

CURRENCY NEWS™

THE CONFIDENTIAL NEWSLETTER FOR CURRENCY | VOLUME 23 – NO 3 / MARCH 2025

Inside this edition

New State of the Art Cash Centre for Angola	1
Gender Parity in Currency – Some Way Still to Go	2
SPL Partners with G+D for Paper Upgrade	3
Oberthur Partners with Giriraj Foils in India	3
Positive Picture for Cash Companies Continues in 2024 (Part 2)	4
News in Brief	5
AGS Transact's Downfall: A Cautionary Tale for India's Fintech Industry	6
Strong Performances from Mints	7
Tenders, Contracts MOUs	7
Upbeat Trading Statement from De La Rue	7
Two Currency Winners in Central Banking Awards 2025	8
People in the News	8
Impacts of Recent Developments on the Cash Cycle: A Global Analysis	9
Sharp Rise in Counterfeit Euro Coins	11
Colour-Changing Smart Materials for Rapid Authentication	12
CYPHER EVO – the Rise of Digital Features	12
Driving Sustainability Through Procurement	13
Plans for New Comparative LCA for Banknotes	13
Banque de France Takes EverFit® to the Next Level	14
Korea Aims to Make Money from Recycled Money	14
HSP Latin America Returns to Rio	15
MDC Goes to Cape Town – at Last!	15
ODDS 2025 Conference	16
The Future of Cash in an Uncertain World	16
Style and Innovation Meet in Milan	17
IACA Excellence in Currency Awards 2025	17
Women on Currency	18
Note and Coin News	19

New State of the Art Cash Centre for Angola



President João Lourenço of Angola has officially opened the National Bank of Angola's new high-tech cash centre – Casa do Kwanza – in the capital, Luanda for the storage, processing and distribution of the country's currency, the kwanza. The cash centre has been four years in the making, at a budgeted cost of c. Kz 33 billion, and will be able to process up to 4 million banknotes daily.

The construction of the complex of the ten buildings that make up Casa do Kwanza began in 2021. Occupying a 10 hectare site, it includes an administrative building of nearly 7,500 sqm, a 10,760 sqm building for the processing and destruction of banknotes and coins, a fully automated vault and a series of technical support buildings.

The design, supply and management of the implementation of the infrastructure project was undertaken by Giesecke+Devrient (G+D), from the building concept, IT and security requirements to the cash handling processes. This included equipping the building with highly automated systems for the efficient and secure processing of banknotes, state-of-the-art IT and security infrastructure, and a multi-level vault to store banknotes and coins, as well as gold, diamonds and works of art.

Once officially opened, G+D will continue to support the Bank, with its local service teams deployed on-site. Together with the central bank's operators and engineers, G+D will maintain the hardware and software while periodically training new local employees to operate the cash centre.

The completion of the cash centre coincides with the 50th anniversary of Angola's independence. 'It is a source of joy and pride to inaugurate the Casa do Kwanza in the year that our country celebrates 50 years since achieving national independence,' the President said, speaking at the inauguration ceremony. 'This infrastructure was much needed, as its role used to be previously carried out under very difficult conditions in

Gender Parity in Currency – Some Way Still to Go

In case you missed it, 8 March was International Women's Day. It was an opportunity for organisations to celebrate the achievements of the women in their workforce, notably on social media. The currency industry, traditionally viewed as a bastion of male dominance, was no exception.

But how diverse are we really, and how far have we come in terms of gender parity?

Back in the day, and we are talking a good 20 years ago or more, as good a way as any to assess the gender diversity of the industry was to sit at the back of the conference room at industry gatherings and survey the backs of delegates' heads. The picture used to be a near uniform one of short hair, or no hair. In other words, virtually all were men.

Nowadays, the picture is notable by the preponderance of long hair, bobs, ponytails, updos, hijabs. Even allowing for a more liberal approach to men's hairstyles, this is a clear – if somewhat unscientific – demonstration that there are very many more women in our industry these days.

So far, so good.

But perhaps the hair survey as a metric doesn't carry much weight, so let's take a more factual approach to the matter, starting with the representation of women on our currency.

As the article on page 18 from De La Rue shows, just one in 12 banknotes features a woman, or just over 7.5%. Another survey from Advisa in Sweden puts this at 15% (42 issuing authorities in total featuring a woman on one or more of their banknotes).

Either way, these low figures are not surprising. Generally speaking, portraits on banknotes are of historical figures – primarily military or political – and until relatively recently, women simply did not feature in public life. It was only from the 1980s onwards that female authors, poets, singers, painters and other artists were introduced, joined more recently by scientists and political activists.

Added to this, the figures are skewed by the portrait of the late Queen Elizabeth II on nearly half of those banknotes that feature women. Following her death, those portraits will either be replaced by that of her successor (a man), or other more locally representative imagery.

The picture is similar for coins – albeit that these are less likely to feature people than banknotes. Where they do, the effigy is generally of the reigning monarch or previous heads of state. Where coins do 'better' is in commemorative and collectors versions – the current American Women Quarters™ program, which over the course of four years is celebrating the achievements and contributions to US

society of 20 different women, being a great example.

If we now turn to people in high places, a good place to start is central banks. How many have women at the helm? The answer is not many. As of the start of this year, women were governors of 29 of the world's central banks and issuing authorities. Considerably better than the 16 at the start of 2022, but that was down from the 21 in 2014. So in 10 years, the needle has moved, but not by much.

“Whilst most central banks have men at the helm, a growing number of deputy governors and other senior managers are women.”

In terms of the leaders of the major suppliers, none at the CEOs of publicly listed companies in our sector are women, and very few of either the non-listed suppliers or state printers are run by women – Canadian Bank Note Company, the US Bureau of Engraving and Printing and Perum Peruri being three notable exceptions.

For the minting community, which is arguably even more traditional than the banknote community, it is noticeable that women hold the top jobs in five of the largest mints – those of Canada, the UK, South Africa, Poland and the US (although the latter has just stepped down).

Even so, by the above metrics, the industry as a whole isn't doing a great job in terms of parity.

But, as the saying goes, 'that was then and this is now', and there is very good cause for optimism. Because coming through the ranks at central banks, printers, cash management companies and suppliers alike are more and more women.

Taking central banks again, whilst most have men at the helm, a growing number of deputy governors and other senior managers are women. This is particularly noticeable in the cash and/or issue departments, many of which are now female-led – among them the ECB and the central banks of the UK, US, Canada, Spain, Portugal, Italy, Chile, Israel, Sweden, Norway, Namibia, Uganda, South Africa, Mexico, Brazil, Jamaica, Hungary, Poland, Australia, the Philippines, Fiji... The list goes on.

In the supplier community, meanwhile, although the leading companies may be run by men, the currency divisions of industry leaders such as De La Rue and Crane are headed by women.

And to give an indication of the direction of travel, at the recent Intergraf Currency+Identity conference, over 25% of the delegates were women. Still some way off parity, but a huge improvement versus a couple of decades back, when that first back-of-the-head survey took place. And it is this next generation of women who are the future leaders of our industry.

So the currency world is definitely on the right path to more parity and equality, even if it's not there yet.



It's a women's world! Some of the 250+ female participants at the recent Currency+Identity conference in Milan.

SPL Partners with G+D for Paper Upgrade

Pakistan's banknote papermaker Security Papers Ltd (SPL) has entered into a strategic partnership with Giesecke+Devrient to upgrade its PM-2 paper machine, first commissioned in 2004. This initiative aims to enhance SPL's capacity to produce banknote paper that meets international standards and incorporates the latest security features.

SPL was incorporated in Karachi in 1965 as a private limited company and was converted into a public company in 1967, under a Memorandum of Understanding between the governments of Pakistan, Iran and Türkiye, to manufacture banknote paper and other security paper.

It remains the only manufacturer of security papers in Pakistan, supplying key institutions such as the State Bank of Pakistan, Pakistan Security Printing Corporation (PSPC), its largest single customer, along with the National Database & Registration Authority (NADRA), the Election Commission of Pakistan, and various government printing presses.



Left to right: Claudio Sgarlata (G+D) & Imran Qureshi (Security Papers).

The upgrade supports the launch of Pakistan's new banknote series. It carries an estimated cost of Rs 3.4 billion (c.US\$12.24 million), including an international contract worth €8.297 million awarded to

G+D. Completion is expected within 18 months.

The agreement was formalised during a signing ceremony at SPL's Karachi head office. Imran Qureshi, CEO of Security Papers Limited, signed on behalf of SPL, while Claudio Sgarlata, Managing Director for the Middle East and Africa for G+D's Currency Management Solutions division, represented G+D.

Imran Qureshi commented: 'this upgrade is vital to fulfilling the SBP's requirements for the new banknote series. By strengthening our manufacturing capabilities, we will ensure that Pakistan's currency remains secure and resistant to counterfeiting and position SPL as a global leader in high-security banknote paper production.'

Claudio Sgarlata added: 'we are excited to work with SPL on this important project. With G+D's long-standing expertise and advanced technology, we are confident that SPL will be fully equipped to meet future demands and international benchmarks in banknote production.'

In September 2024, the SBP announced the winners of a competition for the designs of the new banknote series, and earlier this year said that the first new notes will be issued in the second half of 2025, replacing the existing series one note at a time. At least one of the new notes will be produced on polymer, and the remainder on paper.

Oberthur Partners with Giriraj Foils in India

Oberthur Fiduciaire has partnered with Giriraj Foils, a well-respected name in India's high-security films, stamping foils and laminates market, to deliver advanced authentication solutions tailored for the Indian market. The partnership was announced at the ASPA Traceability and Authentication Forum in New Delhi earlier this month.



Under the agreement, both organisations have established two new entities – Giriraj Oberthur Security Features India Pvt Ltd (GOSFPL) and Giriraj Bioguard India Pvt Ltd (GBIPL).

GOSFPL will focus on security printing solutions, including security threads (Anima™ and Pulsar™), security inks and varnishes (Avalon™ and Ultra™), along with Oberthur's Capto™ technology, developed through its subsidiary Rolling Optics, for brand protection.

GBIPL will focus on expanding applications for Bioguard™, Oberthur's anti-virus, anti-bacterial and anti-fungal treatment that has been in use in the banknote industry for over 15 years. It reduces the risk of virus and bacteria transmission, and is currently in use on over 10 billion banknotes worldwide.

According to both companies, the partnership combines Oberthur's expertise in high-security printing and authentication with Giriraj Foils' strong domestic presence and technical capabilities in security foil, hot stamping and tamper-based security features.

Speaking on the partnership, Nicolas Koutros, Managing Director, Oberthur Solutions (a subsidiary of Oberthur Fiduciaire) stated: 'India presents a dynamic opportunity for secure authentication, and our collaboration with Giriraj Foils allows us to better understand and respond to local requirements with customised solutions backed by global experience.'

India has not only a huge internal market but also a specific policy – Make in India – to encourage domestic production and reduce reliance in imports. It requires overseas company to either have their own production in the country, or to establish partnerships such as joint ventures with local companies.

In addition to banknotes, the partnership covers solutions for the ID, brand protection and tax stamp sectors.

... New Cash Centre for Angola

the headquarters of the Banco Nacional de Angola. This was a challenge both in terms of accommodating human capital and, more importantly, from a security perspective, as currency is one of the symbols of national sovereignty. Therefore, protecting our currency is vital and necessary.'

Manuel Tiago Dias, the Bank's Governor, emphasised the importance of the project for the further economic development of the country. With the newly Caso do Kwanza in Luanda and nine regional

branches, Angola has continuously been modernising its entire national cash infrastructure over the past decade, he said.

This is the third automated central bank cash centre in Africa that G+D has helped create in recent years, the other two being the new cash centre (and printworks, for which G+D was also the main contractor) for the Central Bank of Egypt, the largest in the Middle East and Africa, and the National Bank of Rwanda, for the automation of its vault facilities.

Positive Picture for Cash Companies Continues in 2024 (Part 2)

Last month, we covered the annual results of four of the major companies in the cash sector – Crane NXT, Brinks, Loomis, and Diebold Nixdorf, all of which turned in a respectable performance, showing that the challenges of the COVID years are now a thing of the past.

