

De La Rue has partnered with several recycling and sustainability specialists in the UK who can provide practical support for creating sustainable recycling programmes and fostering local engagement, and plans to extend the concept to all countries where its polymer banknotes are in use.

#madeofmoney



Orell Füssli's New Environmental Evaluation Software: BEES®



At the Global Currency Forum, Daniel Schwarzbach, Innovation Director at Orell Füssli Security Printing (OFS), unveiled the company's new tool for measuring the environmental impact of banknotes – BEES® (Banknote Environmental Evaluation Software), which it believes is the first design-oriented LCA (Life Cycle Assessment) tool not just for banknotes, but for any sector.

Setting the scene, Dr Schwarzbach noted that banknote design is subject to several constraints, such as security, cost, and longevity. In recent years, to this can be added sustainability, which needs to be incorporated into the design process from the outset, and not simply considered as an afterthought. Sustainability is affected not only by the components of the banknote (inks, substrates, foils) but also the country's specific choice of sustainability KPIs, unique circumstances, and operating environment (eg. the energy mix).

It is with all of this mind that OFS developed BEES®.

The start of the journey

OFS' sustainability journey began in 2006, when it qualified for the ISO 14001 environmental management certificate. In 2020 it launched a new innovation strategy, with a particular focus on sustainability. In 2022 it participated in the Swiss National Bank's environmental Life Cycle Assessments (LCA) of the 8th and 9th Swiss banknote series, which enabled the world's first direct comparison of two subsequent banknote series.

These LCA studies demonstrated a 10% reduction from the 8th to the 9th series in spite of the inclusion of a number of new advanced features, due in part to lower volumes, the switch to renewable electricity and improved logistics. They also enabled OFS to collect and analyse vast amounts of environmental data, and the insights obtained were applied to improve the company's internal processes, such as energy consumption, sourcing and, further along the value chain, reusable transport carriers.

OFS has also drawn on the ECB's 2023 Product Environmental Footprint (PEF) Study, which showed an approximate distribution of the impact of banknotes, divided into 10% from raw material production, 3% from the notes' production, 87% from use in circulation, and 0.15% from end-of-life destruction.

And it conducted an analysis of recent banknote tenders to assess what weighting, if any, was given to sustainability. 23% required the printer to have ISO 14001 certification, 9% included a requirement for supplier sustainability improvements, 6% included specific goals

for sustainable production, but 65% had no sustainability requirements at all. And of the third that did, none included sustainability once the banknotes were in circulation.

The central banks define the product and its features, and issues it. The security printer designs and manufactures the product. Commercial banks and CITs handle the product in circulation. And then the central bank removes the notes from circulation. Most life cycle stages are disconnected from each other, mainly for security reasons, yet all stages contribute to the overall environmental impact of the banknote. And while the impact of the circulation phase is largely dependent on local factors such as the climate or payment habits, the production phase can be modelled independently. This is where the BEES tool, which covers all processes relating to the production of banknotes, comes in.

The software is based on real life data collected and compiled over the last two years, and the result is a modular LCA estimation, based on the functional design of a banknote. Indeed, a key attribute of this software is that it works without special knowledge of how to set up and evaluate an LCA or the need to collect inventory data from actual production sites.

Real time answers

A central bank can compare different designs or variants of the same design within minutes. Designs can be altered by adding or removing features and directly seeing the environmental impact on the final product. Questions such as the impact of varnishing the banknote or using alternative substrates can be answered in real time.

Moreover, the size and nature of each feature used in the banknote design are taken into account, with even minor modifications sometimes making a surprising difference to the overall impact.

For example, printing single rather than double side intaglio will save 16% (albeit that the counterfeit resistance and durability of the note could be reduced as a result). Reducing the size of the note by 20% will make a 24% saving in the environmental impact. Conversely, reducing the size of an OVMI patch would only make a 1% saving as the same

production steps and energy consumption are involved.

BEES uses various environmental impact categories for the assessment, such as global warming, acidification, human toxicity, ecotox, and energy use. It also calculates two overall environmental scores: the Swiss 'Ecopoints' used for Swiss environmental policy and the provisional 'European Footprint'. It is based on large amounts of environmental data, security features and printing processes, as well as standard processes such as transport and waste treatment processes.

And, as with any LCA, it covers the entire value chain of each component, eg. for paper notes, from cotton fields to the finished substrate.

