



CURRENCY NEWS™

BANKNOTES AND COINS – FROM CRADLE TO GRAVE | VOLUME 23 – NO 11 / NOVEMBER 2025

Inside this edition

Farewell to the US Penny	1
Banknote Conference Coming in May	2
What We Can Learn from the Dying Days of the Cheque	2
New Metallisation Facility a Leap Forward in Throughput and Energy Saving	3
SICPA Supports Mine-to-Market Visibility	3
News in Brief	4
The Banknote of the Future	5
MoneyBox – Reinventing Banknotes to Empower Young Learners Around the World	6
An Analysis of the Cash Cycle in Pakistan	9
Stepping Forward with Cash Processing Solutions	10
Shaping the Future of Circulating Coins	10
CashTech 2025 – Where Cash and Digital Solutions Intersect	11
Nominations Invited for IACA Banknote Awards	11
Security is Top Priority at MAP 2025	12
Cash Cycle Seminars Turns 30	13
Namibia's Currency Revamp: A Celebration of National Pride and Identity	14
Note and Coin News	15
New Banknote Launch for Fiji	15
Events	16

Farewell to the US Penny

After 232 years of continuous production, the US penny (or one cent coin) has finally ceased to roll off the presses for circulation. The US Mint hosted a ceremonial strike event at its Philadelphia facility in mid-November, with United States Treasurer Brandon Beach striking the final circulating penny coin.



Treasurer of the United States Brandon Beach holds the last penny stamped at the US Mint on 12 November 2025 in Philadelphia, Pennsylvania. Beach pressed the final pennies at an event held at the facility. The pennies pressed bear a special 'Omega' and will not be put in circulation, but will be auctioned off.

Although circulating production has ceased, the penny remains legal tender. The Mint also plans to continue producing numismatic versions of the penny in limited quantities for historical and collector purposes.

Penny confusion continues

The administrative decision, taken earlier this year, to cease penny production was determined largely due to the cost of production rising from 1.42 cents to 3.69 cents per penny – or nearly four times its face value – over the past decade (see CN May 2025). Evolving consumer behaviour and the loss of its purchasing power have also made continued production unsustainable.

However, there are an increasing number of commercial banks

and retailers who have reported shortages and issues with accessing the coins. This has led to the introduction of coin rounding in some cases, with transactions rounded down to the nearest 5 cents.

Some stores are reportedly asking customers to pay in exact change, whilst others are holding promotions to get customers to collect and deliver their spare pennies from home (see CN October 2025).

There are also concerns about the lack of guidance from the federal government over phasing out the penny for transactions, if needed, albeit there should not be a shortage of the coins due to the vast number of them (c. 114 billion) currently in circulation.

Banknote Conference Coming in May

Although the 2026 Banknote Conference (11-14 May 2026) is still nearly six months out, Currency Research has announced the first tranche of speakers who'll be appearing in Washington DC.

Notable additions to the 2026 program include:

- **Sirikumara Kudagama:**
Deputy Governor, Central Bank of Sri Lanka
- **Burkhard Balz:**
Executive Board Member, Deutsche Bundesbank
- **Rosbert Humphrey:** Director — Currency Management Department, Eastern Caribbean Central Bank
- **Arie Piet:** Chief Cashier, National Bank of Belgium
- **Niels Kaas:** Chief Cashier, Danmarks Nationalbank
- **Pearl Kgalegi:** Head of Currency Management Department, South African Reserve Bank
- **Dominic Owusu:** Director — Currency Management Department, Bank of Ghana
- **Patricia Solimene:** Director, US Bureau of Engraving & Printing
- **Mohamad Zaini Ab Jabbar:** Director, Currency, Bank Negara Malaysia
- **Sencia Kaizemi-Rukata:** Director, Currency Management & Banking Operations, Bank of Namibia
- **Jay Zagorsky:** Professor, Boston University Questrom School of Business.

64 speakers appeared at the 2024 Banknote Conference. A similar figure is expected in 2026, and CR anticipates adding many more speakers to the conference agenda early in the new year.

www.currencyresearch.com

What We Can Learn from the Dying Days of the Cheque

Life used to be so simple. You could pay with cash, with a cheque or with a wire transfer. Today the number of payment options is big, and getting bigger, as 'bank money' fragments into a myriad of different products and payment rails. In addition, add in crypto currency, stablecoins and CBDCs. Where will it all end?

Digital payments, real-time transfers and mobile wallets mean cash use for transactions is changing, while cheques have already virtually died a death.

The Bank for International Settlements reports that the value of payments made by cheques fell from 15% in 2012 to 4% in 2021.

Factors often suggested to explain the decline in cheques are:

- The premium placed by consumers and merchants on speed, efficiency and convenience
- Cost
- Risk of crime
- Regulatory push.

The process of change

Cheques used to signify trust, formality and a personal touch in financial transactions. By contrast, digital payments, while quick and convenient, are impersonal, but that has not stopped their rise.

Given that cheques still survive where they satisfy narrow and persistent use cases (high-value transactions, business-to-business payments, older populations, regions with weaker digital payment infrastructure, and where habit and legacy processes persist, such as for charities, clubs and small institutions), is cash going to do the same?

The long glide down to the ground for cheques shows that change tends to be gradual rather than instantaneous. A range of factors slow down the process of change:

- The need for infrastructure, regulation, and culture to align around the replacement sufficiently to make the old payment method redundant
- For the risks of the new technology to be regarded as less than the old solution
- If the new solution is not widely and deeply inclusive, then the old will persist
- Legacy systems leave long tails – there are an awful lot of banknotes and coins out there.

The same appears to be happening to cash in some countries, with it hitting a low level of use in Sweden, Norway, the Netherlands, the UK etc. but then stabilising at that level.

The dying days of cash

Cash shares attributes that overlap with those of cheques, particularly trust and a

personal touch in financial transactions.

Cash is also valued for its anonymity, resilience, finality of settlement, and that it belongs to us all.

However, just as cash has many of the factors suggested to explain the decline in cheques, it also shares some of the factors that have slowed down their demise.

One could conclude from all this that history is about to repeat itself. Cash decline is inevitable and terminal – with the only question being just how long it will last.

Analysis of the niche use cases for cash could define how long it will endure for. For example, there is no realistic alternative way to store value against emergencies, digital systems are not yet trusted to deliver payment resilience in the face of hostile nation or criminal attacks, anonymity in payments remains a valued choice etc.

The art of renewal

There is an argument that given the inability of digital payments to replicate the valued strengths of cash, a new future beckons. But not necessarily for cash as we know it.

If cash did not exist, we would probably need to invent a new physical token of exchange. It would need to fulfil the niche benefits of cash whilst working alongside and as an integral part of the 'digital first' world that we live in.

Re-thinking any much loved and deeply familiar day to day item is brutally hard. It is nearly impossible to clear the mind and get creative unencumbered by our life experiences. The need for clarity about what is vital and what is nice is the first challenge; the instinct to dictate attributes that we like immediately constrains the process.

The cheque will not vanish tomorrow, but its trajectory is clear. By the early 2030s, it will be virtually extinct in advanced economies and marginal elsewhere. What remains will be symbolic—used occasionally, more for ceremony than necessity.

In the digital age, its journey reminds us that every innovation carries both loss and gain. It is also a salutary lesson that the advantages of cash and, by association, its ongoing place in the payments ecosystem are not a given. The convenience of the future often comes at the cost of the rituals of the past.

New Metallisation Facility a Leap Forward in Throughput and Energy Saving

Hueck Folien – specialists in applied security features and threads for banknotes – has successfully commissioned a new high-vacuum vapour deposition facility at its headquarters in Baumgartenberg, Austria. The €8.6 million investment, announced in September 2024, includes both a new metallisation system and associated infrastructure upgrades, and marks a major advance in the company's production of high-performance coatings for the security sector.

The facility, which is now operational, features a 2 metre wide roll-to-roll metallisation line capable of depositing



ultra-thin metal layers with remarkable precision. The system achieves a coating uniformity of ± 2 nanometres – approximately 20 atomic layers – at production speeds of 1,000m per minute, controlled entirely through automated in-line quality inspection. This performance represents a substantial leap in throughput and control compared with the system it replaces.

The project involved the conversion of existing warehouse space into a 400m² production hall and the construction of a new logistics unit to support efficient integration with Hueck Folien's current operations. The proximity to the company's

existing metallisation area enables optimal energy and materials logistics.

The new vapour deposition system consumes 25% less energy than the older system it replaces. It also increases the degree of automation in both the coating and logistics processes. In line with Hueck Folien's environmental targets, only recycled aluminium – processed within a closed-loop internal recycling system – is used for metallisation. This practice, in place for over a year, yields a CO₂ reduction of approximately 85% compared with virgin aluminium inputs.

The company's newly-appointed CEO, Christoph Steger, described the project as a reaffirmation of Hueck Folien's 'technological leadership in the global market' and 'a clear commitment to developing sustainable, forward-looking solutions'. The plant allows for advanced surface structuring to support next-generation smart features in security devices and documents.

The company, which has operated for over 55 years, exports the majority of its production globally. Its materials are used in optical security elements for banknotes, tamper-evident labels, technical tapes, and decorative coatings.

SICPA Supports Mine-to-Market Visibility

SICPA leveraged its security ink and traceability expertise to launch BullionProtect® in 2020, designed to prevent counterfeit gold bars being mistaken for genuine ones. Jointly developed with refiner and coating specialist Metalor Technologies, in line with LBMA (London Bullion Market Association) guidance, the integrated solution comprises a security image applied directly to the bar and bespoke validation devices.