This month is the turn of NCR Atleos, Prosegur, Orell Füssli and Koenig & Bauer. Again, all turned in a positive performance for the year, or at least are heading in the right direction.

First year report for NCR Atleos

NCR Atleos became a stand-alone publicly traded company in October 2023, when it was spun out of what is now NCR Voyix. Its 2023 financial results derived from NCR Voyix's consolidated financial statements and accounting records, and so may not be meaningfully comparable with those of 2024.

That said, NCR Atleos' strong fourth quarter enabled it to report a successful first year. Revenue grew by 3% to \$4.31 billion, with operating profit (adjusted EBITDA) increasing by 7% to \$791 million, and an increase in operating margin from 17.5% to 18.1%.

By business segment, Self Service Banking (including software, hardware and services) provided 64.6% of revenue (up by 4% versus 2023) and 59% of adjusted EBITDA, Network (ATM transaction services) 30.8% of revenue (+1%) and 37% of adjusted EBITDA, and T&T (Telecoms and Technology) 4.6% of revenue and 3.2% of adjusted EBITDA.

During the year the company claimed to have enhanced its ATM solutions platform and strengthened relationships with both customers and partners. It generated higher revenue per ATM through higher transaction volumes and higher service capture.

The company is targeting revenue growth of 1-3% at constant currency, and an adjusted EBITDA growth at 7-10%.

Double digit growth for Prosegur

Prosegur operates in some 38 countries and has five main business – Security (guarding and protection services), Cash, Alarms, Cybersecurity and AVOS (Added Value Outsourcing Services).

Group revenue for 2024 was up nearly 14% to just over €4 billion, a marked improvement over the growth of 3.3% the previous year. Operating profit (EBIT) increased by 21.7% to €290 million and pre-tax profit by 21% to €33 million.

The Security business line contributed 51% of revenue and 24.9% of adjusted EBITA, and Cash 42.6% of revenue and 76.6% of adjusted EBITA.

Sales for Prosegur Cash were up by 12.3% to just over €2 billion, with double digit growth in the final quarter. EBITA increased by 13.9% to €251 million and net profit by 45% to €91 million.

LATAM accounted for 62% of revenues, Europe for 31% and Asia Pacific for 7%. Growth was particularly strong in LATAM and Asia Pacific

The company did not provide an indication of performance for 2025.

Orell Füssli reaches goals ahead of target

The company's revenue increased for the third consecutive year. The 8.7% increase to CHF 252.5 million was above expectations with all divisions achieving growth, and was achieved despite higher taxes and exchange rates.

Operating profit, EBITDA, increased by 17.8% to CHF 35.1 million, with EBIT increasing by 24.5% to CHF 22.6 million, driven mainly by revenue growth and a favourable product mix. Net profit increased by 19.6% to CHF 17.5 million.

In his review Daniel Link, CEO, noted that the company's strategic goals for 2028 are profitable growth, asset-light new business, strengthening the brand, achieving technology leadership, and building resistance to cycles. The successes of 2024 have put the strategy implementation ahead of plan, with all divisions on a profitable growth path.

In Security Printing, revenue increased by 12% to CHF 86.4 million and operating profit by 22% to CHF 12.9 million. Notably, there was high-capacity utilisation of the printworks throughout the year and two new (anchor) customers with multi-year contracts were acquired.

In 2024, innovation remained a key focus, as Orell Fussli introduced:

- BEES®, a sustainability assessment tool for banknotes, helping central banks measure environmental impact (see CN October 2024).
- AI-assisted 3D morphing for banknote portrait design, first presented at the

Security Design Forum in Poland last September.

- A public-facing smartphone app called Jaguar, allowing users to verify banknotes' authenticity instantly (see page 12).
- Microperf, a precision laser perforation system for banknotes, fully developed in-house. This new feature is in high demand, and Orell Füssli subsidiary Zeiser now offers the technology globally.

Industrial Systems (Zeiser) also improved its revenue, which increased by 15% to CHF 24.8 million. Operating profit, EBIT, was 3% lower at CHF 3.5 million. Although there was good market demand in all segments, cost-conscious decisions prevailed in the public sector. In the year orders for numbering boxes was above expectations, new customers for track and trace systems were acquired and increased efficiency enabled reduced operating costs. The business is expected to grow in 2025, with larger track and trace contracts anticipated.

Another achievement last year was a further 11% reduction in the company's CO2 footprint. Other climate/sustainability related achievements were the setting of targets for material topics, improved data on energy consumption and climate reporting according to TCFD (Task Force on Climate-Related Financial Disclosures) recommendations.

For 2025 the target is for 4-6% annual organic growth by leveraging the company's current assets and know-how. The ambition for 2028 is revenue of CHF 300 million, and an EBIT margin greater than 8%.

Koenig & Bauer's Strong 4th Quarter Secures 2024 Target

After a slow start to the year, business picked up in the second half with a particularly strong fourth quarter, enabling Koenig & Bauer to announce it had secured its 2024 targets.

Preliminary figures for 2024 indicate revenue at €1.27 billion, 4% lower than 2023, and an operating loss (EBIT) of €35.1 million, compared with a profit of €30 million in 2023. However, operating profit adjusted for DRUPA and other exceptional items was €25.8 million, 13.7% lower than the previous year. Also of note was that in the fourth quarter, EBIT was €46.5 million, compared with €32 million in 2023.

The company also reported a strong order intake, creating the highest year-end order backlog in the company's recent history (increasing by 8.9% to €1.4 billion), which bodes well for 2025 and beyond.

News in Brief

■ New Currency Symbol for Dirham

Last month, we reported that Saudi Arabia has a new currency symbol for the riyal. This month, its neighbour, the United Arab Emirates, has also unveiled a new currency symbol for the dirham – both physical and digital.

The unveiling of the new dirham symbol took place in conjunction with the Central Bank of the UAE's joining of the FX Global Code, becoming the first central bank in the Arab region to do so. It is part of the Bank's efforts to establish the dirham as an international currency and the UAE as a global financial hub, along with enhancing best practices in the exchange market and promoting ethical practices and sound professional rules for its participants.

The letter D was chosen, derived from the English name of the dirham, to serve as an international symbol representing the nation's currency. It incorporates two horizontal lines that, says the Bank, embody the stability of the UAE dirham and, inspired by the UAE flag, enhance financial and monetary stability.

An adapted version has been created for the digital dirham, the country's digital currency due to roll out later this year, with a circle surrounding the physical currency symbol, using the colours of the UAE flag to reflect pride and national identity.



■ Work Underway on New Cash Centre for New York

Plans are proceeding apace for the Federal Reserve Bank of New York's new cash centre, which will move from its current location in East Rutherford, New Jersey, opened in 1992, to a new site in Warren, also in New Jersey.

The New York Fed announced the plans for a new cash centre last summer (see CN July 2024), and in December purchased a 118-acre site in Warren Township for \$57.35 million which will house a 350 sq ft facility for processing and distributing banknotes and coins. Construction is reported to be underway.

The New York Fed is the largest and most active of the 12 Federal Reserve Banks. Its

territory includes New York state, the 12 northern counties of New Jersey, Fairfield County in Connecticut, Puerto Rico and the US Virgin Islands. It is also the primary contact for foreign banks and undertakes the distribution of US currency overseas

According to New York Fed, the new cash centre will enable it to modernise its cash processing technologies to facilitate more efficient cash processing and maintain a high level of resiliency' and to 'help ensure that sufficient currency is in circulation to meet public demand by paying, receiving, verifying, and authenticating currency on behalf of banks and credit unions.'



An artist's impression of the New York Fed's new cash centre

■ German Cash Forum Supports Cash Rounding

Germany's National Cash Forum is now advocating rounding to the nearest 5 cents for cash payments, asking the Federal Ministry of Finance to follow suit and 'advocate for, and press ahead with, a binding statutory rounding rule in Germany'. As part of the Forum's announcement, it wrote that the rounding rule should be applied across Europe as uniformly as possible.

The National Cash Forum was established in February 2024 on the initiative of the Bundesbank with the objective of securing cash as a widely used means of payment and maintaining its availability. The Forum is made up of representatives from the associations of the banking industry, retail trade, consumer protection, the CIT industry, and vending machine operators.

The lack of popularity of low value coins was cited in favour of the introduction of cash rounding, with the Forum remarking on results from the latest Eurobarometer, which found that the majority of respondents were in favour of abolishing one and two cent coins. The lack of return of these coins to national central banks, as well as the economic and environmental costs of producing, packaging and transporting coins, were also included as arguments in favour of the new policy.

If introduced, Germany would follow several fellow eurosystem countries, including Finland, the Netherlands, Estonia,

Belgium, Italy and Ireland. Lithuania is also set to introduce cash rounding from 1 May.

■ A New Name for Schuler

Schuler is the world's largest manufacturer of metal forming presses, used to create car body sheets and other car parts as well as beverage and aerosol cans, large pipes, parts for electric motors and, of course, coins. More than a decade after acquiring Schuler, ANDRITZ has announced further integration of the two brands, with the former organisation to be renamed ANDRITZ Schuler.

'The joint market presence increases transparency and makes it easier for customers to access integrated solutions', said the company in a press release announcing the new name. Schuler remains as a product brand and will continue to be maintained as ANDRITZ Schuler presses, whilst the names of the Schuler Group companies now feature the prefix ANDRITZ.

The integration is also intended to document Schuler's transformation from a press manufacturer to an integrated solution provider in forming and handling technology, with the move providing customers with unified access to the complementary technologies and solutions of ANDRITZ and Schuler.

■ Banknotes Help Build Sleeping Giant

UK savings platform Flagstone has come up with an unusual use for counterfeit notes – namely, an 8m long, 4m tall 'sleeping giant', made up of fully recyclable materials and 2,000 fake banknotes.

Located in Canary Wharf, part of London's central business district, the 1 tonne construction is designed to draw attention to the £1.3 trillion of UK savers' money that is earning them less than half of the Bank of England base rate, according to Flagstone's analysis of BoE data. It refers to this money as 'sleeping savings'.

The finding comes after research among 2,000 consumers which found that almost half (48%) of those with a savings account couldn't tell you what the interest rate is on it. And 29% have used the same low interest savings account for more than 11 years.



... Positive Picture for Cash Companies Continues in 2024 (Part 2)

The company noted that in addition to the costs of €10.5 million for taking part in the DRUPA trade show, extraordinary items of €50.4 million for the 'Spotlight' programme of restructuring measures to enhance future profitability placed a burden on EBIT in 2024. Further expenses in the low single-digit-million-euro range are expected in the first half of 2025 to complete the project and underpin the Group's sustainable earnings growth.

At Banknote Solutions, order intake was high, and again included tenders for the Bureau of Engraving and Printing (BEP). Revenue for the Special segment, which includes Banknote Solutions, was slightly lower (2%) at €407.4 million due to a lower percentage of completion in deliveries compared with the previous year. It was noted that with the book-to-bill ratio of 1.33 was virtually on a par with the previous year, while the order backlog increased by 35.5% to €513 million spread over several years. EBIT amounted to €-5.2 million (versus a positive €23 million in 2023), and includes a non-operating extraordinary item of €15.7 million from the Spotlight programme.

As for the outlook, the company believes, despite the uncertain global economic and geopolitical conditions, that it is well positioned for 2025 based on a historically high order backlog and additional savings from the Spotlight programme, which will achieve a positive EBIT effect of €15-20 million. The Management Board anticipates a slight increase in revenue to €1.3 billion and EBIT between €35 and €50 million.

AGS Transact's Downfall: A Cautionary Tale for India's Fintech Industry

In the fast-changing world of financial technology, companies that once soared can just as quickly find themselves in free fall. AGS Transact Technologies, a prominent player in India's digital payments and cash management sector, is currently at the centre of a developing crisis that has sent shockwaves through the industry. Once heralded for its innovative payment solutions and ATM services, it now faces insolvency proceedings, credit downgrades, and an exodus of leadership – signs of a financial collapse that few saw coming.