BEES is based on ISO 14040/44, and data sources used are both public – mainly via the Swiss UVEK Ministry's environmental data inventory (UVEK: 2021) and private – from companies within the banknote industry.

Built to expand

As of today, it comprises some 25 banknote features but, as new features are developed, this number will rise. And it is looking for more data inputs from suppliers; where this is not forthcoming, eg. it is proprietary information that suppliers may be unwilling to share, it will model the data. OFS will also apply additional environment impact indicators.

In other words, as the requirements and the data and sources expand, so will BEES, the intention being that the footprint can be calculated directly from the chosen design and relevant criteria, without any additional inputs.

In conclusion, Dr Schwarzbach stated that OFS can now provide a service to issuing authorities to enable informed decisions on the environmental impact as early as the design stage.

The added value for central banks is to be in direct control in optimising the ecological footprint of a banknote – whether an upgrade, a new design or a whole series. The streamlined approach offers an easy, low-cost, rapid alternative to conducting costly and lengthy LCAs. It empowers decision-makers to make informed choices during critical stages, where such decisions have the most substantial impact.

Furthermore, it establishes a foundational framework for subsequent analysis and improvement.

Best Attended Event Yet for EMEA Cash Cycle Seminar

Currency Research, organiser of the upcoming EMEA Cash Cycle (ICCOS) & Payments Seminar in Cape Town, South Africa (25-28 November), says this year's edition is shaping up to be one of the best-attended regional cash events in years. More than 200 attendees – among them central banks, commercial banks and other cash cycle stakeholders. are expected to join the nearly 60 presenters who will be exploring the most salient topics around cash and payments.



The cash agenda for the twin-track event has been finalised, as below. Three pre-Seminar workshops kick things off on the Monday: a Central Bank Summit hosted by the South African Reserve Bank (SARB), Currency Training from the Federal Reserve Board's Currency Education Program, and a workshop on Cash Forecasting.

The main agenda gets underway on the Tuesday with an opening presentation from the Deputy Governor of the South African Reserve Bank, followed by a session on cash trends featuring presentations from SARB, Travelex, and Universal Access to Payments. Rounding out the morning's sessions will be a panel led by Giesecke+Devrient examining how to create a cash cycle that is both efficient and resilient.

'Cash Cycle Efficiency and Sustainability' will be the focus of the first afternoon session, with presentations from the Central Bank of Eswatini, BankservAfrica, and Standard Bank, while the latest efficiency-promoting solutions will be highlighted during Innovation Sessions featuring ECM, Armorsafe, Numisma Bank, and Locksmith.

Misr Bank, Bank of Ghana, and ABSA Bank will join Tuesday's final session, a look at 'Modernizing Cash and the Cash Cycle'.

A keynote presentation from the Federal Reserve Board of Governors opens the proceedings on the Wednesday. The programme then transitions to a session devoted to 'Cash Cycle Contingency and

Resilience' with presentations from Oesterreichische Nationalbank, SARB, and BIGS.

ECM will lead a discussion with cash cycle stakeholders followed by a second round of Innovation Sessions spotlighting Giesecke+Devrient, Kurz, Jura, and Sargent & Greenleaf.

The Bank of Namibia leads the cash agenda's penultimate session and will be joined by SBV, ABSA Bank, and the Bank of Uganda for a discussion on 'Navigating the Intersection of Cash, Digital Payments, and Currency Confidence in a Rapidly Evolving Landscape'.

Rounding out the cash side is a session entitled 'The Future of CIT – The Paradox of Requiring Investment in a Declining Market'; sharing their perspectives will be SBV, ICMS, and a retailer.

Deutsche Bundesbank will then close proceedings with a keynote presentation that considers 'Adopting Cash Strategy in a Changing Payment Environment'.

Several tours associated with the event are also taking place. Delegates will have the opportunity to visit the SBV Cash Centre and The Cape Mint production facility on Monday afternoon. A second round of tours to both facilities is also available on the Thursday, as is a tour of the South African Reserve Bank's Cash Centre.

The event's social programme concludes with an optional wine tasting and lunch in the heart of Cape Town's wine country.

currencyresearch.com/the-emea-cash-cycle-seminar-iccoc

HSP Asia Programme

The programme has now been published for High Security Printing™ (HSP) Asia, which takes place 2-4 December 2024 in Bangkok, Thailand.

The programme starts, on the morning of 2 December, with a tour of the Banknote of Thailand's printworks, followed by an afternoon seminar – part of The Future of Cash series – with a particular focus on resilience.