The security image is based on SICPA's OASIS®, an ink comprising liquid crystal pigments which produce a colour-changing design effect when viewed under a polarising filter. The ink adds negligible weight to the bar. Verification can be made in seconds, with a credit sized validator with two polarising lenses; under one the design turns green and under the other the pattern brightens. A unique QR code is also embedded in the image, readable by any smartphone.

More recently, last month SICPA announced a partnership with Commstack, a provider of next-generation digital infrastructure for commodity traceability and responsible trade, for a strategic joint venture to enhance transparency and accountability across the mining supply chain. The joint venture will initially focus on gold and other high value commodities.

The partnership combines SICPA's secure marking and authentication technologies with Commstack's real-time traceability and digital compliance platform. It aims to ensure full visibility across the mine to market value chain, enabling additional revenue opportunities for governments, facilitating global trade compliance, formalising artisanal mining, and digitising trade flows.

The integration of cutting-edge marking technology, big data analytics, and secure digital infrastructure in one platform offers a scalable and practical path to responsible sourcing, said Commstack in a press release announcing the partnership.

'Building on a program developed by SICPA to secure gold bars, this new joint venture is a decisive move toward full traceability, reinforcing transparency, compliance, and trust across the mining

industry', wrote Philippe Amon, Chairman and CEO of SICPA.

And strengthens cooperation with KOMSCO

In a separate development, SICPA and Korea Minting, Security Printing & ID Card Operating Corp (KOMSCO) have agreed to enhance cooperation on information and communications technology (ICT). The agreement comes as KOMSCO accelerates efforts for a fundamental business transformation by linking decades of experience as the country's manufacturer of banknotes and circulating coins with ICT.

SICPA, more traditionally associated with security inks, has recently expanded its ICT business by providing digital platforms based on data watermarking and data intelligence technologies, supporting digital identity security, online payments and real-time digital welfare subsidy distribution solutions.

Under the agreement, the two sides plan to explore opportunities to create synergies across a range of ICT fields. They include real-time digital platforms for social subsidy distribution, digital identity authentication and online payments, anti-counterfeiting solutions and detection of illegal online activities, and next-generation system infrastructure.

News in Brief

■ New Uses for Old Banknotes

Korea Minting, Security Printing & ID Card Operating Corporation (KOMSCO) has released two more currency-themed goods made from recycled currency by-products, following the launch of the Money Pen, Money Keyring, and Money Envelope earlier this year.

The designs of the Money Cushion and Money Wallet – which replicate the 500 won coin and 100 won coin respectively – were produced under the theme ‘preserving coins that are no longer produced forever’.

The Money Cushion is made of 100% nylon, with approximately 100g of 50,000 Korean won bill by-products (worth around KRW 5 million) inside, along with cotton.

The Money Wallet is made of silver artificial leather to give the feel of coins. One side of the interior contains approximately 10g of 50,000 Korean won bill by-products worth KRW 500,000, while the other side has an inner pocket.

The production of items from banknote waste generated during printing originated from the awareness that most of the approximately 500 tonnes of banknotes destroyed each year (either banknote waste or unfit notes returned from circulation) are incinerated. KOMSCO has worked in partnership with Hana Bank to develop merchandise created from the several tonnes of materials that would otherwise be burned (see CN March 2025).



■ CNB Visitor Centre Worth its Weight in Gold

The Czech National Bank attributes curiosity, a fascination with the world of money, and a desire to understand the economy as reasons why a quarter of a million people have visited the Czech National Bank Visitor Centre since it opened in May 2022. The CNB Visitor Centre has become one of Prague's most popular educational venues and, in a recent ceremony, CNB Governor Aleš Michl welcomed the 250,000th visitor. ‘When we opened the CNB Visitor Centre, we expected annual visitor numbers of around 40,000. In reality, the number of

visitors has been nearly double that. I believe this strong public interest reflects our commitment to openness – supported by free admission – and the quality and interactive design of our exhibitions.

There's something for everyone here, from schoolchildren and families to seniors,’ said CNB Governor Aleš Michl.

Since opening in May 2022, the centre has welcomed thousands of school groups and members of the public, both Czech and international. Visitors can learn about the central bank's responsibilities and how its decisions affect everyday life. They can also admire historical and contemporary currency, try lifting a real gold bar and view the 100-million-koruna gold coin – the largest in Europe and the second largest in the world.



CNB Governor Aleš Michl welcomed the 250,000th visitor to the CNB Visitor Centre – a final-year student from the Grammar and Language School in Zlín.

■ CBN Slated for Reissuing Unfit Notes

Nigeria's Office of the Auditor-General of the Federation has accused the Central Bank of Nigeria (CBN) under the leadership of the former Governor, Godwin Emefiele, of recirculating dirty and unfit banknotes valued at N 29.77 billion in violation of its own Clean Note Policy.

The allegation is contained in a newly-released report on non-compliance and internal control weaknesses up to the end of December 2022, which details how several CBN branches re-issued banknotes already classified as ‘Counted Audited Dirty’, a category of notes formally processed and certified as unfit for circulation.

One of the reasons given was the scarcity of notes at the time (due to COVID), which forced the branches to issue dirty notes to meet cash shortfalls. However, it was observed that the reissue of unfit notes coincided with CBN's controversial naira redesign programme, the accelerated roll-out of which triggered a nationwide cash crunch (see CN December 2023).

The audit document also highlighted a separate concern involving the delayed destruction of unfit notes. A total of N 3.57 billion in condemned notes had accumulated in vaults between 2021 and 2023 due to delays in the briquetting and

disposal processes, increasing the risks – warned the report – of pilferage, loss of public funds, and inefficiency in the Bank's currency management system.

■ Indonesia to Redenominate Rupiah, Drop Three Zeroes

Indonesia's Ministry of Finance is reported to be planning a new bill to redenominate the rupiah by removing three zeroes.

According to a ministry regulation, the redenomination law is a ‘carried-over bill planned for completion in 2027’. It would see the smallest denomination – the 1,000 rupiah – replaced with a 1 rupiah note. The same would apply to the 2,000, 5,000, 10,000, 20,000, 50,000, and 100,000 rupiahs.

This is not the first time redenomination has been on the table. The first time was in 2013, when a bill was submitted to parliament, although it didn't go anywhere. The issue was subsequently raised in 2016, and then again in 2023, when Bank Indonesia (BI) parked it, saying that it was ready to begin, but had not yet found the right timing.

The current banknote series was introduced in 2022.

■ BNPM India Changes Course for Expansion

Bank Note Paper Mill India (BNPM) has invited bids to provide project management and consultancy services for the expansion of its banknote paper production facility in Mysore, Karnataka.

The scope covers a variety of engineering and consultancy tasks for the development and implementation of process plants and equipment for two additional production lines, with a combined capacity of 12,000 tonnes per annum. The execution is expected to be completed within 30 months from the issuance of the letter of intent (LoI).

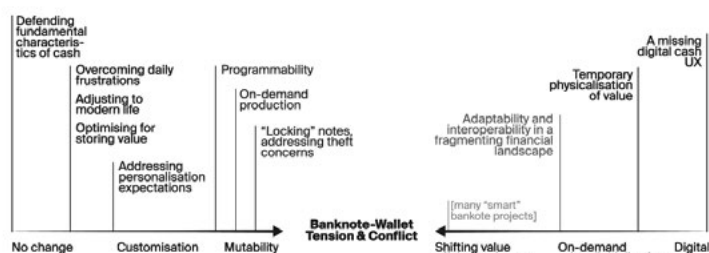
As reported last month, BNPM is producing record amounts of paper (over 16,500 tonnes last year). It had originally announced plans to expand via a new mill on a greenfield site in Odisha's Balasore district (see CN August 2022), and issued a tender for consultancy and engineering services for this two years ago. That plan has now been scrapped, with the new machines going into the existing plant instead.

■ Erratum

In the October issue of Currency News™, in our report on the National Bank of the Kyrgyz Republic (NBK) new headquarters in Bishkek, we incorrectly spelt the name of the President of the Kyrgyz Republic, Mr Sadyr Zhaparov. We also referred to Mr Melis Turgunbaev as the Governor of NBK, whereas his official position is the Chairman. We are happy to put the record straight.

The Banknote of the Future

Dr Andrzej Nowak, Head of Open Innovation at SICPA, presented at the Future of Cash conference in Warsaw in November about what a radical banknote of the future could look like.



The world we live in is changing which, in turn, is changing cash use, attitudes and cycles. SICPA has challenged itself to think about how a banknote of the future could look. This is not a technology project, it does not aim to be prescriptive or definitional, and it does not seek to claim its thinking or findings as a fact or claim that can be evaluated as true or false.

The framework for this exercise has been based around three questions:

- What is the purpose of non-traditional banknotes and who do they serve?
- Which functions or features of a non-traditional banknote could be useful to which stakeholders?
- How can those features be achieved with available and emerging technologies?

One could use the properties or attributes of a banknote to define their purpose, consider different evolutions of payment instruments over time, or compare physical and digital payment artefacts to see what they do, or could do.

SICPA defined three banknote variants:

- The traditional banknote that we have today.
- An 'augmented' banknote capable of having higher information density and communication bandwidth, probably with most benefits for professional stakeholders.
- A smart banknote that can change and retain its state these could have difficult cost-to-benefit ratios making the overall value proposition difficult.