At the centre of this turmoil lies a growing debt burden, a shrinking business footprint, and an escalating legal situation. The firm owes ₹7.19 billion (c. \$82.5 million) to its creditors, and legal action has been initiated against the company.

The situation has further deteriorated with the resignation of all four independent directors, eroding investor confidence and raising concerns about corporate governance.

Founded in 2002, AGS Transact Technologies was a pioneer in ATM management solutions, partnering with global firms such as Diebold Nixdorf, and rapidly expanded into digital payment processing. By September 2024, AGS Transact managed services for over 31,000 ATMs across 1,800 cities.

Its expansion was fuelled by strategic diversification. In 2009, the firm ventured into managed services, and by 2011, had launched transaction switching services, followed by cash management services in 2012. This aggressive expansion into digital and physical financial infrastructure made AGS an integral part of India's payments ecosystem. It further solidified its market presence with the introduction of digital payment solutions, including point-of-sale (POS) terminals and biometric authentication systems.

Cracks begin to show

Despite its impressive growth, AGS's expansion came at a cost. The company took on significant debt to scale its operations, banking on future revenue growth to sustain its financial obligations. However, delays in receivables, operational inefficiencies, and an increasingly competitive landscape made it difficult for the company to maintain profitability.

By late 2024, cracks became evident. The company failed to meet interest payments on its term loans in December 2024 and January 2025, triggering a chain reaction of credit rating downgrades. As a result, its share price crashed by 62.4%, reaching a record low of ₹18.97 (\$0.22).

The final hit came when Maxwell Aircon India Private Limited, one of its creditors, filed an insolvency petition, alleging

repayment default. If the tribunal rules in favour of Maxwell Aircon, AGS could face corporate restructuring, asset liquidation, or even dissolution.

Exacerbating the situation has been the simultaneous resignation of all four independent directors, which was officially attributed to personal reasons. But the timing has raised questions about governance and a lack of accountability at the highest levels of leadership.

Stepping into crisis management mode, AGS has announced a major operational shift, with half of its ATMs relocated back to banks and merchant service providers. This is purportedly to cut costs and ensure customers won't face disruptions, but marks a significant retreat from its once-dominant position in ATM management, a business central to its success.

Road to recovery?

As AGS faces insolvency proceedings, its future remains uncertain. If the insolvency petition is approved, the company could undergo restructuring, attracting potential investors or strategic buyers.

Or, if AGS fails to present a viable revival plan, liquidation may be the only remaining option.

The coming months will be critical for stakeholders, including banks, creditors, and employees. Whether AGS can navigate this crisis and emerge as a leaner, more financially stable entity remains to be seen. One thing is certain: the company's journey serves as a cautionary tale for India's fintech industry, highlighting the dangers of unchecked expansion, poor financial management, and the fragile nature of investor confidence.



Strong Performances from Mints

In 2024 the Mint of Finland announced it was to close, and The Royal Mint announced its withdrawal from the export market. Both were seen as signs of an industry in decline, but perhaps benefiting from these development, the latest reports from two leading mints – those of Poland and France – tell a different and altogether more positive story.

The Mint of Poland had a good year, with growth recorded across various business areas, including monetary contracts, investment gold sales, electronic payments, and office space leasing.

According to the company in a preliminary statement, it closed 2024 with nearly PLN 1.4 billion in revenue, PLN 102 million in operating profit, and PLN 128.3 million in EBITDA. Corresponding figures for 2023 were PLN 1.2 billion, PLN 110.6 million and PLN 130.6 million.

As in previous years, the minting segment – which turned over just over PLN 1 billion, accounted for the largest share of total revenue (75.2%), compared with 69% the previous year. Electronic payments contributed 16.9%, while real estate operations represented 7.9% of total revenue.

Exceptional year for French mint

Monnaie de Paris also had good 2024, describing it as an exceptional year. Turnover was up by 20% to €193.9 million, the highest level since it became a public and commercial industrial establishment (EPIC) in 2007. Annual net income of €6.4 million was an increase of 47% compared to 2023.

During the year, marked by the Paris 2024 Olympic and Paralympic Games and the reopening of Notre-Dame de Paris Cathedral, the Mint says it has 'lived to the rhythm of the nation's major events. The oldest French institution has shown that it is a modern and competitive company, whose strong growth

is accompanied by proactive societal and environmental commitments.'

The company produced a record number of circulating coins – 1.6 billion (23% higher than 2023 and 51% higher than 2022). Two thirds of its production, 1.1 billion, was for export, up 33% compared with 2023 and double the figure for 2022. Monnaie de Paris is now, it said, one of the world's leading exporters of coins.

In revenue terms, euro circulating coins for France amounted to €45.1 million, up 15% on the previous year. Revenue from exports stood at €41.4 million, up 20% on 2023 and 58% compared to the average for 2019-2023.

Export successes are leading to a real change in model, said the Mint. While the production of euro coins for the state has fallen by 53% over the past 15 years, the production of coins for international markets quadrupled during this period. The production of current foreign currencies thus represented 66% of production in 2024, compared to 20% in 2009.

Collectors coins also performed well – with sales of €81.7 million up 24% vs. 2023, led by the Paris 2024 collections marking the Olympics and Paralympics, a turnover representing an all-time record for the company.

Another record was the 170,000 visitors to the Paris site, up 5% compared to 2023 and 31% compared to 2019 (the last year before Covid).

Upbeat Trading Statement from De La Rue

De La Rue has issued a trading update for 2025 and 2026, in which it said that its currency division will beat expectations of double-digit core earnings growth in the 2026 fiscal year, supported by stronger orders as demand returns.

The company aims to fulfil most of its recent orders and contracts by March 2026. As of the end of January, its currency unit reported an order book worth £347 million (\$445.48 million).

Additionally, the company is on track to achieve an adjusted operating profit in the the mid-to-high £20 million range for the year ending March 2025. It also plans to complete the sale of its authentication business within the first half of the year.

De La Rue is currently in discussions regarding a potential sale of the group, as well as exploring options for the currency business. It launched a formal sale process last month amid takeover interest.

'The additional orders won so far in FY25 within Currency, and improvements to the operational plan for FY26 which we have worked through in recent months give us growing confidence in the outlook for our Currency business', said the trading statement. 'We now expect growth for the Currency division in FY26 to be significantly higher than that guided at the time of announcement of our half year results.'

The company is expected to announce its FY2025 results in June.

Tenders, Contracts MOUs

■ Following the issue of an EoI (Expressions of Interest) for the 'Procurement of Consultancy and Project Management Services for Modernisation of Currency Management Infrastructure in India', the Reserve Bank of India has shortlisted six companies to participate in the next stage, namely a Request for Proposal (RFP). They are two state-owned companies – Engineers India and MECON – and four private companies – Accenture Solutions, Colliers International (India) Property Services, PricewaterhouseCoopers, and The Boston Consulting Group (India).

11 companies had responded to the EoI for the project to comprehensively revamp RBI's currency management. It will involve the creation of greenfield currency

management centres, the introduction of warehouse automation, the installation of security and surveillance systems, an inventory management system, and a centralised command centre.

■ Nepal Rastra Bank (NRB) has selected six companies who will be able to compete in bids for its banknotes over the next two years. They are China Banknote Printing and Minting Corporation, De La Rue, Giesecke+Devrient Currency Technology, Goznak, Oberthur Fiduciaire, and PWPW.

Over this period, NRB will issue tenders and all companies can bid, with the contracts awarded to those willing to print at the lowest cost.

The first of these, for 230 million 500 rupee banknotes, has just been issued, with a deadline of 14 May.

Two Currency Winners in Central Banking Awards 2025

Central Banking Publications has announced all 27 winners of its 2025 awards, which are now in their 12th year. The Central Banking Awards recognise outstanding achievements in the central banking community and two of the 27 relate specifically to currency.

First is the Currency Manager of the Year award, which went to Bangko Sentral ng Pilipinas (BSP) for the steps it has taken to ensure the country has an adequate supply of stocks, despite a shrinking supplier base (for paper), while transitioning to polymer notes.

BSP has partnered with Bundesdruckerei to collaborate on currency management and production of security features for polymer notes, and is also working with the Banque de France on strengthening the security and production of paper notes, as well as currency demand forecasting, staff training, counterfeit analysis and R&D. In the meantime, it continues to work closely with Note Printing Australia on its new polymer banknotes.

According to BSP Governor Eli Remolona, banknotes remain vital to the Philippines economy. 'We're committed to making sure people have enough of them and have faith in them', he said. 'We innovate and collaborate with global partners to fulfil this mission'.

Second is the Currency Services award, which went to Koenig & Bauer Banknote Solutions for its support to central banks in developing innovative, sustainable, secure and functional banknote designs.

The Awards Committee highlighted the company's innovative use of cognitive neurology and perception science to empower data-driven decisions by central banks on design content and security feature selection. In particular, its approach enables central banks to gain insights into how people use banknotes and which features they rely on most, thereby determining which features are worth the cost of inclusion.

Commenting on the award, Christopher Jeffery, Chairman of the Central Banking Awards Committee, said: 'Koenig & Bauer Banknote Solutions' integration of cognitive science in banknote design reflects a thoughtful strategy to enhance usability. Overall, the company is helping central banks to achieve efficiency savings and optimal banknote design.'

People in the News

■ The Bank of England has appointed **Sarah John**, current Chief Cashier, as its new Chief Operating Officer (COO), replacing **Ben Simson**. She will be replaced by the Executive Director for Payments, **Victoria Cleland**, who was herself Chief Cashier from 2014-2018 and who will now combine the two roles, which include work on the future of payments.

■ **Adrian Orr** has resigned as Governor of the Reserve Bank of New Zealand (RBNZ), three years before he was due to step down. Deputy Governor **Christian Hawkesby** will be the Acting Governor pending the appointment of a stand-in for up to six months while the RBNZ seeks a permanent replacement.

■ **Yahya Al-Shunnar** has been sworn in as the new Governor of the Palestine Monetary Authority, replacing **Ferim Milhem**.

■ Asset manager **Karim Souaid** has been named as the new Governor of the Banque du Liban, marking the first permanent appointment to the position since 2023. His predecessor was **Riad Salameh**, whose term expired in 2023 and who is currently under investigation for embezzlement.

■ Sudan Currency Printing Press (SCPP) has announced the appointment of **Mohamed Krory** as General Manager, replacing **Amna Hassan**, who has retired.

■ **Ventris Gibson**, the 40th director of the United States Mint, is stepping down to make way for President Trump's as yet unannounced appointee. She joined the US Mint as Deputy Director and Acting Director in 2021, and was approved by the full Senate the following year for a five year term. Pending a presidential decision on the new Director, the US Mint will be led by Deputy Director **Kristie McNally**.

■ **Katarzyna Budnicka-Filipiuk**, President and CEO of the Mint of Poland, has been recognised as one of the 24 most influential women in business in Poland. The ranking, compiled by the editorial team of Capital24tv, highlights female executives whose determination, professionalism, and innovation are shaping today's business landscape. She has been with the Mint of Poland since 2011, and in her current position since 2022.

■ Koenig & Bauer has announced the completion of a generational

change to the company's Executive Board. **Dr Stephen Kimmich** – previously CFO and Deputy CEO – will succeed **Dr Andreas Pleßke**, who will take on special responsibilities as member of the Executive Board after the AGM and will retire as planned at the end of the year. Furthermore, **Dr Alexander Blum** has been appointed as the new Chief Financial Officer, the responsibilities of which previously lay with Dr Kimmich. Moving forward, there will be only two members on the Executive Board, versus the previous five.

The company is also reducing the number of business segments from three to two (see CN December 2024).

Christian Steinmaß is responsible for the newly created Special & New Technologies segment, which includes Koenig & Bauer Banknote Solutions, and **Markus Weiß** now leads the Paper & Packaging Sheetfed Systems segment,

■ **Hervé Guillerey** is leaving Koenig & Bauer Banknote Solutions to join Oberthur Fiduciaire as Strategic Business Development Director.