The main programme will be formally opened the following day by the Bank of Thailand, and the first session on Currency and Identity Documents will feature a number of presentations on banknotes and government ID programmes throughout the region.

Thereafter, the programme splits into two tracks – one on Currency and the other on ID.

The session on Currency Development will hear about Kazakhstan's new Saka series, the first anniversary of Tonga's new banknote series, China's Year of the Dragon commemorative note, and Australia's clean note public education campaign.

Four presentations in the Security and Sustainability session will cover high precision security features based on recycling materials (Hueck Folien), green cash (Louisenthal), security and sustainability together (KURZ), and the Transforma initiative, which is recycling old banknote paper into new (Blendpaper).

Access to Cash and Anti-Counterfeiting will hear from Oberthur Cash Protection on the role of central banks in reducing ATM attacks, from the Government Institute of Printing (India) on forensic security features and the characteristics of currency, from the National Bank of Kyrgyzstan on its evaluation of the effectiveness of the features on its currency, and from Regula on a new technique for examining banknotes using portable spectrometer microscopes.

Presentations in the session on Production include Koenig & Bauer Banknote Solutions on its new AKTINA platform all-in-one printing, the gamechanger that will be Pakistan's new series, rightsizing banknote security with technology (G+D), the art of real life in banknotes from Oberthur Fiduciaire.

The final session, which brings back together the currency and ID tracks, will focus on design – with presentations from Komori, De La Rue, Zeiser and MoneyTalks.

Alongside the main programme will be a variety of social events, including the conference dinner on 3 December on the Chao Phraya River, where the Regional Banknote of the Year Awards will be presented.

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IACA Coin Awards Celebrate Innovation and Initiative

The winners of the 2024 IACA Excellence in Currency Awards for Coins were announced by IACA Executive Director Marci Chavez at a special presentation ceremony during the Coin Conference in Lisbon on 29 November.

They are as follows.

■ Best New Commemorative/ Limited Circulation Coin

The winner was the Central Bank of The Bahamas for its 25 cent coin coloured on both sides, produced by the Royal Canadian Mint to celebrate its 50th anniversary.

The coin maintains the same specifications as the existing circulating version but is the first painted circulation coin issued by the central bank and, in a world first for a circulating coin, features selectively coloured designs on both sides.

On the obverse, coloured elements include the blue marlin, pink flamingo and conch shell, and green palm fronds. The year of issue has also been updated below the central coat of arms. Painting on the reverse includes the artist's rendering of a native sloop, in red, white, and brown, in addition to a blue sea. Wording on the reverse has been updated to include 'The Central Bank of The Bahamas, and '50th anniversary 1974-2024' alongside the standard denomination inscription.



Other finalists included the Banco de México for its 20 peso coin commemorating the bicentennial of diplomatic relations between Mexico and the United States, the Central Bank of Eswatini for the 50 emalangenji coin produced to celebrate the Bank's 50th anniversary, and the National Bank of Kazakhstan's 1,000 tenge commemorating the 30th anniversary of the national currency.

■ Best New Coin Product, Process or Manufacturing Innovation

The award went to the Royal Canadian Mint (RCM) for its environmentally friendly plating process for bronze-plated circulation coins that does away with toxic chemicals, such as cyanide.

The traditional plating process used harsh process chemistry, with related wastewater treatment requiring strong oxidising agents to chemically break down the harsh chemicals before being released in line with municipal environmental standards.

The new procedure is environmentally friendly in both the plating process and during the subsequent wastewater treatment – where it does not require the strong oxidisers. The RCM noted that the electroplating process is therefore safer, more efficient, and cost-effective in terms of wastewater treatment and chemical management.



The RCM has patented this technology, with bronze plated products able to be used as candidate materials for both mono colour coins and bi-colour higher denominations.

Other finalists were the United States Mint for its circulating blank annealing furnace retrofit that has reduced pollutant output of harmful gases and wastewater, and Monnaie de Paris for an NFC-enabled silver €25, produced to commemorate the centenary of the death of Gustave Eiffel and featuring an NFC chip on the reverse.

■ Best Recirculation/ Distribution Initiative or Innovation

There were two joint winners in this category.

First was Bangko Sentral ng Pilipinas (BSP) – for its Coin Recirculation Program to address the problems of artificial coin shortages – the second award this year from IACA (having won 'Best New Cash Cycle Innovation' at the Excellence in Currency: Technology Awards ceremony in May).

