

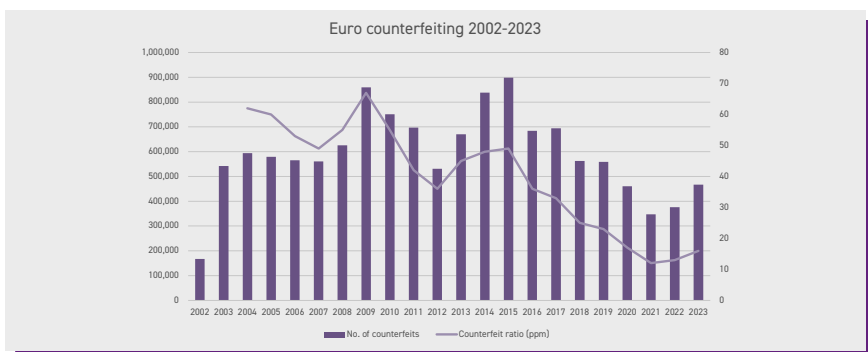


CURRENCY NEWS™

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Levels of Euro Counterfeiting Remain Low in 2023

467,000 counterfeit euro banknotes were withdrawn from circulation in 2023, according to the European Central Bank. This is one of the lowest levels ever since the introduction of the euro in 2002 in proportion to total banknotes in circulation (over 30 billion), representing a ratio of 16 ppm.

The figure is higher than in the preceding three years, but this is attributed both to counterfeiting and economic activity being suppressed during COVID, with 2023 figures reflecting a return to normality. In 2019, the figure was 559,000 and a counterfeit ratio of 23 ppm.

As in previous years, the most counterfeited denominations were the €20 and €50, accounting for 70% of the total (compared with 63% in 2022). 97.2% of the counterfeit banknotes were found in euro area countries, 1.9% in non-euro area EU member states and 0.9% in other parts of the world.

Some, although by no means all, national central banks (NCBs) have also reported the levels of euro counterfeiting in their respective countries, and the picture from those that have is a mixed one.

In Germany, counterfeit banknotes increased by 28.8% to 56,600, although the value rose rather more, by 90%, due to a massive increase in counterfeit €200 and €500 notes seized (up by 266% and 167% respectively).

According to the Bundesbank, this was driven by a handful of major cases of fraud involving luxury goods such as jewellery, gold bars, watches and cars. Those fraud cases aside, the majority of seized counterfeit banknotes were lower denominations, in many cases comprising so-called 'movie' money which is rudimentary and generally lacks any security features.

Levels also rose in Portugal (55% to 16,000), Cyprus (42.4% to 642), Finland (40% to 653) and Slovakia (nearly double to 1,697, albeit still a far cry from the 16,000 plus counterfeit banknotes seized in the country in 2020).

They fell, however, in the Netherlands, by 54.4% to 17,400. They also fell in Estonia, by 43% to 264.

Whilst overall the €20 and €50 denominations were the most counterfeited, this also varied from country to country. In Germany, the Netherlands and Estonia, the €50 was the favoured fake. In Finland and Cyprus it was the €20 and in Portugal the €100. Slovakia shared the 'honours' between the €50 and the €100.

New Year, New Name!

Cash & Payment News™ (CPN) is the sister publication to Currency News™. It was first published in July 2018 as the successor to Payment News Quarterly and, while Currency News focuses on the product that is ‘cash’, CPN has concentrated on the use of cash once issued.

The changing nature of payments is an integral part of that story, and so tracking payments around the world has been the other half of the magazine. Somewhere in all that, of course, has been the rise of Central Bank Digital Currency (CBDC).

However, it is a time for change. The first edition of 2024 bears the name, ‘Cash, Payments & CBDC News™’. While we have written about CBDCs for a long time, it is time to recognise formally that they are part of the agenda of the magazine.

While CBDCs were very much with us in 2018, since then activity has accelerated to the extent that nearly all central banks are doing at least some work on them. There is a sense that the number of active CBDCs will increase and that it is a matter of ‘when’ rather than ‘if’. At the same time opposition to the idea of CBDCs has gone from nothing to being increasingly present.

In parallel, while the price of the likes of Bitcoin has been a roller coaster with a steady stream of scandals, crypto currencies and stablecoins are becoming regulated, understood and accepted. While they may be ‘defying gravity’, it appears that they are here to stay, adding colour, complexity and confusion to a busy financial situation. We will touch on these rather than making them a mainstay of the magazine.

The aim of the newsletter remains to provide our readership with an overview of cash, payments and CBDCs so that you have the context and fundamental information to do your work.

And as we consider it an essential accompaniment to Currency News, you qualify for a 50% discount on the annual subscription. Contact us for further details and to set up your subscription.

Currency News Comes of Age

Currency News™ has officially ‘come of age’! That is, if reaching its 21st birthday counts as the coming of age – which in many societies it does.