■ Crane Currency has appointed **Magnus Gyllenrapp** as the new Managing Director and Operational Director at Crane AB, the banknote paper mill located at Tumba in Sweden.

■ **Jamie Ashley** has been appointed the new Sales & Marketing Director for Luminescence Sun Chemical Security. With 15 years' experience in the security printing industry, he will – says the company – lead the sales team, drive strategic growth initiatives, and continue to strengthen its market position.

■ The International Optical Technologies Association (IOTA), previously known as the International Hologram Manufacturers Association (IHMA), has announced its inaugural leadership team for the new global trade body focused on optical security technologies. The leadership includes **Alexandre Noizet** (SURYs), **Don Havourd** (Hazen Paper Company), **Jim Keller** (Opsec Security), **Manoj Kochar** (Holoflex), and **Ondřej Fedorčák** (Optaglio). They join Chair **Dr Mark Deakes**, with **Dr Paul Dunn**, former IHMA Chair, remaining in the post as a consultant board member.

■ The ATM Industry Association (ATMIA) has announced the appointment of **Daryl Cornell**, CEO and owner of Triton Systems, to its Executive Board.

Impacts of Recent Developments on the Cash Cycle: A Global Analysis

■ By Antti Heinonen, External advisor, Bank of Finland, and former Director, Banknotes of the ECB

Even though innovations in digital payments have accelerated in recent decades, cash is the only payment option for a number of citizens in every country. Moreover, the great majority of people would like to keep cash as one of their payment options – even in those countries where its share in transactions is already small. Cash is also used for precautionary reasons as well as a store of value and has a significant role in various crises and uncertainties.

In order to continue to be a safe haven in the future, cash infrastructure should be maintained and developed in line with the changing environment. Only a structure that functions in normal circumstances can be used in a crisis. Therefore, with good reasons, there is a debate in several countries about the status of the cash infrastructure.

Recent discussions have mainly focused on the access to and acceptance and affordability of cash, and new useful indicators have been created to measure these.

However, these indicators only partly describe the impacts of current developments. Nor can the impacts be analysed by the development of the value of cash in circulation or its ratio to GDP. These might have been valid indicators when the value of cash correlated strongly with the share of cash in transactions. Furthermore, the value of cash or its ratio to GDP at a certain point in time is a stock variable, while the different components of the cash cycle – like production, processing or transport of cash – are flow variables.

All these activities are moreover volume businesses; hence focusing just on values is insufficient or even misleading.

The impacts of decreasing volumes on the cash cycle are already seen in a few countries. In order not to have a vicious circle, developments should be consistently followed and proactively responded to by the respective authorities.

The following study is a preliminary attempt to find better metrics to indicate what is happening in cash cycles globally. It will also indicate how central banks have succeeded in making the cash cycle more efficient. In principle, the whole cash cycle should be analysed in this context from production, distribution and processing up to destruction. The publicly available information limits the following study to the banknote data provided by central banks, but at the national level all stakeholders in the cash cycle should be included in the exercise.

An example to clarify the issue at stake

To clarify the issue at stake and before moving to address the situation globally, developments of euro banknotes – one of the few cases of full transparency of volume figures as well as both stock and flow variables – is used as an example. Figure 1 represents the number of euro banknotes at the end of each year from 2013 to 2024.

According to this chart, the impression of the recent development of euro banknote circulation is very encouraging: the number of euro banknotes in circulation has grown every year during the last decade. Also, the significant increase during Covid-19 pandemic is evident.

However, the annual stock figures give only a partial picture. The next step is to check what kind of flows have led to this stock development. This is done by looking at the annual lodgements and withdrawals of euro banknotes, as described in Figure 2.

This figure, describing the development of banknote flows to and from the Eurosystem central banks, gives a totally different picture. Both flows have decreased almost continuously and around 30% during the period. In particular, the drop during the pandemic in 2020 was significant, and since then the flows have recovered only slightly. This development means that the transport of euro banknotes to and from the Eurosystem central banks and their processing have also decreased correspondingly. Similar conclusions could be drawn from the development of US dollar note circulation.

One may ask, what is the problem, because that is just what the central banks have pursued? By increasing local recirculation, the cash cycle has become more efficient. Furthermore, these developments are good news from the point of view of the environmental impact of banknotes.

However, the problem is that the decreasing flows may create challenges in the medium term from the perspective of the cash infrastructure and various stakeholders in the cash cycle. In the following, recent developments are studied globally.

Global developments of banknote stocks

Let us first study the global development of banknote circulation in volume terms. Currently, there are close to 150 different

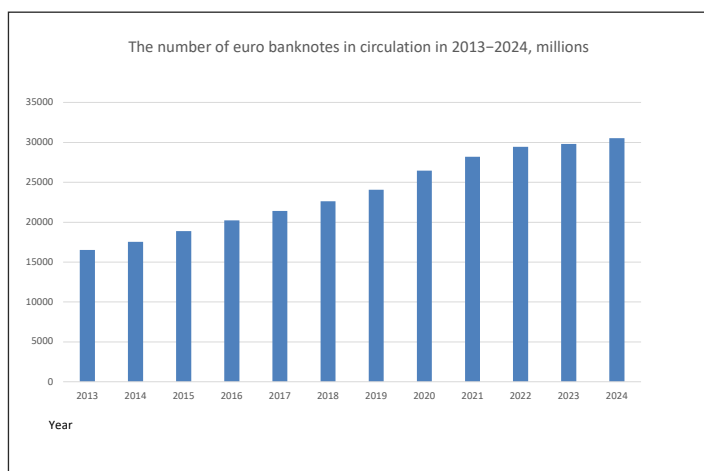


Fig 1: The number of euro banknotes in circulation in 2013–2024 (millions of pieces). Source: ECB Data Portal.

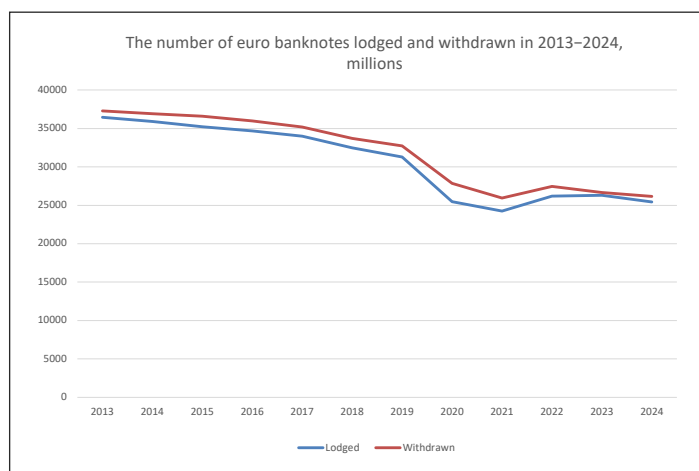


Fig 2: The number of euro banknotes lodged and withdrawn in 2013–2024 (millions of pieces) Source: ECB Data Portal.

... A Global Analysis

currencies issued by central banks and other monetary authorities. The number is significantly lower than that of the independent states, because several currencies are issued by monetary unions and/or they are used outside the state or monetary area responsible for their issuance.

Data on cash in circulation in value terms are regularly available for around 140 currencies. Regular data on the more important variable of the number of banknotes in circulation is limited, however, to a good 100 currencies. Figure 3 describes how the median growth rate of the number of notes in circulation has evolved globally at the end of the years 2013–2023.

Based on Figure 3, the median growth rate by the number of banknotes in circulation has exceeded 4% during the whole period. This means that at least half of the c. 108 currencies have had a growth rate higher than 4%. The second observation is the exceptional development during the Covid-19 pandemic, when the median growth rate was more than 9%.

Another way to study the global development is to count the share of currencies which have had a positive growth rate by the number of banknotes in circulation at the end of various years. This development during the last decade is depicted in Figure 4.

The pandemic and its aftermath of growing inflation was a global phenomenon, but otherwise the different annual developments are explained mainly by local situations. A negative growth rate doesn't necessarily mean that people have changed their behaviour towards the use of banknotes. When a new higher denomination is introduced, the store of value denomination often changes. This evidently decreases the number of banknotes in circulation, when for example five pieces are replaced by just one.

Similarly, when the lowest denomination is withdrawn from circulation, the number of banknotes may decrease temporarily.

On the basis of Figure 4, more than 80% of the currencies have had annually a positive growth rate during the last decade except in years 2022 and 2023, when it was a bit lower. A decline in this share was foreseen after the exceptional increases of the note stocks in 2020. They have subsequently been given up gradually in an environment of growing inflation and interest rates.

However, as shown by the earlier example on euro banknotes, various flow developments may have led to the growth rates of the annual note stocks. These flow developments will be considered next, and particularly what kind of conclusions can be drawn on their impact on the cash cycle.

Global development of banknote flows

As a balance sheet item, cash in circulation is similar to other liabilities of a central bank and hence it is appropriate to address it in value terms. Nevertheless, when considering cash related activities, they are all volume driven. This difference is unfortunately not taken consistently into account by central banks in annual reports and other data published on their websites, because value data are often used when describing cash related developments. In many cases lodgements and withdrawals of notes are addressed in value terms, not to mention their production, processing or destruction.

More than 70 central banks provide regularly at least some information on activities related to banknote flows. Based on these data a global view of the impacts of recent developments has been studied.

Starting from note production, only some 25 central banks provide regular annual information on it. It is a too small figure to draw any global conclusions. Furthermore, the annual production needs of central

banks vary significantly from year to year. They are high before the introduction of a new series or upgrade, because central banks are conservative in their estimates of the needs. After the issuance of a new series the needs often drop significantly and start to increase again only gradually.

The next step in the cash cycle is the issuance and return of notes and their processing. Figures of the withdrawals and lodgements and/or their processing are provided by 65 issuing authorities. However, 18 central banks provide only or mainly value figures, which do not necessarily tell anything about the volume flows. More than 42% of those central banks, which provide data on volume flows, have decreasing and 22% increasing flows. The developments of the rest have no clear trend.

The final step in the note cash cycle is their destruction. Destruction of notes is a very important component because it explains the replacement demand for unfit banknotes. The banknote orders of central banks consist of three components: new demand, replacement demand and inventory adjustments. As explained in Figure 3, the annual median growth rate was between 4% and 6.5% during last decade except in 2020 and major adjustments in inventories occur only irregularly. Hence, the replacement demand for unfit notes is often the main explanation of the size of a banknote order, except in the case of introduction of a new series or upgrade.

50 central banks provide regular information on the destruction of notes. The industry has made great efforts to increase the durability of banknotes, so it is not a surprise that the destruction of notes rarely has an increasing trend. Furthermore, the decreasing transactional use of notes reduces wear and tear of notes and increases their lifetime.

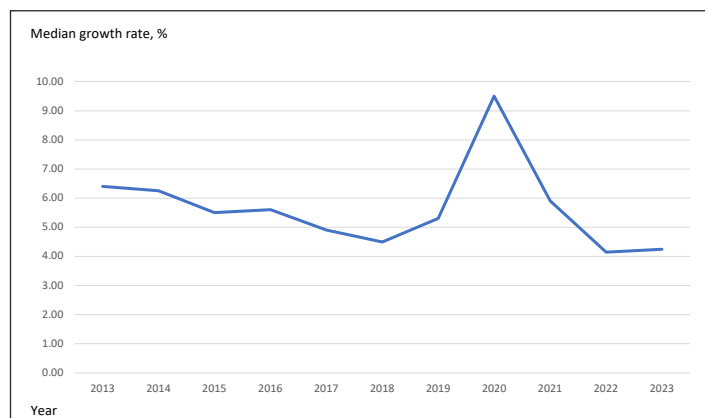


Fig 3: Median growth rate by the number of banknotes in circulation in 2013–2023, on average 108 currencies (in order to have as extensive data as possible the number of currencies included varies a bit, because data are not available from all currencies during the whole period).