The BSP has deployed coin deposit machines (CoDMs) in high foot traffic locations to address the issue of artificial coin shortages, and promote financial inclusion and digitalisation. A total of PHP 798.5 million worth of coins, or 215.3



© BSP.

million pieces, had been collected from the CoDMs as of end June this year.

The campaign has been successfully integrated into mainstream customer routines by placing CoDMs in convenient locations like shopping malls and retail stores, where users are able to deposit accumulated coins at any of the 25 CoDMs in the Greater Manila Area whilst shopping, for example.

The CoDM project is expected to contribute millions of pesos in cost savings, with less coins requiring minting to solve the issue of shortages, along with lower costs for storage and transportation.

Second was the Central Bank of Eswatini (CBE) for its Coin Management Efficiencies Project aimed at enhancing coin recirculation and reducing hoarding.

The project – which aims to enhance coin recirculation in the country, reduce coin hoarding, and lower coin monetisation expenses – has involved the installation and deployment of coin vending machines, coin counting/sorting machines, and coin packaging systems.

Around SZL 25 million worth of coins equating to 28 million pieces have been collected since the installation of a coin vending machine with a retail partner in June 2022, with the CBE noting a perceived reduction in coin hoarding via the provision of a simple option for the public to deposit low value coins in particular.

The initiative has led to significant cost savings for the central bank, reducing the need for minting new coins and promoting more efficient coin circulation. The estimated cost saving is SZL 14 million, based on the average minting price for new coins, with an average 16% decline in monetisation costs over the last two financial years. A reduction in the need for new coins also conserves natural resources, supporting environmental sustainability.

The third finalist in this category was the US Mint for its Bill of Lading Automation System, which automates the bill of lading documents used to ship coins to the Federal Reserve, and includes the use of mobile devices for tracking shipments.

Note and Coin News

Anima™ Makes its Debut on Lesotho's Banknotes

The Central Bank of Lesotho is issuing new 10 and 20 maloti banknotes which have the same design as the current notes but which will be the first to feature Anima™ security threads from Oberthur Fiduciaire, via its partnership with (and subsequent acquisition of a majority stake in) Rolling Optics.

Anima is the company's micro-optics solution, combining lenticular lenses with high resolution printing to provide effects of movement and depth along with colour.

Both denominations will carry a 4mm wide Anima thread containing Switch and Grow movement effects, replacing the Dualtrack® threads that appear in the current notes. The threads feature Lesotho's national symbol, the Basotho hat (called the Mokorotle), as an expression of the country's cultural heritage.

Lesotho has an economy in transition and its government is focused on durable strategies that conserve the environment and its natural assets. The new banknotes reflect this focus; 20% of the substrate is made from natural sisal fibres and Highlink™ has been added to improve their performance in circulation. Highlink is a type of latex added during the paper making process and acts as a glue, creating stronger bonds between the fibres and thereby increasing the internal strength of the substrate. The notes have also been

coated with Bioguard™, Oberthur's anti-viral and anti-bacterial treatment.

The new notes will go into circulation early next year.



In Other News...

■ The Central Bank of Samoa is issuing limited-edition commemorative banknotes, designed and printed by De La Rue, honouring Samoa's historic hosting of the 2024 Commonwealth Heads of Government Meeting (CHOGM), held in Apia, Samoa from 21-26 October 2024. A flower-shaped CHOGM 2024 hologram, produced by IQ Structures, has been applied to a limited number of the award-winning 60-tālā and polymer 5-tālā, 10-tālā and 20-tālā banknotes. The logo is surrounded by microtext that lists the names of all 56 Commonwealth countries. All commemorative banknotes begin with the serial number 060xxxx, specially chosen because of Samoa's recent 60th anniversary of independence (which was honoured last year with the issuance of the 60-tālā commemorative banknote).



Commemorative albums and folders containing the new CHOGM banknotes have been prepared for presentation and sale at the CHOGM 2024.

■ A communiqué following a recent meeting of the Monetary Council of the Eastern Caribbean Central Bank (ECCB), titled 'Change of Queen's Image on Eastern Caribbean Currency', has stated that new Eastern Caribbean banknotes could begin circulating in 2027, starting with a new EC\$100. Redesigned \$5, \$10,

\$20, and \$50 banknotes will follow at a later date as current stocks are depleted.