So to celebrate this milestone, below is both a review and a preview of what’s to come this year.

We launched in January 2003 with a 12 page newsletter, in spot colour, to be published ten times a year. This quickly moved to full colour and, as an indication of the quantity of news and information that our industry generates, is now routinely 16, and sometimes even 20, pages a month.

The headlines that month and indeed, for the first several years of publication, majored on counterfeiting, security features, substrates and capacity. These topics remain important, but fast forward 21 years, and the focus now is far more on resilience, access, sustainability and digitisation, none of which were major concerns back in 2003.

Along the way, and recognising the importance of coins in the cash cycle, we began covering coin topics, culminating in the issue of Mint News Quarterly, which became Coin & Mint News Quarterly, and was then spun out as a separate monthly publication – Coin & Mint News™.

Also recognising the importance of the broader payment landscape in which cash operates, we launched Payment News Quarterly, which turned into a separate monthly newsletter, Cash & Payment News, and which has started off 2024 with a new name – Cash, Payment & CBDC News™ (see left).

So Currency Publications Ltd – the publishing vehicle – now has three titles covering the full gamut of the cash cycle and the stakeholders within it.

And to supplement the news that comes each month, we added access to the Currency Index – a database of all the world’s banknotes and coins, and periodic directories – the Directory of Currency & Technology Suppliers (the seventh edition of which will be published this May to coincide with the Banknote Conference) and the Directory of Circulating Coins (the

fourth edition of which will be published in October to coincide with the Coin Conference).

Other publications that form part of the portfolio include special reports on threads and diffractive features, white papers on sustainability and repurposing banknotes, and a special supplement on the latest and best concept (house) notes, the second edition of which will be published this spring. Also published shortly will be a summary of all the new banknote and coin issues of 2023, which we intend to make an annual supplement.

We have also embraced the digital era in publishing. Indeed, thanks to COVID, we had little choice. Currency News, and its sister publications, are now supported by e-publishing platforms where all the content can be viewed online, providing access to the monthly issues of each newsletter, as well as a searchable database of all articles, archives of all back issues, the Currency Index, and a weekly newsfeed.

They supplement the existing printed versions, ensuring that you always have access to the news on the go – as it happens and wherever you are.

And you may have noticed the new look for this issue of Currency News, which is part of the journey toward digitisation since it is not just for print but also online viewing.

Finally, in addition to the above, we had added a Tender Alert service for subscribers, starting this month, which provides information on public tenders for coins and banknotes – features, substrates, production, equipment, consultancy and other services.

We are also making our whole archive of 21 years’ worth of Currency News available to enterprise and charter subscribers.

It’s been quite a journey. We look forward to celebrating our next milestone, whatever that is (our silver anniversary, gold – even diamond?) with you all.

What Goes Round Comes Round in the Minting Industry

The start of 2024 has been marked by a series of acquisitions in the minting community.

First off was the announcement that the Mint of Finland has sold its blanks business to the German producer Freiburger EuroMetall. The transaction includes the blank factory in Halsbrücke, Germany and its stake in the Spanish blank manufacturer Compañía Europea de Cospeles SA (CECOSA).

The on-going projects for the supply of coins and coin blanks to various customer will be completed by Mint of Finland as planned and agreed with each customer, it said. But in future, it will tender for the blanks needed for its circulation coin business.

The move will, it added, enable it to focus on the sale of circulating coins and related services from one site, at Vantaa in Finland.

The wheel has now come full circle. The Mint of Finland bought what was then Saxonia Eurocoin, the largest blank manufacturer in Europe, back in 2011. Two years later, the original Saxonia owners set up Freiburger EuroMetall just down the road from Halsbrücke in Freiberg. And now they are back to owning their original company again.

Shortly after came the news that precious metal manufacturer Heimerle + Meule has acquired all shares in the Swiss company Reischauer, which produces blanks for collectors coins, medals and investment products.

According to the Group, the acquisition enables Heimerle + Meule to further expand its value chain in precious metals processing and further cements its position in the European precious metals market.

To cap it all, Heimerle + Meule then announced the acquisition of the Royal United Mint from the Belgian Heylen Group, which is the world's second largest private industrial holding company in the production of coins.

The acquisition includes the Royal Dutch Mint, which has been producing Dutch coins since 1567 and has developed into one of the largest coin manufacturers in Europe, with customers among more than 60 central banks for circulation coins. It is also a leading producer of

commemorative coins, tokens and investment coins made of precious metals. Originally owned by the Dutch government, it was sold to the Heylen Group in 2016.

The acquisition also includes Dutch Value Logistics (storage and logistics for value products), the Belgian company Tool & Dies (a manufacturer of tools for the metal processing industry) and the blank, precious metal coin and medal producer Osborne Coinage, the oldest private mint in the USA which was acquired by Royal United Mint last year (see CN April 2023).