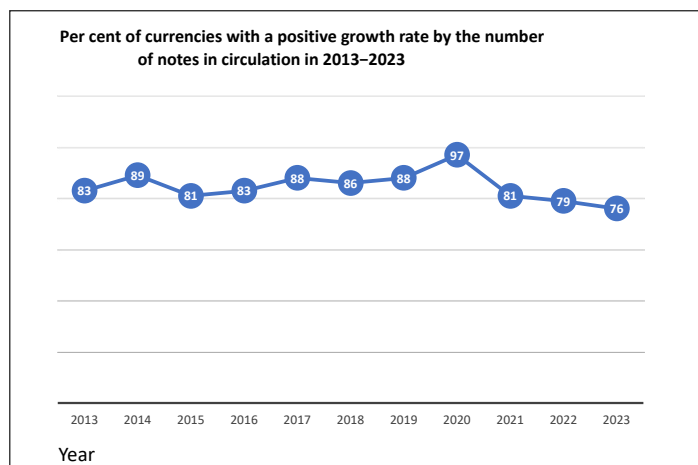


Fig 4: Per cent of currencies which had a positive growth rate by the number of banknotes in circulation in 2013–2023, on average 108 currencies.

Only 13 % of those currencies, from which volume data is available, have an increasing trend. Others have either a decreasing or no clear trend is evident.

Metrics of banknote volume flows

In order to have a metric, lodgement/processing and destruction flows should be set in proportion to something. Two indicators have been considered in this respect: return frequency and destruction rate. The return frequency is the ratio between lodgements/processing and notes in circulation and the destruction rate the ratio between destroyed notes and notes in circulation.¹

The return frequency can be counted for 56 and the destruction coefficient for 48 currencies. One or the other is available from 74 currencies covering all continents, which gives a reasonable description of the global situation. The data is not covering the full decade 2013 (2014)–2023 (2024) in all cases and an average of the two first years and two last years of the period are used in the study to minimise the impact of potential exceptional circumstances.

The development of return frequency and destruction rates during the period are divided in five categories: significant decrease (more than 50%), moderate decrease (20%–50%), stable (20 > decrease > -20%), moderate increase (20–50%) and significant increase (more than 50%). The results are depicted in Figure 5.

As regards both indicators, the metrics have a moderate or significant decrease in a great majority of currencies; 71% of the currencies belong to these two categories. The rest has mostly a stable situation and only very few currencies have an

increasing trend. The results could have been even more striking if the time period had been longer because in the case of many currencies the durability improvements were already made before 2013.

A typical development of many currencies has been a decreasing trend up to 2020, when – because of lockdowns and travel restrictions – both lodgements and processing decreased significantly. Therefore, in many cases both metrics increased in 2021 and have either stabilised or continued to decrease thereafter.

Concluding observations

The objective of this study has been to consider the impact of recent developments on the cash cycle and to find representative indicators for global developments. Cash related analyses are often based on the value of cash in circulation or on its ratio to GDP. Even if these considerations have their role, they tell very little about the main components of the cash cycle: the production, issuance, processing or destruction of banknotes. Therefore, it is important to develop representative metrics for the volume developments of cash related activities.

Figure 5 represents a preliminary attempt to find a metric for two components of the cash cycle: the return frequency and destruction of banknotes. The result does not surprise and is very much in line with the objectives of central banks.

Recent efforts have focused on the efficiency of the cash cycle and on the increase of the note lifetime by introducing more durable substrates. However, the impacts may require innovative solutions to keep the cash cycle viable to all stakeholders.

Sharp Rise in Counterfeit Euro Coins

Last month we reported on the 2024 counterfeit figures for the euro. This month is the turn of coins, with figures from the European Commission detailing a sharp increase in the number of counterfeits in 2023 (the most recent year on which it has reported) to 480,371 – up 62% compared to 2022 and the highest level by far since the introduction of the euro in 2002.

This was slightly higher than the 467,000 counterfeit euro banknotes seized in 2023.

The most counterfeited coin was the €2 – with a total of 451,747 detected in circulation (94% of the total) – up by 67.5% over the previous year. This denomination is also the coin that features a wide variety of commemorative designs, with each Eurosystem country able to issue two €2 coins depicting a commemorative design on their national side each year. A larger portion of the counterfeits were these circulating commemoratives.

Counterfeit €1 coins comprised 3.94% of the total (18,937 pieces), higher by 11.7% than 2022. Counterfeit 50 cent coins (9,687) fell by 3%.

The report also covered the countries where counterfeit coins were most prominent, with Germany topping the list. Between them, Germany, Greece, Italy, and Spain accounted for 61.6% of the total in 2023. An additional 68,088 counterfeit coins were detected in third countries.

The Commission reports counterfeits removed from circulation separately from those seized before they enter circulation. As these seizures occur on an occasional basis, the number of counterfeits reported following these varies widely each year.

46,347 counterfeit coins were seized in 2023 before reaching circulation, compared to the 62,270 in 2022. The €2 remains the most counterfeited coin, regardless of whether seized before or whilst in circulation.

The European Commission's report concluded that whilst the production and distribution of counterfeit euro coins increased in 2023, it is likely that a chunk of these were produced in the previous year(s) and gradually put into circulation.

The full report can be found at https://economy-finance.ec.europa.eu/document/download/becece70-811a-414f-a28a-a542e6056d51_en.

1 Return frequency – type indicators have been published by i.a. European Central Bank and the central banks of Albania, Bulgaria, Norway and Poland.

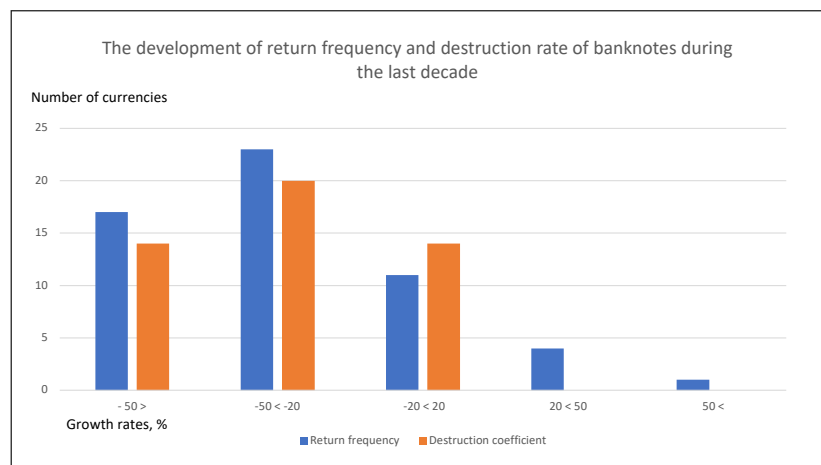


Fig 5: The development of return frequency and destruction rate of banknotes during the last decade.

Colour-Changing Smart Materials for Rapid Authentication

At the recent High Security Printing™ EMEA conference in Basel, Switzerland, Dr Alexander Brannan from the University of Manchester, and Gary Spinks of Security Fibres UK presented advances in colour-changing smart materials designed for rapid authentication. This technology addresses key issues in anticounterfeiting by integrating academic research with industrial application.

Traditional fluorescent pigments are an essential tool in security printing. However, the increasing availability of cheap substitutes means that these pigments are now much easier to simulate, significantly limiting their effectiveness and making them vulnerable to counterfeiting. This growing challenge highlights the need for more robust and sophisticated authentication solutions.

The smart materials developed by Dr Brannan and Spinks offer a solution through advanced light-emitting compounds. Their key innovation lies in a single molecule capable of exhibiting two distinct photoluminescent behaviours: fluorescence, which produces an immediate glow, and phosphorescence, where light emission continues after the excitation source is removed. As Dr Brannan puts it: 'this is not a mixture of compounds. In a single molecule you get a fast fluorescence, followed by phosphorescence'.

This dual-emission property creates a rapid visual effect that is challenging to counterfeit but straightforward to verify. The materials portfolio includes compounds exhibiting colour transitions such as blue-to-green, blue-to-yellow, blue-to-white, and blue-to-red. These changes are triggered using an affordable ultraviolet (UV) torch, enabling simple and cost-effective deployment.

A significant aspect of this development is the collaboration between the University of Manchester and Security Fibres UK, which specialises in multi-colour UV fluorescent fibres and works alongside academic institutions to develop secure authentication solutions. Additionally, efforts are being made to produce these fibres from bio-derived polymers, reducing micro-plastic generation.

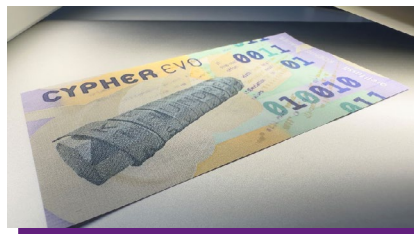
Looking ahead, Dr Brannan and Spinks plan to commercialise their discovery through further industrial partnerships and their next-generation materials are currently under development.

CYPHER EVO – the Rise of Digital Features

Digitalisation is a buzzword that has been shaping industries for over 40 years, fundamentally transforming products and business models. In the security printing industry, this transformation is particularly relevant as smart devices become dominant tools for interaction and authentication.

Ignoring digitalisation is not an option, and the security printing industry needs to explore ways to integrate digital solutions into traditional practices. Among the various opportunities, digital security features provide an innovative way to connect high-security printing with the digital world.

Digital security features refer to physical features on banknotes or security documents that can be authenticated using a smart device application without requiring any changes to the physical printing process. These features leverage advanced technology to provide an additional layer of security and authentication.



Industry leaders Orell Füssli Security Printing and Koenig & Bauer's new Vision & Protection division have been developing features that leverage the computing power, network connectivity, and advanced camera capabilities of smart devices to authenticate banknotes. To illustrate the variety and capabilities of such features, they presented the Cypher Evo House Note at the recent Intergraf Currency+Identity conference.

This house note integrates both traditional security elements and multiple digital security features and users can scan the note using a smartphone app to authenticate its validity, offering a hands-on demonstration of digital security in banknotes.

One of the key advantages of digital security features, say the two companies, is their seamless integration. There is no need for additional investments in plate-making equipment or printing presses. These features can be implemented using standard inks and existing printing technology, ensuring a cost-effective transition.

Moreover, unlike traditional security features that remain static once a banknote is issued, digital security

features provide flexibility. For example, authentication criteria can be updated dynamically based on emerging threats. Features can remain dormant until activated, ensuring adaptability over time.

Digital features on CYPHER EVO

CYPHER EVO banknote features three digital security features, the first two developed by K&B and the third by Orell Füssli:

Ovjera: this utilises the uniqueness of material variance and production characteristics, and captures it on an optical level. Similar to biometric features – and hence part of a technology group called document 'fingerprints' – Ovjera can assign a precise identity to each object and then identify it.

DAKTYLO: based on the patented Sound of Intaglio process, DAKTYLO captures and classifies the printing characteristics, and can robustly and quickly identify printing technologies – providing real time 'pass' or 'fail' result – without the need for a special ink or manipulations in the pre-press.

JAGUAR: at its core is the patented Secure Graphic technology, which has been advanced and extended to high security documents. Created using offset security printing and standard inks, an app and corresponding algorithms are used to detect, localise, extract and ultimately authenticate the security pattern. Developed with secure graphic technology from Scantrust, JAGUAR enhances counterfeit detection through AI analysis of print degradation.

Benefits of digital security features

According to Orell Füssli and K&B, digital features go beyond security to enhance public engagement, particularly among younger generations. By integrating smart device authentication, central banks can increase awareness and interaction with physical banknotes and so reinforce trust in cash.

From a citizen's perspective, digital security features provide an intuitive and accessible way to verify banknotes. No expert knowledge or specialised equipment is required. This democratisation of authentication strengthens confidence in the integrity of physical currency.

Driving Sustainability Through Procurement

Mark Wind of the Dutch National Bank (DNB) reported on the sustainability work of the Joint European Tender (JET) group at the Intergraf Currency+Identity conference. This is a tangible banknote specific example of an approach to using procurement to drive change.

The Eurosystem sources banknotes from both in-house government printing works and private companies. While the European Central Bank (ECB) aligns national demand and bank stocks within the eurozone, the ECB's governing council then decides on production volumes and the allocation of new banknotes. The proportion of the volume to national central banks (NCBs) is allocated based on the capital key – the ratio of capital each country has deposited to fund the ECB.