For digital wallets, it considered disposable wallets, which it saw as having two forms:

- A single-use wallet capable of moving from being off- to on-line. This is voucher-like and quite different from today's banknote.
- Reusable wallets that can dispense and accept stored tokens of exchange. These would enable sovereign, peer-to-peer transaction of digital currencies in a cash-like way.

Whichever way a new banknote goes, it will need to deliver the circulation efficiency and convenience of today's notes and have greater interoperability with the modern digital world, keeping money straightforward and convenient. If it can keep familiar form factors and interactions, it can continue to support the social functions of money.

Emerging themes

The exercise involved 245 cash stakeholders, including 50 central banks, who explored 30 different scenarios for the future.

The requirements focused on the short comings of the digital cash user experience (UX), a need to be able to create a physical token of exchange (on demand value digitalisation) and the need for the solution to be able to be interoperable in a fragmenting financial landscape.

For developments from the traditional banknote, ideas such as being able to optimise banknotes to store value, personalise them, programme them, produce them on-demand and 'lock' them to address the risk of theft were all listed.

Options proposed

- **Edge-notes.** A response to a digital-first financial landscape and cash infrastructure becoming unsustainable, might be the ability to print notes at the ATM or point-of-sale.
- **Banknote passports.** These are augmented notes. In effect this is a banknote-as-a-platform, ie. information online is tightly linked to the physical object with role-based access control. This plays into concepts such as digital twins.
- **Autheni-note.** These are augmented notes. Using a smartphone, or other consumer device, to establish the authenticity of a banknote.
- **Custom banknotes.** These augmented notes play to customisation trends, personalised messaging and mixing public and private spheres.

- **Crisis pack notes.** Special notes, standard or smart, that work in a crisis in line with rules set by the government.
- **Zero notes.** These are effectively reusable wallets that address the dislike of change and address low denomination circulation efficiencies.

Choices

Many of these ideas have their roots in the concept of dark twins, but this requires identity and money to be linked and creates technological dependence. Inevitably all of these futures exist with a series of tensions:

- If the value is not fixed but exists in a digital form, familiar, straightforward interaction patterns are disrupted
- Decentralisation means security through control is lost
- Customisation means uniformity and consistency for efficiency and familiarity are lost
- Efficient digital functionality loses the resilience of traditional notes

And so on.

Thoughts and observations

Can digital cash replicate the UX and values of physical cash? If cash replicates digital, why bother?

Would losing anonymity open up a radically different set of options?

Doubt is easy, trust is hard.

Will machines become so ubiquitous (and so reliable) that some of the strengths of cash are diluted?

What other information can a banknote carry?

You can read the full 100+ page SICPA report online at [Currency Spectrum Futures](#).

■ Currency Spectrum Futures

In 2021, SICPA set out to discover what future might lie ahead of banknotes, asking three fundamental questions about their purpose, functionality, and technology.

In 2023, it published a resulting report on the scope, purpose and appetite for non-traditional banknotes.

The follow-on and second part (and the subject of this article) focuses on functionality more than purpose.

Separately, in 2024, SICPA published a Currency Spectrum Futures Notebook. It is available on request and is filled with a comprehensive set of futuring exercises and inspiration, meant to help think about the future of banknotes and currency.

MoneyBox – Reinventing Banknotes to Empower Young Learners Around the World

In last month's Currency News™, we reported on a new programme for financial inclusion called MoneyBox. In this interview, we provide more detail on this far-sighted and far-reaching initiative.

Banknotes have been used for generations to teach financial concepts and money skills, particularly during childhood. For most of us, physical cash represents our very first interaction with money and early interactions with cash help children develop numeracy and mathematical skills that are essential to responsibly manage our relationship with money in adulthood. Banknotes are a powerful way to explain and demonstrate core money concepts such as earning, spending, saving, borrowing and budgeting.

So says Koenig & Bauer Banknote Solutions, which points to a growing body of recent research clearly showing that the 'tangibility' of physical currency makes the value of money more concrete and real for young people when compared to the abstraction or disconnect created when paying digitally.

So what more, it asks, can banknotes do to foster life skills and financial competency development around the planet?

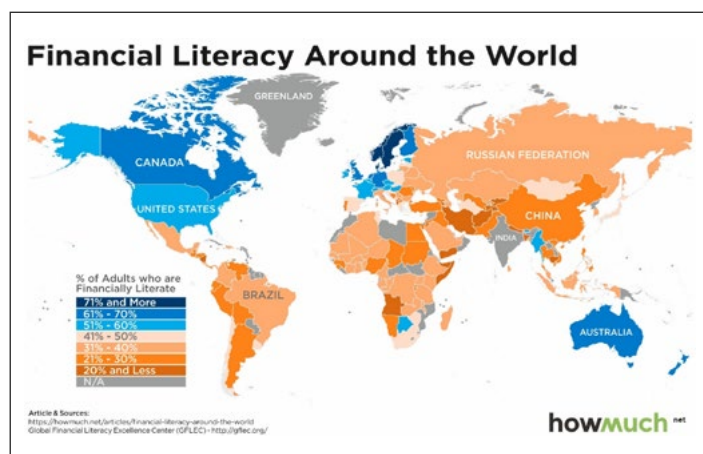
It has set out to provide the answer with its pioneering MoneyBox initiative. We caught up with the creators, Mark Stevenson (MS) & Sina Grebrodt (SG), to find out more about MoneyBox, and how and why banknotes play such a vital role in youth financial competency development.



Mark Stevenson & Sina Grebrodt.

Q: Why did a company who is historically known for supplying banknote printing technology become involved in financial literacy?

MS: As banknote printing technology suppliers, we don't limit our interest and engagement exclusively to banknote printers or central banks. All of us in the global currency community share a much higher agenda and mission: 'to support societies worldwide who choose to use cash empower cash-users to build better lives.' Understanding, using and managing money in a responsible and sustainable way is an integral part of this philosophy.



Financial literacy deficits are highest among populations who use and depend upon cash the most – in some countries it's less than 20%.

But, despite common perceptions, this financial literacy deficit isn't limited to emerging nations alone. Today, according to the OECD, more than 50% of the world's population suffer from such deficits and this is equally spread across all countries – emerging and developed. A good example of this is Switzerland, where financial literacy levels have actually decreased since 2020 from 57% to 49% for the youth population.

An incredible opportunity exists to build upon the public's familiarity with banknotes in all of these nations to transform them into powerful educational vectors. It seems a logical step to support the people who use our product to develop vital life skills, such as financial competencies, so that they can improve their own quality of life and well-being while contributing directly to national socio-economic development.

Q: Should financial literacy be a collective endeavour by the industry, therefore?

SG: First of all, yes – I believe we all share a collective responsibility to make education accessible to all. For many of us, we consider education as the great equaliser, but for far too many people in the world it still remains the great differentiator, and access to basic education still remains a challenge for over one third of the world's youth population.

Second, as a community, we now have a concrete and practical way to convert words into actions by taking real measures to help cash users around the world. This creates an incredible opportunity for our community to support current and future users of our products – banknotes.

It is hard to imagine any major life decision we make without considering its impact on our finances and money. Money is an incredibly pervasive thing in our lives and it influences our decision-making every day and throughout our entire lives. We simply cannot decouple money from our life journey.

So if we really want to empower populations to enjoy higher levels of prosperity, employment, entrepreneurship, health and social cohesion, we have to support them to develop responsible and sustainable relationships with their money and finances.

Q: When did you start your journey in the financial literacy space and what have you learned since then?

SG: We entered the financial literacy space back in 2023 when we were extremely fortunate to meet our current partner in this field, AFLATOUN International. AFLATOUN is the global leader in youth financial and life skill development, working in over 110 countries through their unique global network of over 350 NGOs, dedicated to this subject.

AFLATOUN quickly immersed us into the world of financial literacy and we were afforded the opportunity to develop a global perspective on the challenges involved but also to engage at grass roots level with the NGOs and spectacular people doing the work on the ground to support youth populations to develop money skills.

A milestone for us was the 2023 Global Financial Literacy Conference in Utrecht, Netherlands. During this event we engaged with central banks, ministers for education and social development, NGOs and big supranational organisations who are committed to addressing the financial literacy challenge on both a national and regional level.

Q: *Is there any evidence to show that banknotes actually support the development of financial competencies?*

MS: I am so happy you asked me this question. The simple answer is yes... more and more pieces of solid research are appearing on this subject. We now have clear, independent and scientific evidence that demonstrates the unique and irreplaceable role of cash as an essential vector for financial competency development.

In addition, a large body of recent research also demonstrates that the relationship we develop with money at a very young age has a direct impact on our financial habits, attitudes and behaviour as adults. If we fail to develop a sustainable and responsible relationship with money at a young age, it is highly likely that this will have long term adverse impact on us right the way through our lives.

For example, in a recent 2025 German Bundesbank (April Monthly Report 2025 Vol 77 No.4), 94% of the population stated that cash plays a unique and irreplaceable role in the development of child and youth financial competencies.

A Swiss Post Office study from 2025 states that 'cash is the basis for all financial education... it serves as a tangible basis for children's first experiences in learning to manage money'. And this is supported by the fact that in a country where almost everyone uses a digital mobile payment tool called TWINT, 73% of parents still believe that physical cash is the best way for children to learn about money.

We have just issued a white paper summarizing the available body of independent research on this subject from around the globe. It can be downloaded at <https://online.flippingbook.com/view/560671121/>.