'We have made the Royal United Mint Group a globally significant and profitable provider of official monetary coins, collector and investment coins and tokens. We are delighted to have found the ideal new shareholder in the Heimerle + Meule Group, which will continue this successful development,' said Vincent Van Hecke, CEO of Royal United Mint, and of the Royal Dutch Mint.

Royal United Mint's token business Mauquoy Token Company, which also includes the Belgian companies VistaMint, National Tokens and Royal Blanking, has been spun off into a separate independent company to supply tokens, blanks and souvenir coins.

The Heimerle + Meule Group, which represents the precious metal processing division within the Lübeck-based Possehl Group, has become one of the key players in the precious metal sector. It entered the coin business in 2013 with the takeover of the Cookson Group, including the shares of the Spanish coin blank producer Sempsa among others, and acquired a majority stake in the UK's Commonwealth Mint in 2022. And, as above, it has just acquired Reischauer too.

'The latest acquisition of the Royal United Mint with the two long-standing companies of the Royal Dutch Mint and Osborne Coinage is a further milestone for the Heimerle + Meule Group on its path to becoming a global key player in the coin business and thus underscores the long-term buy-and-build process', said the company.

Central Banks and Cash Round-Up

This month's coverage of cash information in central bank annual reports contains news from the central banks of Rwanda and Uganda.

■ National Bank of Rwanda (NBR)

Cash in circulation: in the year, the NBR says it successfully fulfilled its primary role of issuing legal tender in suitable denominations. The value of CIC grew by 6.36%, increasing from RWF 352.57 billion in 2021/22 to RWF 375 billion in 2022/23.

Trends in cash cycle management: there was a 19% increase in total cash deposits of banknotes, reaching RWF 588.51 billion, compared to RWF 494.58 billion the previous year.

Similarly, total cash withdrawals increased by 2.1% to RWF 532.69 billion from RWF 521.96 billion.

The Cash Automation Centre Project, aimed at enhancing cash management processes, was successfully concluded. The project involved automating the NBR cash vault management system, currency storage, and operations.

■ Bank of Uganda (BOU)

Cash in circulation: this grew by 487 billion Ugandan shillings, or UGX (7.1%) from UGX 6.8 trillion in FY 2021/22 to UGX 7.3 trillion in 2022/23. The net value of banknotes in circulation increased by UGX 477 billion from UGX 6.6 trillion in June 2022 to UGX 7.1 trillion in June 2023, while that of coins increased by UGX 9.9 billion to UGX 216 billion.

During FY 2022/23, the need for cash increased by 14%, from an outflow of UGX 10.2 trillion in FY 2021/22 to UGX 11.6 trillion. Deposits by commercial banks on the other hand, grew by 19% from UGX 9.4 trillion to UGX 11.1 trillion.

During 2022/23, the BOU's Currency Department processed used banknotes to the value of UGX 10.3 trillion, up by 8% over the previous year. This resulted in a 19% expansion in reissued currency returned in the period. Out of the UGX 10.3 trillion, 76% was reissued and the rest destroyed.

Currency costs: BOU spent UGX 199.3 billion on currency issuance, up by 15.6% on the previous year. Of this, UGX 190 billion was spent on banknotes (an increase of 16.6%) and UGX 9.4 billion on coins (a decrease of 0.5%).

News in Brief

■ Glory Invests in Retail Software

Cash automation solutions provider Glory Global Solutions (GGS) has announced plans to acquire 100% of the issued share capital of UK-based Flooid, provider of cloud-based unified commerce software to the retail industry, from Inflexion Private Equity Partners.

Flooid's offering is described as a powerful cloud-native, hardware-agnostic, unified commerce platform. It drives traditional point of sale, self-checkout, mobile POS, self-order and pay kiosks from a single platform, handling pricing, payment, receipts, taxation, promotions, coupons, orders and deliveries, regardless of store format or segment.

Commenting on the proposed purchase, which is subject to shareholder approval, Akihiro Harada, GGS Chairman and CEO, said, 'the acquisition of Flooid will be a significant strategic step for Glory. Their core value proposition for retailers around enhancing operational efficiency, reducing cost, delivering a seamless customer experience and having a positive environmental effect are in lock-step with those of Glory's existing solutions. The addition of Flooid will build not just on our present retail solutions portfolio, it will expand our annuity revenue streams driven by their software as a service business model.'

■ Royal Mint's Net Zero Targets Validated

The Royal Mint (TRM) has announced that its science-based net zero targets have been officially validated by the Science Based Targets initiative (SBTi), the global body enabling businesses to set greenhouse gas (GHG) emissions reduction targets in line with the latest climate science.

TRM has committed to reaching net zero GHG emissions by 2050 across its own operations and within its supply chain, with more near term targets set for 2030.