Each denomination will feature dual portraits of two notable Eastern Caribbean Currency Union (ECCU) nationals, 10 in total.

A public consultation will take place through to the end of the year, with the public invited to comment on the proposal to replace the Queen's portrait and offer suggestions before a final decision is made.

The current all-polymer series was introduced in 2019.

■ Further to the news that Bangladesh is considering upgrading the 5, 10 and 20 taka (Tk) banknotes due to their poor condition, or possibly even replacing some with coins, the Finance Minister has now requested new designs for all denominations. The portrait of Sheikh Mujibur Rahman could be replaced.

Currently, all the banknotes – ranging from Tk2 to Tk1,000 – feature images of the Sheikh, who is viewed as the founder of Bangladesh. The current series was issued in 2011. Some of the notes carry his image on both sides, while coins also feature his portrait.

Four different designs for each denomination will be created in accordance with the guidelines of Bangladesh Bank's Currency and Design Advisory Committee. They will be presented in six month's time to the Ministry of Finance. It will take up to two years to produce the new notes once the designs are agreed, and they will be outsourced to a foreign printer. Security Printing Corporation of Bangladesh will manage the project, and will continue to

print existing designs in the meantime to ensure sufficient banknotes remain in circulation while the new designs are finalised and produced.

■ The Central Bank of Trinidad and Tobago has announced that the introduction of a new \$100 polymer banknote has been postponed until next year, due to plans to redesign the country's coat of arms.

The existing \$100 note was issued in 2019, the first in the new all-polymer series.

■ The National Bank of Cambodia has issued a 200,000 riel commemorative banknote to mark the 20th anniversary of the coronation of King Norodom Sihamoni. The front features portraits of the King and his mother, Queen Norodom Monimeath Sihanouk, while the reverse features an image of him in ceremonial attire. Security features of the note include a diffractive stripe on the front and a colour shifting thread on the reverse, both supplied by Hueck Folien.

20 million of the notes have been printed.



... Note and Coin News

■ Artists and designers are being invited to design Guernsey's first new banknotes in more than 30 years. The opportunity is open to local resident artists and designers or those with strong connections to the island.

The current notes are produced on paper and all but the £1 carry a portrait of the late Queen Elizabeth II. The new notes will be produced on polymer, and designers are being asked to put forward concepts for the £1, £5, £10, and £20. A new £50 note will also be designed but, according to the Treasurer of the States of Guernsey, who is overseeing the project, 'may not be put into

production given the current limited usage of this denomination'.

The deadline for submissions of creative concepts and artwork is 3 January 2025.

■ The National Bank of Poland is considering the introduction of a new high denomination 1,000 zloty banknote featuring the 14th century monarch Jadwiga Andegawerńska, also known as St Jadwiga of Anjou. Her inclusion would make it the first circulating Polish note to feature a woman since the redenomination of the zloty in 1995.

According to the Bank, the note is needed to relieve pressure on the 500 zloty, currently the highest denomination. If issued, it is likely to go into circulation in 2025 or 2026.

■ The Central Bank of Belize has confirmed that it will introduce new banknotes next year that celebrate the country's heritage and its journey toward self-determination. They will feature national heroes George Price (the country's first Prime Minister following independence in 1981) and Philip Goldson (a renowned Belizean activist and politician) in place of the current portraits of the late Queen.

Events

4–5 NOVEMBER 2024

THE AMERICAS CASH CYCLE & PAYMENTS SEMINAR

Louisiana, USA

currencyresearch.com

25–27 NOVEMBER 2024

THE EMEA CASH CYCLE SEMINAR

Cape Town, South Africa

currencyresearch.com

2–4 DECEMBER 2024

HIGH SECURITY PRINTING ASIA

Bangkok, Thailand

hsp-asia.com

3–5 FEBRUARY 2025

HIGH SECURITY PRINTING EMEA

Basel, Switzerland

hsp-emea.com

5–7 MARCH 2025

INTERGRAF CURRENCY + IDENTITY

Milan, Italy

intergrafconference.com

9–11 JUNE 2025

HIGH SECURITY PRINTING LATIN AMERICA

Rio de Janeiro, Brazil

hsp-latinamerica.com

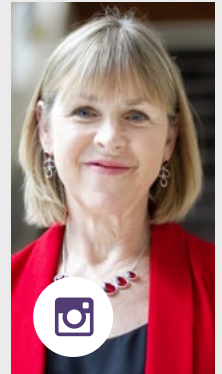
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