Q: *So that's the background. Can you now tell us what exactly MoneyBox is?*

SG: MoneyBox is best described as a banknote-based immersive educational system for financial competency development. It maximises learner engagement and retention while bringing to the forefront the five essential pillars of financial literacy: Earn, Spend, Save, Borrow and Budget.

The MoneyBox System is not just about banknotes. It is an interconnected multi-component system based upon immersive learning through real-life exercises and interplay, as this graphic shows:

The MoneyBox system mirrors the real-life activities that young cash-users encounter every day and focuses on empowering them with the necessary life and social skills to responsibly and sustainably build and manage their own financial future. The interplay of these components creates a one-year, budget-focused learning journey that is simple, engaging, and provides valuable data insights through a dedicated teacher-facing content and support platform.

Q: *You said that MoneyBox is not just about banknotes. That it is a learning system. Can you tell us a little about the other components in the MoneyBox System?*

SG: There are 12 interconnected components that work together to make the learning journey, engaging, rewarding and impactful. All of these components fuel the data capture process since MoneyBox has been designed and developed by prioritising the importance of capturing user data so that baselining, impact and improvement metrics can be analysed at aggregate or granular levels.

The main MoneyBox components include:

1. Educational banknotes
2. MoneyBox
3. Learning curriculum
4. Teacher-facing app
5. Exercises and games
6. Persona cards
7. Budgeting materials

8. Videos, animations and learning content
9. Learn@home toolkit
10. Data capture and learning analytics system
11. Reward system
12. Certification system.

MoneyBox can be used in any environment where a teacher, educator, leader or parent is present. Different deployment models exist, ranging from integration into national curricula to simply using it at home with family and friends.

Q: *What makes the MoneyBox Banknotes so unique?*

SG: The MoneyBox banknotes have been designed in collaboration with child education specialists, using cognitive neuroscience-informed design elements to engage and retain the young learners' attention. The banknote design enables a learning journey independently of whether they are used in connection with the moneybox or simply on their own with parents or family at home, for example.

The front of the banknotes serve as subject-specific reference points that anchor the topic visually, primes core financial concepts and supports quick recognition and recall. This information is used during budgeting and group learner exercises.



The reverse of the banknote is more centred around reflection exercises on the subject of money and creates a life journey where money decisions have a direct impact and quality of life for the individual, family and community.

Parallel narratives are visually programmed into each denomination design, enabling the teacher or parent to address important topics connected with money such as gender equality, employment, climate, sustainability and peace.



Q: *What does the learning journey actually look like?*

SG: Every learner begins the journey by projecting themselves into the future when asked a key question: 'How would you like to earn money when you grow up?'

From this point the learner assumes a persona associated with their answer to the question and they follow a life journey that revolves around the five pillars of financial literacy but progressively becomes less abstract and more real as learners receive weekly salaries in cash and must make decisions on how they earn, spend, save, borrow and budget.

As learners develop, they are introduced to a series of real-life shocks and challenges that are highly contextualised to mirror their actual living environment and they must make life-decisions accordingly. A simple example of this may be an unexpected pregnancy, health problems, the opportunity to start a business, or determining the difference between your needs and your wants.

... Reinventing Banknotes to Empower Young Learners Around the World

As the learner progresses, they earn micro-credits that can be redeemed against pre-defined rewards... These micro-credits are absolutely essential as they are a reward system to retain young learner attention and engagement throughout the journey. These micro credits are then converted into a formal recognised certification upon completion of the MoneyBox curriculum, that can be used by young learners to open formal bank or mobile money accounts and gain access to primary financial services.

Q: Who is involved in the MoneyBox project?

MS: The list is very long... To start with, we have the most important people; the young learners. Almost 25,000 children between the ages of 7-12 living in 18 countries representing a diverse demographic cross-section of society in terms of language, access to education, gender and culture.



The first roll-out of MoneyBox in 18 countries across Latin America, Africa, Europe, and Asia.

Then we have the teachers and educators working in a range of schools and learning clubs who have received training from our partner NGOs in these countries. More than 1,700 teachers are directly involved in MoneyBox and they have a dedicated feedback channel to share their experiences and make suggestions within the MoneyBox community.

MoneyBox has also involved significant consultation and exchange with central banks, ministries for education and social development, finance ministries, and other state institutions who are participating in the project.

And then we have our partner in this endeavour, AFLATOUN International, and their global partner network of over 350 NGOs who has shared their unique expertise, knowledge accumulated over 50 years to make MoneyBox possible.

We are also looking to engage commercial organisations that will support different aspects of the programme. A good example is DHL, who are our global distribution partner for the MoneyBox materials.

The project also involved the design team here at Koenig & Bauer Banknote Solutions, along with our printers and many staff members who freely gave their time took time to pack over 3,000 kilos of MoneyBox materials into more than 100 delivery containers.

Q: How do you plan to make MoneyBox available to nations?

SG: Right now we are prioritising engagement at central bank and Ministry for Education level via accelerated contextualised pilot programmes. This makes it extremely easy and fast to frame the MoneyBox curriculum to fit specific national requirements and address priority challenges such as gender equality, employment or entrepreneurship.

Within a few weeks a national pilot programme can be deployed and executed, providing impact data to the central bank that

will enable data-drive decision making on scaling MoneyBox on a national basis, or reaching specific target demographics within society such as rural populations, female populations or underserved communities.

Central banks and education ministries can orientate the MoneyBox curriculum and banknote design to meet current and future national challenges and in this way fast-track impact within highly specific societal contexts.

Q: A year or so ago you launched BeeSmart, a digital learning platform that is also based on banknotes. How does this differ from MoneyBox?

MS : BeeSmart is an all-digital solution and an excellent tool, but it isn't suitable for many of the target communities because of the lack of digital bandwidth and/or the cost of data in those countries. The physical and tangible nature of the MoneyBox system overcomes the challenges of digital access (that significantly limit learner access) by providing teacher-facing content, such as lesson plans and exercises in either a printed booklet format or a teacher-facing app.

Q: What are your next steps and long-term goals?

MS: Our next steps involve a call to action to the global cash community to become more involved in MoneyBox and support scaling activities by making it more accessible by participating directly in the programme.

We will be engaging with central banks and education ministries, offering them the opportunity to trial a country-specific version of MoneyBox, framed according to their priorities and national strategies. MoneyBox success will be based upon positive impact data and before committing to any large-scale deployment, we invite any central bank to talk with us and simply run a MoneyBox pilot study in their nation and analyse the learning and outcome data.

Our goal for 2026 is to reach 1 million learners and then continue scaling by leveraging international funding and support to reach a goal of 50 million learners by 2050.

This may all seem very ambitious but we are confident... Our community spends over \$10 billion dollars every year on producing banknotes for payment and store of value purposes. Imagine if just 1% of this spend was channelled into providing banknotes for educational purposes... This would allow us reach 100 million young people every year, transforming lives and empowering them to build brighter futures.

Now surely that is something we can all aspire to!

Q: How can people find out more about MoneyBox?

SG: It's really simple... you can contact the people behind MoneyBox at Koenig & Bauer Banknote Solutions directly:

mark.stevenson@koenig-bauer.com

sina.grebrodt@koenig-bauer.com

Currency News™ and Reconnaissance International are proud to support the MoneyBox initiative and will act as official Media and Event Partner for MoneyBox activities as the project evolves and scales in 2026.

This support starts with the HSP (High Security Printing™) EMEA event next year, which takes place 9-11 February in Rabat, Morocco and where a pre-conference MoneyBox workshop will be held. The workshop will involve representatives from AFLATOUN and KBBS, along with the Moroccan Foundation for Financial Education, Hope for Family Rwanda, and Future Hopes Integrated Family Development of Ethiopia, among others.

The objective is to inspire participants to look at banknotes through an entirely different lens, to re-imagine and redefine exactly what they bring to society, and to encourage all to become part of a global movement.

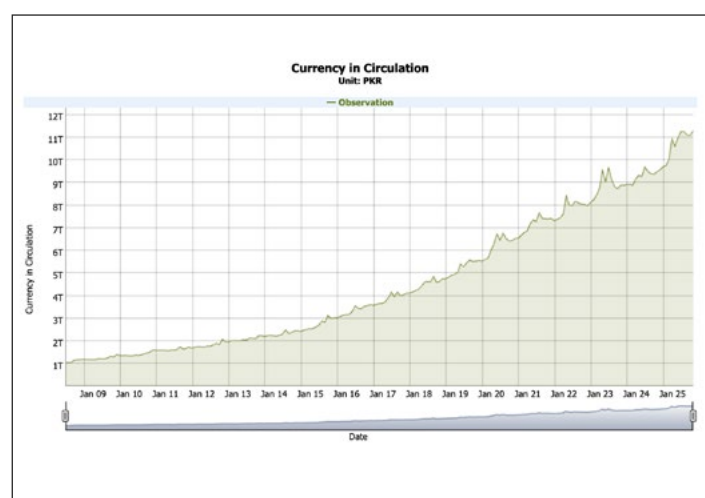
An Analysis of the Cash Cycle in Pakistan

■ By Aftab Baloch, Reconnaissance Associate

Cash processing plays a crucial role in Pakistan's financial system, ensuring liquidity, security, and public confidence in an economy where physical currency remains widely used. Despite the growing adoption of digital financial services and a determined push by the government to reduce dependency on cash, it continues to dominate daily transactions, particularly in the informal sector (which generates over 40% of GDP).

Efficient management of currency, therefore, remains essential to maintaining financial stability.