Of the 20 members of the eurozone, just six have their own printworks and print their own countries' indents (Portugal, Spain, France, Italy, Austria and Greece). The rest procure from elsewhere and, in some cases, the volumes are low. The NCBs of several of these countries have joined together to buy banknotes through the JET, run by DNB and which includes the Netherlands, Ireland, Finland, Estonia, Slovakia, Slovenia, Luxembourg, Cyprus and Malta.

The benefits of such an approach are that larger volumes equal lower costs, the workload is shared, knowledge preserved, and more leverage can result in priorities and ambitions being pursued, among them sustainability and innovation.

Driving innovation

JET works through a competitive process leading to a four-year framework agreement being agreed with the selected accredited suppliers, who are drawn from the private printers in the Eurosystem (or at least, under the ECB's level playing field rules, not those that produce their own country's indent). Each year mini competitions then decide what has to be produced.

JET has used the process to drive innovation in sustainable production. One example is a focus on sustainable cotton, now adopted across the whole Eurosystem, and it is now working on SAF (Sustainable Aviation Fuel) for air freight and HVO100 fuel (HVO stands for Hydrotreated Vegetable Oil, fuels made from which offer up to 90% saving in greenhouse gas emissions

compared with diesel) for the CIT movement of banknotes.

Another example of successful co-operation that has led to increased sustainability has been the move to printing colour changing ink using the silk screen process after intaglio printing. This is said to have increased efficiency, reduced material consumption and reduced waste.

And another has been better data gathering on energy consumption. This has provided more insight, allowed the location of points of wastage and reduced energy consumption.

JET tender

The key focus of JET in tenders when it comes to sustainability is now:

- Carbon footprint
- Renewable energy
- Waste management
- Recycling initiatives
- Sustainable materials

Within a tender there are two ways to drive sustainability beyond just choosing suppliers who have their own drive to be sustainable. First, to mandate requirements – 100% sustainable cotton and a yearly meeting on sustainability are examples of mandatory requirements. Second, to offer 'reward points'.

The JET tender gives suppliers additional points for the tender evaluation if they can demonstrate their use of green energy at the printworks and where their paper is sourced, more sustainable packaging materials and if they measure their CO2 footprint and can substantiate the calculation.

The JET is looking in future tenders at giving more reward points for a sustainable process, reducing the pressure on price. It is looking at more triggers for innovation. This is helped by the four-year purchasing cycle used, which gives suppliers time to adapt their sustainability efforts.

In the meantime, the DNB demonstrates that action can be taken now to encourage and drive suppliers to produce more sustainably and deliver lower impact banknotes.

Plans for New Comparative LCA for Banknotes

Biobanknote – the Colombian developer of solutions for composting banknotes and banknote waste – is planning to carry out a Life Cycle Analysis (LCA) to evaluate the manufacturing and use of banknotes compared with digital transactions, in accordance with the internationally recognised standards ISO 14067 and ISO 14040.

The aim is to allow a fair comparison so that the public can make informed decisions when making payment choices.

The systems for managing cash in circulation in most countries, both physical and digital, are similar; however, each presents its own particularities that must be taken into account as inputs for the study.

This LCA will consider the entire cycle of cash payments – including the extraction, production and acquisition of raw materials, circulation, recycling, treatment at the end of life, and final disposal – so that a comparison side by side with digital payments can be done considering all the activities consuming energy. For the latter, these include the electronic equipment to the servers that house the databases of commercial banks, private companies and apps for digital payments.

The analysis aims to identify and measure all GHG emissions associated with the stages of the banknote life cycle compared to those of digital transactions. Biobanknote hopes it will help organisations to understand environmental impacts by offering information based on good data to improve sustainability practices, optimise the use of resources and align operations within the framework of the circular economy and the objectives of global climate change control.

The study would be conducted by Biobanknote as expert in these matters, with the work reviewed by an international auditing company. It would be carried out in accordance with Colombian norms under the frame of environmental technical standards NTC ISO 14067 and NTC ISO 14040, to be easily verified by third parties and to be compared with similar international evaluations. The approach of the work is concentrated on the analysis of the impact on climate change through the carbon footprint for the two options.

Biobanknote's proposal will use as reference relevant information obtained from the Central Bank of Colombia and from some interested raw material supply companies. Colombia remains, for the second consecutive year, the only central bank that has obtained Carbon Neutral status. It has, therefore, very precise information about this matter.

The estimated time frame for the execution of this work is between three and four months.

Banque de France Takes EverFit® to the Next Level

Banque de France used the opportunity of Intergraf Currency+Identity to launch EverFit® Enhanced on the Industry Innovation Arena Stage of the conference, the latest significant upgrade to the composite banknote since its introduction in 2014.

EverFit is a combination of a printed and secured paper banknote over-laminated as a finishing step with a highly adhesive thin film that protects the printed surface and security features from wear and soiling. The protective layers are laminated as a finishing step, instead of varnishing, onto both sides of printed sheets of banknotes in a single pass using a specially adapted laminator.

EverFit was developed primarily to protect the printed surfaces and security features of low denomination notes against soiling, ink abrasion and colour fading. Additionally, the protective films allow the composite banknote to achieve high resistance to fold and tears.

According to BdF, and based on close monitoring of banknote over 24 months, EverFit notes last up to four times longer in circulation than varnished paper equivalents in the most demanding circulating conditions.

Security features such as UV, IR, colour-shifts, embedded features and SPARK® can be used with EverFit, and it retains the tactility of conventional, non-laminated or varnished, banknotes. But the matte finish of the protective layer, required for sorting and soft touch feeling, introduces light diffusion that was interfering with the latest generation of complex optically variable applied features.

Wanting to provide an answer for durability issues of high profile security features, the reintroduction of a selective finish was needed.

EverFit Enhanced is BdF's selective treatment; it is applied to the protective layer, reintroducing a gloss finish in key areas such as security elements. This advanced solution, says BdF, boosts optical durability and adds an extra anti-soiling barrier, ensuring that targeted components stand out while being protected against the challenges of real-world environments. As a result, EverFit

Enhanced elevates performance, enhances visibility, and extends longevity of banknotes' most valuable security features.



EverFit® (and now EverFit® Enhanced) is available exclusively from the Banque de France and has already been applied over time on more than 1 billion of banknotes, notably those currently circulating in the Comores, and BEAC areas.

BdF is inviting anyone wanting samples to contact it at everfit@banque-france.fr.

Korea Aims to Make Money from Recycled Money

According to the Bank of Korea (BOK), last year it withdrew and disposed of 474.89 million damaged or contaminated banknotes, amounting to a total value of KRW 3.3761 trillion won, a 1.9% reduction over the previous year. The disposal of these notes is part of its ongoing efforts to maintain the integrity and quality of the currency in circulation, the central bank said. It also disposed of 101.53 million coins.

The BOK is actively pursuing a project to recycle damaged currency instead of discarding it – a topic that has been raised in the country's National Assembly. Last year, it was able to recycle 55% of the 400 tonnes of withdrawn currency into concrete reinforcing materials or solid fuel, while the remaining 45% was incinerated as before. Last year was the first time damaged currency was actively recycled.



A pen made from shredded banknote waste (Source: Korea Minting and Security Printing Corporation).

Currently, the Bank of Korea is considering ways to gradually increase the recycling rate of damaged currency. However, identifying companies that can process discarded currency reliably and exploring additional utilisation methods remain essential tasks.

A Bank of Korea representative stated that 'currency is not just ordinary paper; it is made from cotton pulp embedded with various anti-counterfeiting devices, making recycling difficult,' adding 'we are examining whether there are more environmentally friendly recycling methods aside from solid fuel and concrete reinforcing materials.'

Separately, the producer of Korean currency, Korea Minting and Security Printing Corp (KOMSCO) has announced a partnership with Hana Bank to generate profits by using recyclable materials left over from the production of banknotes and coins.

Both organisations have signed a memorandum of understanding to develop merchandise created from the several tonnes of materials that would otherwise be burned. KOMSCO ran a 'Currency By-Product Utilisation Seminar' last year to demonstrate some of the products it has come up with from the banknote waste, including money calendars, money cushions, and money pens (see CN December 2024). Hana Bank, meantime, has produced pillows, clocks, cushions, and other merchandise from recycled materials since 2023, as part of its award-winning Money Dream Campaign (see CN January 2023).

According to local reports, KOMSCO is seeking to make a 'business breakthrough' whilst cash usage declines in the country.

'The joint project is meaningful as it turns the by-products that are generated during the creation of cash into something valuable', said Sung Chang-hoon, CEO of KOMSCO. 'We will continue to create model cases of a circular economy and a social value by fully using by-products from the entire currency manufacturing and distribution process.'

The collaboration represents 'a step toward creating valuable, eco-friendly products while addressing environmental challenges and promoting sustainability', he added.

HSP Latin America Returns to Rio

The programme will shortly be published for the High Security Printing (HSP Latin America) conference, which returns 9-11 June to Rio de Janeiro, Brazil – the location for the inaugural event back in 2012.

Attendance is likely to be at capacity for the three-day conference, which includes a one-day regional version of the Cash Sustainability Forum™ and two days of plenary sessions split into two tracks covering currency and identification.

The Cash Sustainability Forum seminar is available to all delegates attending the conference, but can also be attended as a standalone event. It is being organised in partnership with the International Currency Association's sustainability committee and will comprise two parts – a morning focused on the production and procurement of cash, and the afternoon considering how to organise, manage and optimise the cash cycle from the point that cash is issued to end-of-life.

In addition to expert speakers from central banks, printworks and suppliers, an important part of the agenda will be hearing from non-industry specialists in order to broaden knowledge and thinking.

Overall, this is intended to be a workshop with delegate interaction and opportunities to share experience with each other, and will build on the work already done at the two previous Cash Sustainability Forums, held in Europe in 2022 and 2024 respectively.

The next day, delegates will be welcomed by the Banco Central do Brasil and Sérgio Perini Rodrigues, President of Casa da

Moeda do Brasil. There will then be an overview of developments in currency issue in the Latin America and Caribbean, before the programme splits into parallel sessions.

There will be three sessions dedicated to banknotes – Regional Developments, Sustainability and the Environment, and Substrates and Features, before a final session where everyone comes back together to learn about the latest in fraud insights, anti-counterfeiting and anti-money laundering.

Some of the highlights of the programme will include Guatemala's new 1 quetzal note, the new Caribbean guilder series, IMBISA's new high tech printworks, Casa da Moeda do Brasil's new Good Luck house note on polymer (a first not only for it, but for the polymer supplier, Spectra Systems), and cash demand in times of crisis – ensuring a resilient infrastructure.

As is customary, the HSP Regional Banknote and ID Document of the Year awards will be announced and presented at the conference dinner on 10 June, which takes place on the iconic Sugarloaf Mountain.

Nominations for these awards are now open, with categories for Best New Banknote, Best New Banknote Series, Best New Commemorative Banknote and,

for the first time for the region, Best New House Note.

Another new award category, which will become a regular feature of HSP Latin America, is Best Environmental Project Award. This will be made in recognition of the breadth of thinking, creative drive, the determination to succeed and the difference made by organisations striving to safeguard the environment.

In a departure from tradition, the conference will conclude not with the HSP Football Match, but – appropriately given Rio's renowned beaches – the HSP Beach Volleyball Match, to which all delegates are invited – as players or supporters.

The day following the conference, ie. 12 June, there will be two optional tours. These will be to Casa da Moeda's printworks and mint just outside Rio (the largest in Latin America), and SICPA's Latin American HQ, SICPA América do Sul. In both cases, there is a limit on numbers to 100 visitors, with places awarded on a first-come-first-served basis.

The following day, 13 June, delegates also have the opportunity to visit Blendpaper, the Brazilian banknote papermaking specialist. The visit will involve a short flight to São Paulo, where Blendpaper is located.