It has also joined the Business Ambition for 1.5°C campaign. Developed in partnership with the Race to Zero and supported by SBTi, the campaign is an urgent call to action from a global coalition of UN agencies, business and industry leaders.

Last year, TRM announced the launch of its local energy centre (LEC), which includes a new solar farm and wind turbine, combined heat and power plant, and battery storage facility, with the objective of generating 70% of the power used on-site at its Llantrisant plant in Wales.

It is also building a Precious Metals Recovery Plant – to recover gold from electronic waste – one of several initiatives underway to reduce its reliance on mined materials. This has recently received a boost with the announcement that it has entered into a partnership with DESA (Defence Equipment Sales Authority), part of the Ministry of Defence, to process retired and surplus defence equipment, which typically contains high levels of gold and other rare metals.

Other plans for achieving its net zero goals include new packaging innovations, deployment of an enhanced responsible sourcing strategy, and using cloud services within its technology area.

■ US Coin Production Falls

After three successive years of bumper coin production to meet COVID-induced shortages in the cash cycle, volumes of coin produced for circulation by the US Mint in 2023 finally fell back to pre-pandemic levels. A total of 11.38 billion coins were minted, 16.4% fewer than in 2022 and the lowest number since 2012.

Last year, more than 4.5 billion cents were struck, versus 6.3 billion in 2022, marking the lowest annual amount since 4 billion were minted in 2010. The 1 cent, or penny, accounted for 39.7% of the total combined coin production for 2023.

The production of 5 cents (nickels) fell by 7.8% to 1.4 billion and of 10 cents (dimes) by 13.7% to 2.7 billion. Production of the higher denominations all increased – for 25 cents (quarters) by 3.8% to 1.6 billion, for half dollars by nearly 500% to 58 million, and for dollar coins by 14.3% to 2.2 million. Although produced to circulating quality, the latter are sold only to the numismatic market.

■ Sustainability Award for Crane

Crane Currency has won first place in the Sustainability category of the Malta Engineering Excellence Awards (MEEA) 2023 for the semi-autonomous cleaning systems that form part of the pioneering solar farm at its printworks in Hal Far, Malta.

Last year, Crane Currency invested €1 million in the solar farm installation, which sits atop the banknote printing plant. Spanning 6,500 m², the solar panels have surpassed their estimated energy generation, producing 1,620,093 kWh in their inaugural year of operation, a 6.7% increase over the target of 1,519,000 kWh.

According to the company, what sets this solar farm apart is not only its scale but also its integration of cutting-edge technology in the form of the semi-autonomous cleaning systems, or cobots, within the infrastructure. These cobots, remarkably efficient in their operation, consume a mere 2 cubic metres of water for a comprehensive wash of 1,710 photovoltaic panels, ensuring maximum energy efficiency and output.



■ Kosovo Cash Regulation Could Derail Relations with Serbia

The Central Bank of Kosovo has approved a regulation for cash operations, stating that the only currency allowed for cash transactions in Kosovo will be the euro, despite the use of the Serbian dinar in the north of the country. This regulation will come into effect on 1 February.

Some 5-6% of the Kosovan population is ethnic Serbian and in all predominantly Serbian settlements the dinar is used for commercial transactions and to pay pensions and social benefits. In the four Serbian majority municipalities in the north, prices are quoted in dinars.

According to the new regulation, non-euro currencies can only be used for 'physical preservation or in bank accounts' and for international payments, but only through licenced institutions. Otherwise, only the euro can be used.

Dinars have been provided to Kosovo from the National Bank of Serbia, which has a vault in Leposavic, one of the Serbian municipalities.

Kosovo used the German mark following the break-up of Yugoslavia up until 2002, when it adopted the euro as its de facto legal currency, despite not being part of the eurozone. It declared independence from Serbia in 2008 and is not recognised by the latter as autonomous state, but EU-supported attempts to normalise relations between the two states appeared to be bearing fruit. A number of European nations have urged Kosovo to reconsider the new regulation, fearing that it will set back such attempts and have an adverse impact on the minority Serb population.

SPMCIL Records Strong Growth

Under the new leadership of Vijay Ranjan Singh, who was appointed its Managing Director last year, Security Printing & Minting Corporation of India Ltd (SPMCIL) recently released its 2022/23 Annual Report, registering a growth of 20.35% in revenue to Rs 49.18 billion, versus Rs 40.86 billion last year.

The profit before tax (PTB) from continuing operations, meanwhile, increased by over 170%, from Rs 8.63 billion to Rs 23.41 billion. This was due both to an increase in revenue from operations and the writing back of an excess provision of Rs 5.45 billion from the previous year relating to a dispute over VAT, which was settled during the year.

An additional amount of Rs 3.85 billion was received from the Ministry of Finance as an adjustment covering price differences in the rates at which circulating coins were billed in 2018/19 and 2019/2020.

The profit after tax (PAT) for 2022/23 was Rs 17.79 billion compared to Rs 6.70 billion the previous year, an increase of 165.56%.