The State Bank of Pakistan (SBP), through the SBP Banking Services Corporation (SBP-BSC), oversees the issuance, distribution, and quality assurance of banknotes and coins. As of FY24, currency in circulation stood at PKR 10.93 trillion (c. \$40 billion), reflecting the country's continued dependence on physical cash.



Currency in circulation - 2020-2025 (source: SBP).

SBP manages the full lifecycle of banknotes – from production and circulation to withdrawal, destruction, and replacement of unfit notes. Counterfeit detection is also a priority. Under its Clean Note Policy, SBP requires banks to deploy modern authentication technologies and forensic support to detect and isolate counterfeit notes. A dedicated smartphone application further assists the public in verifying security features. Although detailed counterfeit statistics are not publicly released, official statements suggest that the rate of detected counterfeits has remained relatively stable over the past two years.

To modernise cash management, SBP operates a comprehensive Currency Management Strategy (CMS), first introduced in 2015 and successively updated and refined. Central to the CMS is the replacement of manual processes by machine-based authentication and sorting of banknotes. The CMS mandates that banks issue only machine-authenticated, good-quality higher-denomination notes and SBP has approved specific models of Banknote Processing and Authentication Systems (BPAS) and note-sorting machines (DNS, CNS), requiring banks to calibrate these systems to meet regulatory standards.

A major step forward has been the interbank cash exchange mechanism. This allows commercial banks to trade cash directly rather than relying heavily on SBP-BSC (which is used only as a last resort to provide cash to the banks in case of shortages and to absorb excess cash in case of surpluses). This has improved the efficiency of cash logistics and strengthened day-to-day financial operations.

Pakistan's banking sector comprises 41 scheduled banks, six development finance institutions (DFIs), and two microfinance banks (MFBs), all regulated by SBP. Many banks have established specialised Cash Processing Centers (CPCs) as required under

the CMS. Banks may also outsource processing to other banks or CPCs when necessary. The ATM network, with just over 19,500 machines nationwide, processed 259 million transactions in FY24 amounting to PKR 4.3 trillion, with each ATM handling an average of 144 transactions per day.

Retail payments have undergone major digital transformation in Pakistan. While cash once dominated all transactions, mobile banking, wallet transactions, and app-based digital channels now lead growth. According to SBP's FY24 Payment Systems Review, digital payments accounted for 84% of all retail transactions, up from 76% in FY23. The COVID-19 pandemic accelerated this shift, prompting quicker adoption of mobile and cashless banking solutions.

Raast, Pakistan's instant payment system launched in 2021, has significantly expanded digital access by enabling instant and free person-to-person (P2P) and person-to-merchant (P2M) payments. This has particularly benefited underserved and unbanked segments.

Despite this progress, financial inclusion challenges persist. Around 64% of adults hold a bank account, leaving 36% unbanked. With a population of 241.49 million – 38.8% urban and 61.2% rural – gaps in access to modern banking remain, especially in rural areas. SBP aims to increase account ownership to 75% of adults by 2028 through targeted inclusion measures.

SBP has also announced plans to introduce a new series of banknotes; it officially began the process in January 2024 and aims to complete it over a two-year period. The design has been finalised, and the process will be initiated in 2026 to obtain approval from the Federal Cabinet, which is a mandatory requirement before the issue of new banknotes.

The primary goal is to modernise the designs, improve security features, enhance durability, and align with global standards (see also CN November 2024 – New Banknotes: A Game Changer for Pakistan's Economy?).

SBP has laid out a comprehensive plan to ensure a smooth transition across the financial and banking infrastructure. To facilitate this, all banks have been mandated to recalibrate their currency processing equipment to handle the new notes. SBP has prepared a detailed framework for the eventual withdrawal of the existing banknote series. During the transition period, the current notes will remain legal tender and continue to be accepted for all transactions. Once the new notes are widely circulated, SBP will begin the phased withdrawal of older denominations.

Furthermore, public awareness campaigns will be launched to educate citizens about identifying the new features and understanding the transition timeline.

While digital financial services are growing rapidly, cash remains deeply embedded in Pakistan's economy particularly in rural areas and informal markets where financial literacy and access remain limited. SBP's initiatives including CMS, CPCs, Raast, and the new banknote series aim to modernise cash operations, strengthen transparency, and build an efficient, secure financial environment.

However, continued focus on inclusive strategies is essential to ensure that rural communities and underserved populations gain equitable access to financial services.

Stepping Forward with Cash Processing Solutions

Giesecke+Devrient is continuing to invest in its cash processing solutions and, at its Currency Technology Symposium this summer, presented the latest evolution of the well-known high-speed system – the BPS® M^{evo} series – and the complementary solution for smaller cash centres – the all-new BPS® C7.

The result is a choice of two high performance systems for central banks depending on their operational and volume needs.



The new BPS C7 is described as compact, smart and M-feature® secured. The logic of developing and introducing it was to meet the demand for small sized remote cash centres or bank branches. As a result, the configuration needed to be flexible to suit the wide variety of branch requirements, to have secure reject reconciliation and to be able to be used at branch counters so that it can accept personal banknote deposits.

These requirements meant a machine had to be developed suitable for lower processing volumes, but able to cope with exceptional periods of high demand, with a smaller footprint suited to the limited space in branches, preferably a desktop system, and no need for an air supply (with all the infrastructure that that requires).

Another consideration was to enable easy relocation, if required.

The new BPS C7 achieves all these requirements.

To ensure secure reject reconciliation, the new BPS C7 is able to detect the level three security feature widely used across the world in banknotes, namely G+D's forensic M-feature, offline, giving certainty about acceptance and the ability to reconcile large volumes of rejects efficiently.

The standard configuration is an input module with sensors, the M-feature module, or the bander delivery module.

The new BPS C7 can be configured to have up to five modules in total and the mix of bander delivery modules and standard delivery modules is flexible.

As with the BPS M versions, the new BPS C7 is fully connected with G+D's software packages, the Compass System Intelligence and Smart Maintenance.

BPS M^{evo} series

The BPS M^{evo} series is the future proof high-speed solution with online shredding, automation, connectivity and sustainability. Highlights are the NotaTray® ecosystem, the M^{evo} software and SensorFusion®.

NotaTray is a standardised, reusable tray that securely holds loose banknotes and

carries them right through the cash cycle, from central bank vault to ATM. With the new Filling module, M^{evo} closes the loop for automated loading and filling of NotaTrays. This approach not only reduces manual handling efforts but also minimises environmental impact by doing away with single use packaging.

The BPS M^{evo} software offers an easy-to-use touch interface with intuitive guidance and, says G+D, sets the benchmark in regard to connectivity, security and reliability. The highest level of accounting reliability is reached by several factors such as redundant accounting data storages.

SensorFusion offers more precise banknote classification than ever before. For instance, the combined sensor evaluation of thickness, optical and high-resolution UV sensor data significantly improves tape detection.

The SensorBrain® computing system not only provides the required data bandwidth to fuse all sensor data in real-time, but also lifts the computational power to a new level. Its modular design and multi-core processor boards adapts to the evolving needs in banknote sorting for increasing efficiency and sustainability in the cash-cycle.

Final word

With these two systems, G+D offers best in class processing technology for efficiency banknote processing of the future. The well proven BPS M^{evo} high-speed system and a BPS C7, which responds to the trend of more localised cash processing and the need to reduce travel miles of banknotes.

Shaping the Future of Circulating Coins

The Coin Conference 2026 will take centre stage next year as a key part of the industry's event calendar. The event, organised by the publishers of Currency News, brings together experts to tackle critical challenges facing coin production and circulation in the context of a rapidly-evolving payments eco-system.

Taking place 28-30 September 2026 in Budapest, Hungary, over 200 delegates – including central banks, treasury departments, mints, and industry leaders – will have the opportunity to connect with the global coin community at the only event dedicated exclusively to circulating coins.

As such, it provides a unique forum to share insights, exchange best practices, and explore new perspectives on issues ranging from forecasting supply and managing demand to sustainability and recirculation.

Programme outline

The conference will open with a series of pre-conference workshops. Presented by leaders in their field, these optional workshops provide best practice advice and case study examples to enhance the professional knowledge of all attendees.

The main conference begins the following day. The programme takes place over two days, featuring a series of general sessions offering presentations from various organisations on specific topics, in addition to panel discussions.

A post-conference tour of local production facilities will also take place – this is subject to availability and more details will be released closer to the conference date.

And the Coin Conference is also the venue for the presentation of IACA's Excellence in Currency Awards for Coins, with categories for circulating and commemorative coins, technical innovation, and circulation initiatives.

A Call for Papers has been issued, with the deadline for submission of proposals set at 30 March 2026. Proposals should be sent

to info@currency-news.com on topics that cover:

- Forecasting demand
- Determining the optimum note/coin boundary
- Recycling and recirculation
- Minimising costs of production and circulation
- Building and maintaining public confidence
- Creating green, clean and secure coins
- New coin cycle policies and strategies
- A sustainable future for coins
- Threats and challenges to cash and coins
- Digital transformation and next generation technologies.

Special conference rates are available for delegates from central banks/treasury departments and mints, as well as subscribers to Currency News™ and its two sister publications, Coin & Mint News™ and Cash & Payment News™.

thecoinconference.com

CashTech 2025 – Where Cash and Digital Solutions Intersect

The Future of Cash 2025 conference took place at the beginning of November in Warsaw, bringing together global cash industry leaders to examine how cash can remain resilient, accessible, and relevant in a rapidly changing payments landscape.