Sponsorships and exhibition spaces are now sold out, and the organisers, Reconnaissance International, are anticipating reaching capacity for delegates, with numbers capped at 300 to ensure the conference retains the informal and collegiate nature which is its hallmark.

hsp-latinamerica.com

MDC Goes to Cape Town – at Last!

The Mint Directors Conference (MDC) was originally scheduled to take place in April 2020 in South Africa, but had to be postponed at short notice due to COVID. The event went ahead three years later, in Ottawa in October 2023, and now – five years on – is finally taking place in Cape Town, from 27-29 April, co-hosted by the South African Mint and with over 250 delegates from the minting industry taking part.

The programme will feature a range of sessions, including panel discussions on industry challenges, workshops on innovative techniques, and an awards ceremony recognising excellence in coin design and packaging.

Following the official opening of the conference by the South African Reserve Bank and a keynote speech by renowned futurist and technology strategist Doug Vining, a series of plenary sessions and breakout rooms will take place. They include:

- Setting the Scene, led by Marie Lemay (MDA Chair)
- State of the Industry, hosted by the MDA and facilitated by Mark Cartwright (MDA Executive Director)
- IMD Technical Committee presentations:

- Automated Coin and Blank Inspection – Mint of Poland
- Three Component Coins – Monnaie de Paris
- Laser Applications – US Mint
- Coin Design Handbook and Sensor Sensitivity for Plated Coins – CPI
- Benchmarking in the Minting Industry with Integrated Automation Best Practise – Bavarian State Mint / Royal Australian Mint
- Burnishing Guideline Update – Spaleck
- Quality Guideline Update – Schuler
- Coin Anti-Counterfeiting and Genuineness – Austrian Mint / Royal Canadian Mint / US Mint
- The Collector of the Future – What Does It Mean for Our Industry

- Panel Session: Treading Lightly: Carbon Footprint Reduction in the Mint Industry
- Precious Metal Supply Chain from Refining to Customer:

- Refinery View & Insights – Rand Refinery
- Mint/Brand View & Insights – Prestige Bullion

- Artificial Intelligence – Current and Future Use in Our Industry – with speakers from Royal Canadian Mint, Carveco and Giesecke+Devrient
- Industry Insights – Take Aways from the Conference

Social events include a welcome cocktail, an immersive African experience evening at GOLD Restaurant and a gala dinner at the Cape Point Vineyards, with the latter incorporating the handover to the next MDC host country and presentation of the MDC Coin Awards.

An official tour of the South African Mint Company has also been scheduled for Thursday 1 May, in Centurion, Gauteng.

southafrica.mintdirectorsconference.com

ODDS 2025 Conference – Registration Now Open

Registration is now open for the Optical & Digital Document Security™ (ODDS) conference, which will be held in Warsaw from 15-17 September 2025.

The ODDS technical committee has completed evaluating the submitted abstracts, confirming a strong line up of presentations. The programme again demonstrates why ODDS is the premier technical conference for security in physical, digital, and virtual documents.

In the optical segment of the programme, attendees will discover new research covering a full spectrum of optical security technologies, including deep sub-wavelength and plasmonic OVDs, holographic greyscale, zero-order structures, 3D light-field technology, and optically variable inks.

There will also be an update on progress made with publishing the new edition of 'Optical Document Security'. This updated edition will provide essential scientific insights into optical deterrence, including a new section focusing on how smartphones

are reshaping the analysis and verification of optical features.

The digital security track will highlight advances in artificial intelligence and machine learning, post-quantum cryptography, and copy protection patterns. Presentations will also delve into the growing 'phygital' space, where physical and digital security converge through QR codes, holographic markers, and hybrid systems.

■ IOTA Excellence in Optical Technologies Awards

Following the expansion of the International Hologram Manufacturers Association in 2025 – and its subsequent renaming to the International Optical Technologies Association (IOTA) – the association's annual awards have equally been rebranded this year as the Excellence in

Optical Technologies Awards, reflecting a broader scope beyond holography.

Organised in partnership with Currency News sister publication Holography & Optical Technologies News™, the awards recognise the most innovative and impactful optical products and technologies launched in the past year.

Entries are open to all, regardless of IOTA membership, across seven categories. Each organisation may submit two entries per category, with multiple-category nominations permitted:

- Best Innovation in Optically Variable Technologies
- Best Origination
- Best Disruptive Technology
- Best Integrated Technology / Best Document Security Application
- Best Product Security Application
- Best Decorative / Packaging Product
- Lifetime Achievement Award.

Winners will be announced and honoured during a special awards ceremony at the end of the first conference day of ODDS.

The full ODDS programme will be released in May.

opticaldigitalsecurity.com

The Future of Cash in an Uncertain World

Another conference taking place in Warsaw later this year is The Future of Cash conference, from 3-5 November, which will bring together key stakeholders from across the cash community to explore innovative strategies for shaping the future of the cash cycle.

In particular, the conference will bring together central banks, commercial banks, retailers, cash management companies, technology providers, fintechs and other innovators in the cash payment space. It was the first event to bring together all such participants in the cash cycle, and has earned a reputation for attracting high-level delegates from various sectors. It serves as a platform for discussing the changing dynamics of the cash ecosystem and exploring ways to optimise its operation.

At the heart of the conference is the goal to develop new, forward-thinking strategies to ensure the continued viability and sustainability of cash.

The 2025 edition of the conference will feature interactive sessions designed to engage participants in reimagining the future of cash. As recent global events – such as the COVID-19 pandemic and the Russian invasion of Ukraine – have highlighted the crucial role cash plays during times of crisis, the conference will

focus on how to safeguard and enhance this essential infrastructure.

Reimagining the cash cycle

To ensure cash remains accessible and sustainable for those who need and want it, the conference will explore ways to reimagine the cash cycle. Key areas of focus include:

- Establishing a regulatory framework that guarantees universal access to cash and its acceptance by businesses and institutions.
- Redesigning critical infrastructure to support efficient cash distribution and collection, integrating both traditional and alternative channels such as CashTech, cash-in-shop, cashback services, and bank hubs.
- Launching public education campaigns to raise awareness among citizens and regulators about the social and economic importance of cash.

■ CashTech Innovation Awards

The CashTech Innovation Awards, established by the independent think tank CashEssentials, will recognise cutting-edge advancements at the intersection of cash and technology. These awards celebrate companies that leverage digital tools and modern communication technologies to enhance cash services. They include improving access for consumers and businesses, increasing the acceptance of cash by retailers across various channels, and boosting the efficiency, resilience, and sustainability of cash operations.

The awards are divided into three categories:

- Best CashTech – Open to all organizations.
- Best CashTech Innovator – open to start-ups and companies founded after 2019.
- Best CashTech Start-Up – open to start-ups founded after 2023.

The deadline for nominations is 12 October. The judging panel will consist of members from the CashEssentials Steering Committee, and the CashTech 2025 awards will be presented at a special ceremony during the conference.

Meanwhile, a Call for Papers has been issued, the deadline for which is 30 May.

thefutureofcash.com

Style and Innovation Meet in Milan

The Intergraf Currency+Identity 2025 conference was held from 5-7 March in Milan, Italy. From the start, it promised more than just discussions – offering a creative and insightful take on the world of security printing.



Attendees were treated to the potential of security printing materials in a whole new context as Intergraf presented the first-ever 'Currency+Identity Défilé – A Pocket Full of Milan'. The fashion show of 10 different costumes – created from banknotes, substrates and features such as foils by design students from Milan's fashion school NABA – was a very appropriate event given that Milan is often cited as the fashion capital of the world.

Conference program

The conference plenary session began with a keynote on 'The Future is Not What It Used to Be' by futurist Eleanor Winton, setting the tone for an engaging session on the global trends shaping the future of our industries and beyond.

That afternoon, the 'Industry Innovation Arena' was launched – a new stage for rapid, TED-style talks. 15 innovators took to the stage, sharing practical insights and sparking curiosity with short, engaging pitches.

The remainder of the programme was filled with a line-up of conference speakers from central banks, governments, and law enforcement during parallel sessions on currency and identity.

On the currency side, discussions ranged from the role of cash in future societies to sustainable manufacturing, evolving banknote designs, and the security of both physical and digital money.

Topics covered included the current challenges to the production of US currency from the BEP, new approaches to engaging GenZ in banknote communications from the Bank of England, the use of AI in banknote design (using the new euro series as an example) from Banca d'Italia, the implementation of new sustainability measures from the Dutch National Bank on behalf of the JET (Joint Euro Tendering) group (see page 13), and challenges for chief cashiers in times of declining cash usage from the Bundesbank.

Moreover, attendees had three days to explore the 4,000 m² exhibition space, with over 100 exhibitors.

A few highlights from innovations

Among the few innovations and announcements made at the conference were:

■ **PARVIS** – whose VALDA business intelligence solution for printworks gathers and processes from multiple sources, aggregating this and transforming it into valuable insights

■ **Orell Füssli and Koenig & Bauer** – the new CYPHER EVO house note demonstrating advanced digital features for banknotes (see page 12)

■ **PWPW** – new security features for windows in banknote utilising light diffraction technology that reveal hidden images when illuminated with coherent light

■ **Louisenthal** – combining nanotechnology with micromirrors to deliver precise dual colouring in threads and foils

■ **Banque de France's EverFit® Enhanced** – broadening the opportunities to combine security features with the composite substrate (see page 14)

■ **Covestro's Autentium®** – following the official launch under the name CERTEVO® in December, Covestro has announced Autentium® – the banknote version of its new polymer substrate (see CN February 2025).

■ **IQ Structures & Hueck Folien's Optical Security Stripe** – a striking new optical stripe for banknotes featuring a Bilbao motif. The stripe integrates intricate, highly secure designs that are tough to counterfeit, making it a strong addition to next-generation banknote security.

That same day, the Certification Workshop was devoted to advancing Intergraf security strategies and, returning by popular demand, was the 'Tender Tactics' session, following its 2023 debut in Bilbao.

Evenings provided chances to relax and engage during the welcome cocktail, exhibition aperitif, and a festive dinner party at Mercato Centrale, Milan's central food market which was booked out exclusively for delegates for the evening.

The next conference will take place in Copenhagen, Denmark from 13-16 October 2026.

IACA Excellence in Currency Awards 2025

The International Association of Currency Affairs (IACA) has announced the finalists for the 2025 Excellence in Currency Awards, which are in four categories.

■ Best New Banknote/ Banknote Series

Bank of Jamaica – new series

National Bank of Kazakhstan – new Saka Style series

Bangko Sentral ng Pilipinas – the first Philippine polymer banknote series

■ Best New Coin/Coin Series

Royal Canadian Mint in support of Central Bank of Curaçao & Sint Maarten – new Caribbean guildler coin series

Monnaie de Paris – the Olympics 2024 €2 circulating coin

South African Reserve Bank – the Fourth Decimal Coin Series of South Africa

■ Best New Cash Cycle Cash Visibility & Collaboration Program or Initiative

FedCash®: E-Manifest Service paving the path for Cash Visibility in the United States

Giesecke + Devrient: Compass Banknote Intelligence

Glory: Serial Number Reading (SNR) series of projects: providing cash Visibility for more efficiencies

■ Best New Public Engagement Currency Program

Bank of Jamaica – communication campaign to introduce the new series of banknotes

National Bank of Kazakhstan – public engagement program for the Saka Style banknote series

South African Reserve Bank – upgraded banknotes and the 4th Decimal Coin Series launch.

IACA members are currently voting on the winner in each category. All finalists will be recognised and the winners announced at the Currency Conference in Bangkok, 26-29 May.

Women on Currency

■ By Phillipa Peploe, De La Rue

Across the world, banknotes commemorate and celebrate leading and noteworthy people from across history and culture. In essence, they are the business cards and the cultural identity of each country, acting as a physical symbol of national pride.

Presently, inclusivity on cash is an essential topic for central banks and governments worldwide, with women being notably featured less frequently than their male counterparts regarding money.



In this article, we will explore women on banknotes, why this type of representation is important, and how we are helping to address this development for central banks.

Representation on global banknotes

With banknotes often heralding historic and cultural figures, decision-makers need to consider diversity and representation when crafting their designs.