SPMCIL's facilities include two banknote printworks (Currency Note Press (CNP), in Nashik and Bank Note Press (BNP) in Dewas, an ink factory (also in Dewas), the Security Paper Mill (SPM) in Narmadapuram and four mints (Mumbai, Kolkata, Hyderabad and Noida).

It undertook a number of modernisation and capacity augmentation initiatives during the year, including the commissioning of new banknote printing and finishing lines at both its printworks. These have increased annual banknote printing capacity to 12,500 sheets, improved quality and reduced waste. It also commissioned colour medal presses at two of its four mints (Mumbai and Kolkata)

The ink factory developed in-house colour shift ink (CSI) and collaborated with the Bhabha Atomic Research Centre to develop ink taggants, while trial samples of advanced watermarks were developed in-house at the SPM in Narmadapuram.

For sustainable development, the recycling of waste water is done from an in-house combined effluent cum sewage treatment plant (CESTP) at BNP, Dewas. The unit also recycles plywood for manufacturing banknote packing boxes.

In SPM, a zero liquid discharge system is being put in place to minimise fresh

water and utilise treated wastewater in various processes. SPM is also repairing and retrofitting the oxidation pond to improve/increase the operation of the system.

Around 40% of banknotes circulated in India are printed by SPMCIL at CNP and BNP. Moving closer to self-reliance in manufacturing all critical raw materials used in their production, SPMCIL printed 8.98 billion banknotes in the year, 12% more than the previous year. Production of banknotes per employee increased to 4.35 million, as against 3.56 million in 2021/22.

On the coin front, it registered an increase of 26.55%, producing 992.22 million units against 784 million units the previous year. However, its coin production capacity is still under-utilised – with only 13% of the total annual capacity in use last year. The decrease in the production of circulating coins in recent years is due to a reduction in the indent from the Reserve Bank of India.

In terms of security printing materials, SPMCIL produced 6,680 metric tonnes (MT) of security paper and 305 metric tons (MT) of security inks.

Trends reported in the report

The report discusses the latest trends from the banknote perspective.

One is central banks' planned shift from paper notes to more innovative, long-lasting solutions. It refers to superior varnishes and coatings, hybrid substrates, paper/polymer composites, and pure polymer substrates as some of the potential solutions.

Another is that designs are including more novel optical and covert elements while remaining straightforward, intriguing, and engaging. Future banknote designs will emphasise creativity to foster public trust and encourage banknote authentication.

Also, data analytics are increasingly being used to forecast demand, improve the cash cycle, and assess the effectiveness of counterfeiting due to developments in machine learning and artificial intelligence.

Counterfeit Corner

■ By Kerre Corbin, Currency Counterfeit Specialist

How many counterfeit banknotes are in circulation? I can't tell you how many times I have been asked this question. So, let's look at how counterfeit banknotes are found and reported.

There is a small chance that a cash handler will recognise a note as counterfeit and proceed to call the police to recover the note and begin an investigation. The police will usually store the counterfeits in an evidence locker until the case has been resolved, which could be years.

When the counterfeit is not detected at the point of sale, the retailer will deposit the money with a commercial bank. This is where most counterfeits are detected and reported to either the central bank/issuing authority, or to the law enforcement agency responsible for counterfeiting.

There are several scenarios where a counterfeit banknote is not detected or is recirculated. The most obvious would be in remote areas that do not use commercial banks and continuously use cash (including counterfeits) for purchases and then hand these notes as change to other customers. This is most common in open-air markets that primarily use cash for their transactions.

But what about a person that is selling something on an online market, such as Facebook Marketplace? The COVID pandemic has allowed counterfeiters to pass their notes to unsuspecting citizens by purchasing goods using fake notes. Will the seller report it to police (or bank) or just write it off as a bad decision and throw it away? Or maybe they will try to pass it on to a shop to get rid of it. There are also organised crime groups that produce massive quantities of counterfeit banknotes and are either storing them or have scattered them across a distribution network.

Given the three scenarios listed above, the likelihood of counterfeits in circulation that remain undetected are high. As cash is processed through the banking system, the counterfeit banknotes will be detected and removed from circulation. Having a robust cash cycle where all banknotes go through machine authentication on a regular basis will continue to remove the counterfeits and prevent them from being recirculated as genuine.

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2024: a Year of Protecting Cash

2024 has kicked off with a focus on cash, particularly a series of initiatives by central banks to safeguard access to cash.