Across three days, speakers explored rethinking ATM business models, the vital role of cash during crises, the impact of digital innovation and CBDCs, and how younger generations are reshaping money habits.

A full review of the conference can be found in sister publication Cash & Payment News™. In the meantime, one of the highlights of the event was the CashTech Innovation Awards, which showcase pioneering work at the intersection of cash and digital solutions.

The awards were initiated in 2022 to recognise innovation in financial inclusion, sustainable cash management, and the critical role of cash infrastructure in the payments landscape.

According to the thinktank CashEssentials, organisers of the Future of Cash conference and presenters of the 2025 CashTech Innovation Awards, this year's winners exemplify how technology can modernise cash services, optimise logistics, and use digital technology to enhance access to and management of cash, thereby bridging the gap between physical and digital finance.

The winners in each of the three categories were as follow.

■ **Best CashTech Innovation** – Oesterreichische Nationalbank (OeNB) for its 'ATMs for Austria' initiative, which involves a nationwide expansion of the ATM infrastructure to close gaps in rural areas to enhance accessibility, financial inclusion, and security.

OeNB's initiative aims to deploy 120 ATMs across Austria over the next two years, focusing on rural communities where access to cash is limited. This modernisation effort ensures that 66.9% of the population has access to an ATM within 1 km, 82.6% within 2 km, and 97.1% within 5 km of where they live, providing practical solutions to support cash.

The initiative is a rare example of a central bank actively intervening to ensure access to cash.

'Cash as the core product of central banks is the most popular means of payment in Austria – safe, private, modern and inclusive, said OeNB. 'It is our central concern to enable public

access to cash nationwide, especially in rural areas. Both the widespread acceptance and wide availability of cash in everyday life are essential pillars supporting financial inclusion and economic stability.'

■ **Best CashTech** – Bankomat AB for the bold and comprehensive transformation of its cash logistics operations in Sweden.

Bankomat operates over 60% of Sweden's cash machines, and to support this has developed an integrated cash logistics system that includes secure vaults, a vehicle fleet, and a vetted workforce. This initiative brings cash-in-transit services in-house for the first time in over a decade, enhancing operational control, cost-efficiency, sustainability, and real-time cash management.



Stefan Wikman of Bankomat (centre), flanked by Mikael Schlaug of PA Consulting (left) and Guillaume Lepecq of CashEssentials (right).

■ **Best CashTech Start-Up** – MuneY App for enabling the seamless conversion between cash and digital currency transfers in Latin America, enhancing efficiency and inclusion in the Latin American remittance market.

MuneY App is a collaborative platform that connects users and businesses, enabling secure deposits, withdrawals, and cash transactions through a network of affiliated businesses (MuneY U). The app leverages stablecoins to facilitate seamless and transparent transactions, bridging the gap between digital currency and cash.

Examples of previous winners include Cash Perks (using SMS messaging to withdraw cash), Managecash Personal (an app-based solution enabling consumers to access cash from shops or individuals using a QR code), Koenig & Bauer Banknote Solutions' Valicash® (an app-based banknote authentication tool), Sonect (virtual ATM network), Clip Money (app-based platform for cash deposits in shopping malls), and DBS Bank (pop-up ATMs).

Nominations Invited for IACA Banknote Awards

The International Association for Currency Affairs (IACA) has announced that the nomination period for the 2026 Excellence in Currency Awards is now open.

The IACA awards, which started back in 2007, were the first for the currency industry. Since then, says IACA, they have become the most recognised and appreciated program to honour and recognise outstanding projects in currency.

There are three sets of award programs that align with three of the industry's leading conferences, all of which are biennial – namely the Currency Conference, the Banknote Conference, and the Coin Conference.

The 2026 awards align with the next Banknote Conference, which is where the winners will be announced, and have a technical focus, with categories for:

■ **Best New Banknote Feature, Product or Process** – new security features, changes to substrates, innovation in banknote durability, innovative printing techniques, new printing related machinery, or software that significantly improves the efficiency, effectiveness, safety, environmental protection, and/or resiliency of banknotes or the banknote printing process.

■ **Best Limited Circulation/ Commemorative Banknote Award** – a banknote that has been issued to test and evaluate new security features or elements. It must be legal tender in the country, offered to the public at face value, and limited in circulation (by either volume or time period).

■ **Best New Environmental Sustainability in Currency Award** – a new product, service, process/distribution improvement that has led to a more environmentally sustainable outcome (eg. improved stewardship, pollution prevention, resource conservation).

■ **Best House Note** – with judging based on the ingenuity of design theme, the integration of the security features into the design of the note, and overall aesthetic appeal.

The qualifying period is for projects issued/ released/implemented from 1 February 2024 to 31 January 2026. The nomination period closes 13 February 2026. All organisations or individuals involved in the currency community, including issuing authorities and industry suppliers, are eligible for the awards.

For the first three awards, the judging committee will shortlist three or four entries in each category. This shortlist is then put to a vote of IACA members. The fourth award – Best House Note – will be judged by delegates themselves during Banknote 2026.

More information on the guidelines and nomination process can be found at currencyaffairs.org.

Security is Top Priority at MAP 2025

The Mint and Print (MAP) conference 2025, held from 11 to 13 November in Istanbul, reiterated the message: cash remains a vital pillar of monetary stability and national sovereignty, even as payment methods become increasingly digital.

Led by Managing Director Mazen Hamdan of International Mint and Print and chaired by Alejandro Alegre, former General Director of Currency Issuance at Banco de México, this seventh edition drew around 250 delegates from more than 100 organisations, including central banks, printing and minting institutions, and suppliers from the global currency value chain.



In his welcome address, Dr Mehmet Sercan Arslan of the Central Bank of Türkiye set the tone by describing cash as a 'manifestation of trust' and a 'symbol of sovereignty'. He highlighted Türkiye's significant investments in printing, packaging, and inspection systems, emphasising that physical cash and Central Bank Digital Currencies (CBDCs) will coexist as complementary forms of central bank money.

Over three days, ten sessions explored the spectrum of currency design, production, technology and policy. Together, these discussions illustrated how modern currency systems integrate science, art, policy and data to support secure, resilient and trusted cash cycles.

Durability and material innovation

Durability and substrate innovation were prominent themes.

Crane demonstrated how MOTION SURFACE® now functions seamlessly on both paper and polymer, using the 'Beauty of Life' house note to showcase fluid movement, design flexibility, and rugged durability. As Yadira Sierra, VP Global Design at Crane, said: 'substrate is choice; security is not.'

Banque de France framed durability as both science and strategy, showcasing the EverFit® laminated substrate – tested in Madagascar and now circulating in BEAC and the Comoros – with a lifespan up to four times longer in harsh conditions. The key message, they said, to making cash more durable, more sustainable, and more cost-efficient, is to first understand how

they fail in real life. Not in theory. Not in assumptions. But in circulation, in hands, in machines, in daily use.

CCL reinforced polymer's long-term performance, demonstrating 3–5× longer lifespans and substantial life-cycle benefits, including a shift towards bio-based films produced from vegetable and waste cooking oils.

Q&T highlighted PolySecure-SHIELD, its new embedded OVD architecture for polymer substrates.

Mauritania's central bank shared its structured evaluation of reinforced cotton, hybrids, natural cellulose composites and Crane's Endurance™ substrate, backed by national user surveys and live circulation trials. This project earned the Central Bank of Mauritania the RACE (Recognition Award for Collaborative Endeavours) at the farewell dinner

Design, storytelling and public perception

Crane Currency outlined how modern banknote design evolves through a structured, multi-stakeholder process supported by house notes that test feature combinations. Case studies from Mozambique, Kyrgyzstan, Curaçao and Sint Maarten, Bolivia and Kazakhstan showed how dual-substrate series, MOTION SURFACE® and RAPID® threads can support coherent identity and intuitive verification.

Giesecke+Devrient shared its design strategy focused on its 'magic triangle' of security, durability and sustainability, with Kazakhstan's 'Saka style' series illustrating how cultural identity and advanced micro-mirror effects can align visually and functionally.

PWPW's MEADOW house note, developed with Leonhard Kurz, extended this approach using KINEGRAM COLORS®, ecological motifs, layered watermarks and a cotton-hemp blend.

A critical part of design effectiveness lies in public perception. SICPA reaffirmed the central role of intaglio in tactile trust, supported by a sustainability roadmap for inks.

Prof Jane Raymond shared PerceptNote and MATIS scanning, which measure what users detect in the first one to two seconds, providing central banks with predictive metrics on visibility and authenticity cues (see also CN, September 2025).

Sovereignty, strategy and operations

Sovereignty emerged as a central theme in China Banknote Printing and Minting Corporation's presentation. Jad Dagger argued that in a fragmented geopolitical environment, treating currency procurement as standard commercial tendering exposes countries to real supply risk. His 'sovereignty maturity curve' charted a path from early dependence on foreign printers to diversified sourcing and, ultimately, fully integrated national capabilities.

Banco de España presented a data-driven, user-centred cash-cycle approach, leveraging perception studies, AI analytics and improved sorting and reimbursement tools.

The Central Bank of Curaçao and Sint Maarten presents a case study based on their experience in launching the introduction of the Caribbean Guilder (see CN October 2025).

The Central Bank of Türkiye showcased a tightly controlled national cash network with high-speed processing systems and complete in-house maintenance and calibration. PBN emphasised the operational and environmental value of professional end-of-life currency destruction and metal recovery.