Featuring women on currency promotes gender equality while showcasing their contribution to society. It's inspiring for young girls to see women on banknotes, and it can encourage them towards leading positions across traditionally male-dominated sectors.

At present, only 1 in 12 banknotes feature women, which equates to 7.54%, according to a study by TradersBest which encompassed 115 countries and a total of 716 individuals. Meanwhile, of major nations, only Sweden, Australia, and Denmark had achieved gender parity in research completed by Ubuy South Africa. Australia was the only currency that featured women on every banknote, while 60% of Sweden's and 50% of Denmark's currency depict women on their cash.

Generally, women are underrepresented, and this may be symptomatic of there being fewer women in positions of power around the world. While progress is slow in making currency more gender diverse, it is gradually improving and it's becoming a focus for many globally.

Noteworthy women

Having delved into the significance of featuring women on banknotes, let's now spotlight some remarkable and influential women whom we have helped feature on physical cash – from the past and present.

Queen Elizabeth II: the first monarch to be featured on the Bank of England's banknotes in 1960. Her image was perhaps the most widely reproduced image in the world. During her reign, she appeared on more currencies than any other living figure and at the time of her passing, was depicted on 50% of all banknotes depicting women.

Last year, the Bank of England issued the new King Charles III banknotes to replace the portrait of the Queen. This has provided monetary authorities within the Commonwealth with the chance to release new banknotes featuring the new monarch, as seen with the Falkland Islands and the Bermuda Monetary Authority. Meanwhile, others, like the Central Bank of Belize, are opting for entirely new designs that showcase their own national heroes and culture.

Bank of England: the first historical woman to be featured on a Bank of England banknote was Florence Nightingale in 1975 for her role in finding modern medicine during the Crimean War. She was displayed on £10 notes until 1992. In 2002, Elizabeth Fry, a Quaker prison and social reformer, was shown on the £5 banknote until 2016. Finally, much-loved novelist Jane Austen appeared on the £10 banknote in 2017.

Scotland: Scottish banknotes highlight several influential women from the nation's history. Among those featured are writer and poet Nan Shepherd, scientist and author Mary Somerville, notable businesswoman Catherine Cranston, and education advocate and pioneer Flora Stevenson, appearing on the £5, £10, £20, and £50 Royal Bank of Scotland banknotes. This entire series exclusively showcases women.

Sierra Leone: Constance Cummings-John was an educator and political figure from Sierra Leone. In 1966, she made history as the first woman to serve as mayor of a major African city, when she became mayor of Freetown. A politician in both pre- and post-colonial Sierra Leone, she was an unwavering advocate for African women's rights. Since 2022, her portrait has been

featured on the Central Bank of Sierra Leone's 20 leones banknote.

Perú: last year, the Central Reserve Bank of Perú (BCRP) received the award for "Best New Series" from the High Security Printing Latin America conference in Santiago, Chile. The BCRP chose to focus on leading figures within the 20th century, including influential women such as singer and composer Chabuca Granda, historian María Rostworowski, and painter Tilsa Tsuchiya. By featuring these extraordinary women, the BCRP not only acknowledges their individual contributions but also underscores the importance of recognising and celebrating the diverse talents and achievements of women in shaping the country's identity.

Samoa: the award-winning Samoan 60 tala was recognised as the Best Commemorative Banknote of the Year at HSP Asia, with the design commemorating the 60th anniversary of Samoa's independence. As part of this, the Hon Fiamé Naomi Mataafa, Samoa's first female Prime Minister was featured on the note to mark the country's sovereignty.

Jamaica: Nanny of the Maroons, a renowned freedom fighter, was conferred the Order of the National Hero in 1982 and has been featured on Jamaica's currency since 1994. In 2023, the Bank of Jamaica introduced a new polymer series, continuing to honour Queen Nanny of the Maroons, a symbol of unity and strength, by featuring her as one of the subjects on the latest \$500 banknote, with her portrait also appearing in the holographic stripe.

Making banknotes more diverse

Women featuring on banknotes, and generally inclusion and representation, is becoming a more prevalent discussion in the world of currency. And this is why it's even more important to celebrate International Women's Day, to recognise the women that have shaped the fabric of our history and culture worldwide.

We are starting to see more change, with more women featured on banknotes than ever before. As a currency supplier, we create and design fully finished polymer and paper banknotes that not only celebrate cultural and historical national figures but also serve as a testament to the diverse achievements of women throughout history. Our banknotes feature cutting-edge advancements in secure colourshift, micro-optic, and holographic technologies.

These banknotes are not only visually captivating but also exceptionally secure, offering countries a dependable and contemporary form of currency that respects their heritage and fosters inclusivity.

Note and Coin News

Namibia's 2nd Commemorative Note Honours Past President

The Bank of Namibia has issued a new N\$60 commemorative polymer banknote, celebrating the life and legacy of the late President HE Dr Hage G Geingob, who served as the third president of Namibia from 2015 until his death in February 2024, aged 82.

Designed by De La Rue, the banknote has been printed on SAFEGUARD®. It features two clear windows, with the main window depicting a complex portrait of Dr Geingob, while the secondary window showcases the Independence Memorial Museum.

Security features include ARGENTUM™, a highly reflective mirror-like ink, and ILLUMINATE™, which adds texture and intrigue around the window, along with Enhanced GEMINI™ that is only visible under ultraviolet light for added security.

Other security features include micro text reading 'Forward Ever, Backward Never, 60', paying tribute to Geingob's philosophy, while raised tactile dots ensure accessibility for the visually impaired.

This is the second commemorative banknote to be issued by the Bank. In 2020, it issued a commemorative N\$30 on Guardian™ polymer marking the 30th anniversary of independence, which also featured Dr Geingob, along with his presidential predecessors HE Sam Nujoma, and HE Dr Hifikepunye Pohamba.



In Other News...

■ The Central Bank of the UAE has issued a new 100 dirham (AED) polymer banknote, printed by Oumolat on SAFEGUARD with two clear windows. It is part of the CBUAE's Third Issuance of the National Currency Project, and the final note to be issued in the all-polymer series, which comprises five denominations.



The front of the new banknote features the Um Al Quwain National Fort, a historical and cultural monument, and the reverse side the Port of Fujairah. Additionally, it showcases the Etihad Rail – the railway network connecting the seven Emirates and extending to the GCC countries. The predominant colour is red, in common with its predecessor, to ensure public recognition,

Security features include SPARK Flow® DIMENSION for the denomination numeral, and a diffractive stripe in the window incorporating KINEGRAM COLORS®. In common with the others notes in the

series, a second window features a portrait of Sheikh Zayed bin Sultan Al Nahyan (1918-2004), printed with white ink.

Two other notes in the new series – the 500 and 1,000 dirhams – won the 'Best New Banknote' award at the 2023 and 2025 High Security Printing EMEA conferences respectively.

■ The Central Bank of Solomon Islands (CBSI) has issued its new circulating \$1 coin featuring the effigy of HM King Charles III. The launch, said CBSI, marks a significant milestone in the nation's currency evolution and reinforces Solomon Islands' strong ties with Great Britain and with the Bank's trusted supplier, the Royal Australian Mint.

The new \$1 coin retains the same size and shape as its predecessor, featuring the iconic Nguzu Nguzu motif on the reverse – a traditional symbol of protection and good fortune – while the obverse features the new effigy of the King.



This is the first in the island's new coins to replace the effigy of the late Queen Elizabeth II. There are four other coin

denominations in circulation, all of which bear her effigy.

■ The Central Bank of Iran has announced the release of a new 2 million rial (200 toman) banknote (worth just under US\$2). This is the second note of this denomination in two years, the first having been issued in 2023. The note, which the central bank classifies as an 'Iran cheque', bears an image of the Imam Mosque in the city of Isfahan and Farsi text on the front, and a painting of a polo match by Iranian artist Mahmoud on the reverse with both Farsi and English text.

Security features include a watermark, green-to-gold colour shift security thread with the demetallised 'I.R.IRAN' text, SPARK with the same colour shift for the denomination numeral (200), an iridescent stripe and invisible multi-coloured fires.

■ The Bank of Thailand will issue a commemorate 100 baht banknote in April marking the 150th anniversary of the country's Ministry of Finance.

■ The theme of the new Australian \$5 banknote has been unveiled by the Reserve Bank of Australia (RBA), with imagery set to celebrate Australia's Indigenous communities under the theme of 'Connection to Country'. The new design will replace the portrait of Queen Elizabeth II, who has featured on the note since 1992, while the reverse side will continue to feature the Australian Parliament.

... Note and Coin News

The theme was chosen after more than 2,100 submissions were made by the public and key to it is the recognition of First Nations communities' contribution to the restoration and conservation of the environment.

Before selecting the theme, the RBA engaged with First Nations organisations across the country to build awareness and encourage the submission of ideas. The \$5 Redesign Imagery Selection Panel, which includes First Nations representatives and representatives from the RBA and Note Printing Australia, selected the theme.

The \$5 note was last updated in 2016.

■ The Central Bank of Libya has now issued a new 20 dinar (LD) banknote, printed on SAFEGUARD polymer – (as are the 5 dinar note issued in 2021, and the 1 dinar note in 2019). All replace the paper notes of the 2013 series.

Security features of the new LD 20 include Enhanced GEMINI™ Microtext, dual windows and an eye-catching holographic registered stripe with SPOTLIGHT™, PUREIMAGE™ and DEPTH™, featuring a portrait of Libyan national hero Omar Al-Mukhtar. A secondary window features a SPARK® Live star and crescent.



Events

26–29 MAY 2025

CURRENCY CONFERENCE

Bangkok, Thailand

currencyresearch.com

9–11 JUNE 2025

HIGH SECURITY PRINTING

LATIN AMERICA

Rio de Janeiro, Brazil

hsp-latinamerica.com

15–17 SEPTEMBER 2025

OPTICAL & DIGITAL
DOCUMENT SECURITY

Warsaw, Poland

opticaldigitalsecurity.com

DIRECTORY OF
CIRCULATING
COINS™

EDITION 4 / 2024

The one-stop guide to circulating coins around the world

ORDER
NOW

PUBLISHED BY
COIN&MINT
NEWS

Publisher: Currency Publications Ltd (a Reconnaissance/Currency Research company).

Editor: Astrid Mitchell (right).

Editorial Advisors: Richard Haycock, Martyn White.

Advisors: Lahcen Hadouni, Antti Heinonen, Concha Jiménez, Michael Lambert, Brian Lang, Tsuyoshi Uematsu, Richard Wall, Lydia Yip.

Contributors: Antti Heinonen, Chander Jeena, Phillipa Peploe, David Tidmarsh.

Annual subscription rate: from **£1,595** plus postage (also includes the Currency Index database and Currency Publications bi-weekly updates). Ask about subscriptions for multiple access, including to the Currency News e-publishing platform.

The editorial team welcomes your news, contributions and comments.

Please send these to info@currency-news.com



Charter Subscribers

CCL
SECURE

CBPM

CRANE
CURRENCY

DeLaRue

Giesecke+Devrient

GSI
GLEITSMANN
SECURITY INKS

KOENIG & BAUER

KOMORI

LUMINESCENCE
Sun Chemical Security

Oberthur
Fiduciaire

orell füssli
security printing

oumolat

KUSTERS
ENGINEERING

SICPA

SCHULER
Member of the ANDRITZ GROUP

VHP
SECURITY PAPER

Terms and Conditions

No part of this publication may be reproduced, stored in a retrieval system or translated in any form or by any means – electronic, mechanical, photocopying, recording or otherwise – without the prior permission of the publishers.

While every effort has been made to check the information given in this publication, the publishers cannot accept any responsibility for any loss or damage arising out of, or caused by the use of, such information. Opinions expressed in Currency News are those of the individual authors and not necessarily those of the publisher.

Copyright 2025. All rights reserved

ISSN 2516-6336

Currency Publications Ltd

2.4 The Beacon, Beaumont Park, Anick Road, Hexham, Northumberland, NE46 4TU, UK
Tel +44 (0)1932 785 680 Email: info@currency-news.com