Netherlands consultation concludes

The results of the public consultation on the Dutch legislation on access to cash has now been published. The legislation, known as the Cash Payments Act, establishes rules that contribute to the smooth operation of cash payments. The purpose of the proposal is to keep cash accessible, available, and affordable. To that end, it includes the following measures:

- Major banks in the Netherlands will be required to provide basic cash infrastructure across the nation. The largest Dutch banks (ABN AMRO, ING, and Rabobank) already do this through their joint venture Geldmaat.
- Banks will be required to offer their account holders access to basic cash infrastructure at maximum rates, although banks with fewer than 50,000 accounts will not have to do this.
- One risk identified for the continuity of cash service provision is that the transportation of cash is largely carried out by one service provider. The Dutch central bank DNB will monitor this, and large cash transport companies will have to comply with certain obligations, including periodically reporting on their financial health to DNB.
- DNB will be tasked with overseeing compliance with the obligations outlined in the bill. It will be empowered to impose sanctions, such as financial penalties.

New Zealand leads on cash innovation

New Zealand is a country that has taken an early and proactive approach to designing a payment system for the future. Cash is part of the plan, but with the Reserve Bank of New Zealand (RBNZ) looking to design a novel cash cycle. It is running a range of cash trials in 2024 in locations that have already lost their cash infrastructure.

RBNZ is looking for merchants to have an expanded role in cash distribution. The support could include helping merchants to recycle cash at the point of sale, paying them for cash out services, and facilitating frequent, affordable cash delivery and collections for merchants by consolidation in the cash system based on creating utility entities.

With this in mind, four different approaches will be trialed, all funded by the RBNZ:

- Recycling cash hubs, with ATM-like devices for cash and coins
- Non-recycling hubs, replenished by a CIT

- A collective cash service with a collective back office safe, used by multiple merchants
- An individual CIT service, whereby merchants contract individually with a CIT.

One driver for these changes is that the cost of cash has moved from commercial banks to merchants, to the extent that they now carry 68% of the overall cost of cash.

The trials will run for 18 months, with the results used to form future policy.

Ireland's proposals move forward

Ireland is also looking at legislative proposals to maintain access to cash and the Minister for Finance is presenting to cabinet an Access to Cash Bill. The primary focus is on requiring banks to provide ATMs to a given level. The plan seeks to restore ATM numbers to 2022 levels when two major banks left the retail banking market, Ulster Bank and KBC.

The goal is to have 95 ATMs for every 100,000 people in border regions and 80 per 100,000 in Dublin. The government also wants people to have the right to pay with cash for essential services and goods, for example groceries and medicines. All of this is framed in the context of financial inclusion.

Swedish parliament plans cash safeguards

The Swedish government is also keen that cash can be used to buy basic necessities. With only 8% of Swedes using cash in 2022, down from 40% in 2010, the government wants to safeguard those who find digital payments hard, a group estimated to be as many as a million people, and to ensure Sweden is able to use cash during a crisis.

A parliamentary panel has been formed to look at how it is possible to safeguard the ability of people to pay cash for certain products, particularly food, fuel and medicines. The panel is to report back by the end of 2024.

Sharp response to the UK's Access to Cash Consultation

Auriga has published a paper on the future of payments. One conclusion is that the UK's Financial Conduct Authority (FCA) needs to be braver on the regulations it is bringing forward to protect cash. The FCA's access to cash consultation on protecting access to cash is open until 8 February.

Auriga's observation is that the FCA's proposals, while requiring banks and building societies to assess and fill gaps,

or potential gaps, in cash access provision, including enabling access to both notes and coins, and access free of charge for consumers with personal current accounts, actually allow them to cut branches and ATMs. They don't impose a moratorium on closures now, meaning banks can continue to rush through their current extensive closure plans.

The proposals require the banks to undertake their own cash access assessments without any independent oversight. The requirement for banks to respond to customers and others on how the closure is not robust. Auriga argues that alternative to a bank branch so often put forward, post office counter cash services, are not a like-for-like alternative to in-branch bank service. The opening of shared banking hubs has been painfully slow just as the closure of branches has been swiftly executed. Auriga suggests that if the FCA wants to reassure the public, they should demand that no branch is closed until there is a hub or something better open to service that community.

Calculating cash use in Australia

The Reserve Bank of Australia (RBA) has published an article in its Bulletin about cash usage.

Cash in circulation has soared in recent years – the total value of banknotes in Australia grew by 22%, or \$19 billion, from March 2020 to a record high in December 2022, before falling back slightly. This followed a period of already-strong banknote demand; in the decade prior to the pandemic, demand was growing faster than GDP. And yet cash payments have declined from 30% in 2019 to 13% last year.

The article starts by explaining that transactional demand is hard to calculate and then goes on to use four different methods to establish a range of estimates. The methods, based on work by Finlay, Staib and Wakefield in 2018 are:

- The counting method
- The velocity method
- The banknote processing method
- The seasonality method.



The RBA's data shows demand for \$5, \$10 and \$20 notes has been growing at a rate of about 1% per annum since 2007. While demand for these transaction notes has crept up, demand for the store of value notes, the \$50 and \$100, has risen by about 5% per year over this timespan.