Security and aesthetics of coins

The Coin Minting and Precious Metals session at MAP 2025 showcased how modern coin design now integrates security, art, and digital identity. Three case studies illustrated the industry's evolution: (1) coin-design courses by AGA Bullion and the Czech Mint nurture new artistic talent for future projects; (2) IQ Structures' nano-holograms enhance both the visual appeal and security of rare coins, offering lasting anti-counterfeit protection; (3) a collaboration between the Mint of Poland and World of Tanks connects numismatics with gaming culture, attracting younger collectors.

The session also highlighted global market trends, operational challenges, and the growing commercial potential of commemorative coins, with contributions from Monnaie de Paris, the Mint of Poland, CBPM, and CIT Coin Invest.

Industry associations

The event further witnessed participation from three key industry associations of the currency ecosystem, including the International Currency Association (ICA), International Association of Currency Affairs (IACA) and International Optical Technology Association (IOTA) on 'why cash matters', thoughts on the future of cash, and the future of optical security features respectively.

The next International Mint & Print Conference will take place in November 2027.

Cash Cycle Seminars Turn 30

Since its founding in 1995, the Cash Cycle Seminar organised by Currency Research (CR) has brought together industry leaders to discuss the future of cash. Celebrating its 30th anniversary, the 2025 seminar in Bali, Indonesia, adopted the theme 'Cash Cycle 360: Redefining Resilience with Technology & Trust', bringing together over 150 delegates from 64 organisations, including 20 central and commercial banks, and 24 CIT companies.

As digital payments rise, the seminar emphasised that the future is not cashless. Instead, cash and digital payments will coexist, supported by technology, trust, and collaboration.

The programme started with the Central Bank Summit, providing a platform for regulators. The Asia Cash Management Association (ACMA) held its annual meeting, followed by a workshop on cash cycle viability featuring experts from CPT Group, Brinks, Prosegur, Glory, and ACMA.

Day 1: Trust, Innovation, and Resilience

The conference opened with a keynote from Budi Sudaryono, Deputy Governor of Bank Indonesia, stressing the importance of trust, innovation, and resilience in maintaining confidence in cash.

Plenary sessions explored regional payment trends, reaffirming cash's stability. Panels discussed using analytics to

improve operations and shared lessons on cash infrastructure resilience and technology advancements.

Day 2: Collaboration, Sustainability, and Logistics

A keynote by Bernard Ato Otabil (Central Bank of Ghana) preceded panels on cash logistics and sustainability. Highlights included discussions on collaboration, crisis management, and financial inclusion, with examples from Sri Lanka and the Philippines showing cash's role in economic recovery.

Regional Insights

Several sessions delivered useful takeaways from across the region.

■ Indonesia's cash system exemplifies resilience, with 107 commercial banks, nearly 39,000 branches, 98,000 ATMs, and 20 CIT companies. Cash in circulation grew

7.33% year-on-year in December 2023 to Rp 1,101.75 trillion and is projected to rise 8.9% in 2024. Despite digital payment growth, cash still accounts for 77% of total payments, serving around 140 million unbanked citizens.

■ The Central Bank of Sri Lanka has introduced a 'brown label' self-service device model, outsourcing infrastructure management to providers like AB Securitas. This approach gives banks a single point of contact, reduces capital expenditure, and lets them focus on core operations.

■ Across Asia-Pacific, digital and mobile payments are expanding, but cash remains vital, making up 46% of global withdrawals in 2023.

■ Brinks reported 33.3 billion global cash withdrawals in 2023 (valued at \$8.4 trillion), with Asia-Pacific representing 46%. Banks are increasingly outsourcing ATM networks to cut costs.

■ Nedbank (South Africa) achieved major savings through cash recycling, with recycled cash now 38% of ATM dispensed value.

■ The Bank of Thailand's Consolidated Cash Centre initiative reduced banknote management costs by 26.5%.

■ Trust, Resilience and Inclusion Frame 2025 Americas Cash Cycle Seminar

Less than two months on, Currency Research (CR) hosted its annual Americas Cash Cycle Seminar in Miami, returning to South Florida after an eight-year absence. The 2025 edition welcomed 214 delegates from 99 organisations – including 35 central and commercial banks – and 36 countries, making it the best-attended Americas Seminar in more than a decade, according to CR.

Devoted to the complete range of the commercial cash cycle and its myriad stakeholders, the Seminar over the course of two days examined regional trends in cash and payment methods, developments in US currency, the evolving CIT and commercial bank landscape, counterfeiting trends, and the demise of the US penny, among other topics.

As is customary for this event, the centrepiece of the pre-conference agenda was LatAm Day, a full-day program conducted in Spanish and focused exclusively on trends in Latin American markets and the role innovative solutions are playing in advancing the cash and payments industry throughout the region.

Building on the same theme as the Asia event, ie. 'Cash Cycle 360: Redefining Resilience with Technology and Trust', Amanda Wick, author of the recently

published 'The Catalysts', delivered an opening keynote address emphasising the link between the decline in institutional trust and how individuals prefer to pay, a global trend with significant implications for cash.

A look at regional trends revealed a diverse landscape, with cash remaining an enduring force in many countries alongside innovations such as Brazil's PIX instant payment system. These developments, panellists noted, underscore the need for collaborative and balanced strategies that incorporate technological advancements while ensuring cash's continued availability.

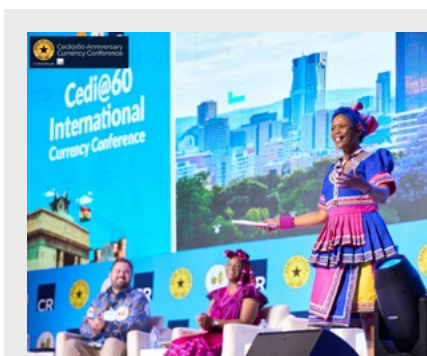
Marcus Brodber shared the results of a recent survey on Jamaicans' payment preferences, revealing cash's sustained popularity on the island and its critical importance during crises, such as in the aftermath of the catastrophic Hurricane Melissa.

Innovations to the cash cycle that seek to modernise cash handling, improve data standardisation, and boost sector resilience were examined throughout. AI was described as a double-edged sword for the industry, particularly in counterfeiting, offering great potential as an anti-counterfeiting tool but also at risk of being exploited by bad actors via resources on the dark web.

In his closing keynote address, cash advocate Prof Jay Zagorsky echoed and amplified the idea of cash as a public good. He introduced the concept of 'reverse

Robin Hood', describing how electronic payment systems disproportionately benefit the wealthy while disadvantaging the poor; criticised anti-cash policies; pushed back against persistent anti-cash myths; and proposed a series of initiatives to boost cash usage, including a Global Cash Day.

Currency Research will return to Miami for the 2026 Americas Cash Cycle Seminar, tentatively slated for November 2026.



The Cedi @60 Anniversary Currency Conference in Accra this November was a joyous occasion, co-hosted by the Bank of Ghana and CR with an attendance of nearly 800 people to celebrate the 60th anniversary of Ghana's currency. They included fellow African central bankers Sencia Kaizemi-Rukata of the Bank of Namibia and Pearl Kgalegi of South African Reserve Bank.

Namibia's Currency Revamp: A Celebration of National Pride and Identity

In a bold step to modernise its currency and reaffirm national identity, the Bank of Namibia (BoN) has launched an upgraded series of banknotes and a fully redesigned set of coins. Officially introduced by President Netumbo Nandi-Ndaitwah in July 2025, the new currency began circulating at the end of September 2025, marking a historic milestone for the nation.



Namibia, officially the Republic of Namibia, is located in Southern Africa, bordered by the Atlantic Ocean to the west, Angola and Zambia to the north, Botswana to the east, and South Africa to the south. Once a German colony and later administered by South Africa as Southwest Africa, Namibia gained independence in 1990 and adopted the name derived from the Namib Desert, the world's oldest desert, symbolising vastness and resilience.

Today, Namibia is regarded as one of Africa's most democratic nations, with one of the highest literacy rates on the continent. With a population of just over 3 million, it is the second most sparsely populated country in the world, after Mongolia.

The Bank of Namibia, the country's central bank, was established in 1990, and the Namibia dollar (NAD/N\$) was introduced in 1993, replacing the South African rand (which remains legal tender). Current denominations include banknotes of N\$10, N\$20, N\$50, N\$100 and N\$200 and coins of 10, 20 and 50 cents, as well as N\$1, N\$5, N\$10 (the 20 cent coin being a new addition).

Cash remains a cornerstone of Namibia's economy. According to BoN's latest annual report, the value of currency in circulation rose by 6.9% to N\$5.6 billion in 2024, while coin usage increased by 4.6%. Counterfeit banknotes declined by 10.7%, reinforcing the importance of enhanced security features.

The new series was unveiled during BoN's 35th anniversary celebrations under the theme 'Our Currency, Our Heritage, Our Pride – Meet the Next Generation of the Namibia Dollar'.

A special ceremony marking the official issuance took place in Mariental, the capital of the Hardap Region, at the end of September 2025, a deliberate choice reflecting BoN's commitment to inclusivity and ensuring that national milestones resonate beyond the capital city.

As BoN emphasised: 'the Namibia dollar is more than a medium of exchange; it is a unifying national symbol that belongs to every Namibian, in every town and region.'

The upgraded banknotes, the third series since 1993 blend tradition with innovation. They retain the portraits of Founding President Dr Sam Nujoma and freedom fighter Kaptein Hendrik Witbooi on the front, while the reverse continues to feature iconic wildlife that symbolises Namibia's natural heritage. The designs, last updated in 2012, now feature cleaner lines, richer colours, and advanced security elements.