When the results of the four methods are put together, a range for hoarding of 55-80% was reached. 5-9% was thought to be lost, destroyed or forgotten about, 7-11% used in the shadow economy and 9-26% used for legitimate transactions.

Despite such wide variations, the authors draw three conclusions from their work.

First, declining transactional velocity of cash and an increased share of banknotes that are hoarded means most Australian banknotes will have a longer lifespan compared with the past.

Second, fewer banknotes used for transactions will lead to lower cash processing volumes, which -increases financial pressures across the wholesale banknote distribution industry. (Evidence of such pressures is already being seen with the CIT provider Armaguard which has a 90% market share following its merger with Prosegur – warning that it cannot continue without government support – see CN November 2023).

And finally, these results provide evidence that the pandemic has had a lasting effect on payment behaviour in Australia.

EU closer to agreeing cash limits

European Council and European Parliament negotiators have now agreed on a plan to limit cash payments to €10,000 as part of a series of measures designed to combat money laundering, including with cryptocurrency, in the proposed EU Anti-Money Laundering and Countering the Financing of Terrorism (AML/CFT) legislation. The plans will then need bloc-wide approval.

There had been fears that the limit would be much lower. A limit of €10,000 was originally proposed in 2022, subsequently revised downwards to €3,000, before being lifted last year to €7,000. Now it is back to €10,000. Member states would be given the flexibility to impose a lower maximum limit if they wish as part of the plan. In addition, according to the provisional agreement, entities will need to identify and verify the identity of a person who carries out an occasional transaction in cash between €3,000 and €10,000.

Currently the limits in individual EU countries range from €500 (Greece) to none at all (Luxembourg, Malta, Germany, Austria and Sweden).

People in the News

Jasmina Selimović has been appointed Governor of the Central Bank of Bosnia and Herzegovina (CBBH). She replaces **Senad Softić** and is the first woman to hold the position.

The Central Bank of Montenegro has also appointed the first woman as its Governor. **Irena Radović** is a former central bank official and diplomat, and replaces **Radoje Žugić**.

The same goes for the Bank of Papua New Guinea, which has confirmed the appointment of **Elizabeth Genia** as its first female Governor. She has been Acting Governor for a year, and replaced **Benny Popoitai**.

Piero Cipollone has joined the Executive Board of the European Central Bank, replacing **Fabio Panetta**, who resigned last year to become Governor of the Bank of Italy.

The Zimbabwean government has announced that **John Mushayavanhu** will take over as Governor of the Reserve Bank of Zimbabwe in April, replacing **John Mangudya**.

Argentina's President-Elect has announced that he will appoint **Santiago Bausili** as the next Governor of the Central Bank of Argentina. He will succeed **Luis Caputo**, who will become the country's next Economy Minister.



The Bureau of Engraving and Printing (BEP) has announced the appointment of **Patricia 'Patty' Solimene Collins** as its new Acting Director. Patty comes from the BEP from the

Government Publishing Office (GPO), which she joined in 2020, and succeeds **Len Olijar**.

Patty is a former Colonel in the US Army, with a military career spanning 24 years, during which time she served several tours of duty to Bosnia, Iraq and Afghanistan. In 2006, following a road accident, she lost her leg, but rehabilitated and served an additional

nine years on active duty with the US Army before retiring in 2015.

She went on to represent the United States at the 2016 Paralympics as its captain and team member, competing in the Paratriathlon. She later joined the McChrystal Group as a principal consultant, before joining the GPO.

Hansjoerg Gietz, Managing Director of Gietz, has announced the transition of the company's leadership to **Marcel Gerber**, former Engineering Director.

Gietz is a prominent player in print finishing, and its Foil Commander foil application systems are in widespread use in the currency industry. Hansjoerg, who had led the family-owned firm since 2002, will now focus on guiding the company's strategic vision in his capacity as Chairman of the Board of Directors.

Anne Jessopp, Chief Executive of The Royal Mint, has been awarded a CBE (Commander of the Order of the British Empire) for services to industry and the finance sector in the UK's New Year Honours List. She joined the Mint in 2008 and was appointed CEO in 2018. She is spearheading the transformation of the 1,100-year old company into a portfolio business, with a focus on sustainability. She is also overseeing one of the biggest changes to UK coins in 70 years, with the introduction of the new King Charles III coinage.

Marc Schwarz, CEO of the Monnaie de Paris, has been made a Knight of the Legion of Honour, France's highest civilian decoration. Marc has worked for 35 years in both the public and the private sectors, and was appointed CEO of Monnaie de Paris, France's oldest company, in 2018.

Mark Cartwright has been appointed Executive Director of the Mint Directors Association (MDA), replacing Acting Executive Director **Ross Macdiarmid**, who has now retired.

Mark has spent the past 12 years in the industry as the Executive General Manager of Sales, Marketing & Innovation for the Royal Australian Mint (RAM), having oversight of product design and development, sales, B2B relationship management, marketing, innovation and education and visitor services.