Produced by De La Rue, the N\$10 and N\$20 notes are printed on Landqart's Durasafe® composite substrate, while the higher denominations remain on paper. Security features include transparent and embossed windows, SPARK® Live colour-shifting ink, and optically variable threads, PUREIMAGE™ on the two lower denominations and IGNITE® on the three higher ones. On each, a different species of antelope on the reverse is also present in the threads and the watermarks.

The new coins, produced by the Mint of Poland, represent the first full redesign since their introduction in 1993. Smaller, lighter and more durable, they are designed for efficient handling and longer lifespan. Moving away from fauna-and-flora motifs, the coins now celebrate five pillars of Namibia's economy and identity:

- **10 cents** – agriculture: Mahangu (pearl millet)
- **20 cents** – renewable energy and manufacturing
- **50 cents** – tourism: Sossusvlei and Deadvlei
- **N\$1** – retail: hands exchanging coins
- **N\$5** – mining: rough and polished diamond.

The N\$5 coin is bimetallic and incorporates an advanced angle-effect security feature, an innovation developed by the Mint of Poland, making it the most secure coin in Namibia's history. This feature enhances authenticity and sets a new benchmark for coin security in the region.

Together, the series pays tribute to Namibia's resilience and economic diversity.

The introduction of the upgraded notes and coins has been supported by a nationwide education campaign under the message 'Look, Feel, Tilt' to help the public identify security features. All existing banknotes and coins remain legal tender, with BoN confirming that there will be no immediate demonetisation, and both old and new series will co-circulate.

Speaking at the official ceremony, BoN Governor Dr Johannes Gawaxab captured the significance of this milestone.

'Today marks a historic moment as we usher into circulation the upgraded banknotes and an entirely reimagined coinage series', he said. 'The Namibia dollar has always stood as a declaration of confidence in ourselves, our economy and our future. This upgraded series enhances durability, inclusivity and security, while telling the rich story of who we are as Namibians. It is more than money; it is a mirror of our nation's resilience, our heritage and our aspirations.'

All in all, it has been a busy year for the BoN, since the introduction of the new series followed the issue of a commemorative note in March honouring the life and legacy of the late Hage Geingob, who served as the third President of Namibia from 2015 until his death in February 2024.

The note features a portrait of the late President, the Independence Memorial Museum, and on the reverse, motifs such as wind turbines, a green hydrogen tank, solar panels, and biomass, symbolising his commitment to sustainable energy.

The commemorative note, also designed and produced by De La Rue, but this time on its SAFEGUARD® polymer, incorporates Argentum™ and Illuminate™ inks, as well as Enhanced GEMINI™ (see CN March 2025).

Note and Coin News

New Banknote Launch for Fiji

The Reserve Bank of Fiji (RBF) is preparing to launch a completely new series of Fijian dollar (FJD, \$) banknotes in a major refresh that reflects both technical advances and an updated national vision. The formal unveiling will take place on 2 December in the capital, Suva, by the President of Fiji, HE Ratu Naiqama Lalabalavu, and the new notes are scheduled to enter circulation from 2 January 2026.

Fiji's banknotes are denominated in \$5, \$10, \$20, \$50, and \$100. They were last redesigned in 2012, with a theme of fauna and flora, and issued in 2013. The \$5 was the first circulating note to be produced on De La Rue's SAFEGUARD® polymer; the remaining notes were printed on paper.

The fauna and flora theme will be continued in the new series, but the images on the reverse, the as-yet-



unspecified substrate and security features are all being upgraded. According to RBF, accessibility features (ie. for the visually impaired) will also be incorporated.

Under the Reserve Bank of Fiji Act 1983, the RBF must review the nation's currency every 10–12 years to ensure that notes

remain secure, durable and aligned with national requirements. RBF Governor Ariff Ali has stated that, in line with the Act, the aim of the new series is to ensure the currency remains 'fit for purpose', while reflecting Fiji's heritage, biodiversity and culture.

... Note and Coin News

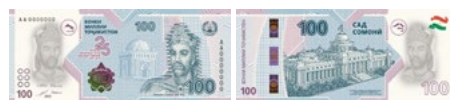
■ The Royal Monetary Authority (RMA) of Bhutan has unveiled the designs for the first three notes in its new banknote family – the 100, 500, and 1,000 ngultrum (Nu). Designed and printed by De La Rue on SAFEGUARD polymer, the series represents a significant upgrade in durability, sustainability, and public authentication and, say both the RMA and De La Rue, embodies Bhutan's commitment to innovation, inclusivity, and the enduring values of its monarchy.



The banknotes feature a robust set of optical security elements, including ARGENTUM™, ROTATE™, enhanced GEMINI™, tactile emboss, and a sophisticated holographic stripe with DEPTH™ and SPOTLIGHT® effects on the two higher denominations, depicting a dynamic dragon grasping jewels.

The launch was timed to coincide with the 70th Auspicious Birth Anniversary of His Majesty the Fourth Druk Gyalpo, Jigme Singye Wangchuck.

■ The National Bank of Tajikistan has issued a new 100 somoni banknote to mark the 25th anniversary of the national currency, making it the first commemorative banknote to be introduced since the creation of the somoni.



The note circulates alongside the existing 100 somoni denomination and is also the first to feature Louisenthal's new RollingStar® Venus thread with both Color MotifFlip™ and ColorFlip on the reverse, and RollingStar® Patch on the front.

The RollingStar® Venus is a registered 6mm security thread in orange and violet. The middle of the three windows utilises Color MotifFlip with striking change of colour and motif, with the orange denomination numeral (100) disappearing into the violet background, while a second motif 'БМТ' ('Бонки Миллии Тоҷикистон', which means National Bank of Tajikistan) appears out of the violet background in orange in the same area.

In the upper and lower windows is the eye-catching ColorFlip™ with ornaments typical of Islamic culture showing dynamic effects and flipping colour (orange and violet).

The RollingStar® Patch, meanwhile, features demetallisation and a ColorShift effect from violet-to-green. The background has a dynamic pattern and, in the centre,

is a clear flip effect from the denomination numeral to the letters 'БМТ'.

■ The Central Bank of Bolivia has completed its new 'B' series of banknotes with the issue of 10, 20 and 50 boliviano notes. The new 100 and 200 bolivianos were issued in June.

The new Series B is referred to by the Bank as a 'fusion of design, security, and trust'. The designs remain the same as Series A, introduced in 2018, albeit with greater print clarity and more vibrant colours. And the SPARK® Live feature from Series A has also been retained.



The changes include a RAPID® Vision windowed thread, enhanced intaglio elements (including tactile features for the visually-impaired), tricolour UV fibres, a durable coating and IR and magnetic machine read features. The banknotes were produced by Crane Currency.

... Note and Coin News

A consumer awareness campaign is being undertaken to help citizens learn how to recognise and use the new banknotes. Meanwhile, all Series A notes in circulation will remain legal tender until they wear out and are removed from circulation.

■ The Central Bank of Madagascar (Banky Foiben'i Madagasikara) has enhanced the security of its 10,000 Ariary and 20,000 ariary banknotes with a Moov™ security thread from IN Groupe.



The Moov technology creates animated features based on a combination of micro-

and nano-optics, along with a distinct bicolour transformation when the note is rotated. It was first launched in patch format as an extension of IN Groupe subsidiary Surys' DID™ and Graphic Wave features to provide two high diffractive registered colours at a reflection angle, as well as opposite dynamic effects when the note is tilted top to bottom.

The thread version was introduced as part of the company's first portfolio of optically variable security threads in 2020. It combines two vibrant colours (green and red, which is the most eye-catching to the human eye) to deliver powerful visual effects and dynamic animation. Fluorescence and magnetic features are also incorporated for machine readability.

The current versions of the two high denomination ariary notes were introduced in 2017. The Moov threads replace the RollingStar™ threads that appeared

on those two versions. The designs remain unchanged.

■ The Czech National Bank is to issue a commemorative 5,000 koruna (CZK) banknote next March to mark the centenary of the central bank, and the 30th anniversary of the Czech koruna (which replaced the Czechoslovak koruna in 1993 after the dissolution of Czechoslovakia).



The design of the note will be the same as the circulating version, but will feature a micro-optics metallised patch with the dates of the centenary, portraits and a QR code.

Events

1–3 DECEMBER 2025

HIGH SECURITY PRINTING ASIA

Kuala Lumpur, Malaysia
hsp-asia.com

2–4 MARCH 2026

HIGH SECURITY PRINTING EMEA

Rabat, Morocco
hsp-emea.com

23–25 MARCH 2026

CENTRAL BANK
PAYMENTS SUMMIT

Istanbul, Turkey
currencyresearch.com

27–30 APRIL 2026

GLOBAL CURRENCY FORUM

Antalya, Turkey
globalcurrencyforum.net

11–14 MAY 2026

THE BANKNOTE CONFERENCE

Washington DC, USA
currencyresearch.com

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, Tsuyoshi Uematsu, Richard Wall, Lydia Yip.

Contributors: Aftab Baloch, John Winchcombe.

Annual subscription rate: from **£1,595** plus postage (also includes the **CurrencyCheck** 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

ANDRITZ



KOMORI



CCL
SECURE



Giesecke+Devrient



CBPM



CRANE
CURRENCY

KOENIG & BAUER

orell füssli
security printing



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