Looking Back, Looking Forward – What Does 2024 Have in Store?

■ As has been customary at the start of the year in the past, we have invited stakeholders and other participants in the cash community to give their views on key trends and likely developments for the coming year.

This year, we hear from a broad cross-section of representatives who between them represent most stakeholder groups – Kathleen Young from the Federal Reserve, Doris Schneeberger from the European Central Bank, David Hensley from Enryo, Ruth Euling from De La Rue, Stuart Mackinnon from NCR Atleos, Marci Chavez from the International Association of Currency Affairs and Mark Cartwright from the Mint Directors Association.

Visibility and Collaboration Go Hand in Hand

■ Marci Chavez, Executive Director, International Association of Currency Affairs (IACA)

IACA represents all the key stakeholders in the cash industry including central banks, banknote printers (both independent and state owned), substrate and feature suppliers, equipment manufacturers, mints, and cash distribution and management companies.

Our members span the world from heavy cash user countries to minimal cash user countries. We surveyed our members in 2023 asking what issues were top of mind. ‘Challenges and opportunities in the cash cycle’ dominated. We believe this will be the continued focus for the industry in 2024.

For those countries where cash use is declining, the central banks have realized accessibility, acceptability and availability are at risk – so they must look to their cash cycle stakeholders or potentially legislation, to help support the cash infrastructure.

For those countries that are still heavy cash users – their cash cycle stakeholders are facing heavy costs, and the central banks are seeking opportunities for improving efficiency and effectiveness.

In both cases – an efficient, resilient, and sustainable cash cycle is KEY – and central banks seem to be making that their focus more than ever before.

Throughout 2023, IACA held a number of member discussion meetings to better understand what topics and themes within the cash cycle were of most interest. Visibility was the stand-out theme. Many central banks really have no idea of the extent of their cash cycle – who delivers cash, when, and how often. To exacerbate the issue there is little exchange of data across the system. Visibility throughout the entire cash supply chain requires collaboration and many central banks are now bringing their cash cycle stakeholders to the table to learn more.

The central banks that have better visibility (usually low cash use countries) are also working with their stakeholders – particularly the retailers, recognizing their important role in the cash system to ensure cash remains easy to access and accepted.

In summary – visibility and collaboration go hand in hand, and we will surely see efforts around these key themes in 2024 and beyond, and IACA will be helping to facilitate discussion and progress ideas with our membership.



Demand for ATMs Evolving and Growing

■ Stuart Mackinnon, Chief Operating Officer, NCR Atleos

We saw cash transaction volumes on the 80,000 ATMs we operate up by 12% in the last year.

In addition, particularly in Advanced Economies (AEs), banks are investing in self-service equipment such as cash recyclers and ‘Integrated Teller Machines’ (ITMs) in response to fewer bank branches and the wish of banks to free up staff to work with customers. In Emerging Market Economies ATM networks are growing fast as banks rush to keep up with the growth in bank accounts. To date that growth has led to more cash usage, with ATMs as the preferred means of accessing it.

There has also been a clear move in favour of ‘ATMs as a service’ as banks, particularly those without very large scale ATM networks, want to have a predictable, and lower, cost base and also be able to control the quality of their ATM services. It also helps them upgrade their ATM capabilities without the major upfront capital costs associated with that.

While some countries have gone down the utility model for ATM provision, we have introduced Allpoint, a surcharge free network that allows banks to move cash services into the retail environment, combined with other banks, but still retain their branding.

Interestingly sustainability has moved centre stage in the last six to nine months, appearing in tenders in a way it hadn’t before. We have been working on initiatives to reduce power use and the life cycle impact of our ATMs. While recirculation policies are long established, recycling of banknotes close to the point of use is relatively new. We are offering customers guidance on both.

We believe cash demand will remain steady overall in 2024 and that the trend to ATMs as a service, investment in more capable machines and a strong focus on sustainability will be centre stage this year.



What 2024 Holds for Cash?

■ Doris Schneeberger, European Central Bank

25 years ago, the euro became the single currency in 11 countries, with euro cash being introduced in 12 countries three years later, in 2002. The euro is the second most important currency worldwide, serving the economy and making life easier for more than 350 million people in 20 countries now. It is therefore also exposed to worldwide developments and challenges such as the pandemic, war, energy crises, that have impacted euro cash production and demand. Digital means of payments have also gained importance. However, as our payment attitudes study in the euro area (SPACE) shows, cash remains a core means of payment for European citizens.

So what does 2024 hold for euro cash? First of all, we hope for a year with steady banknote production and demand where we can focus on further improving the environmental impact of our banknotes, on continuously improving production and supply and on keeping a close dialogue with our stakeholders.

The key topic to address throughout 2024 is access and acceptance of cash. Only by guaranteeing good access to cash and its broad acceptance as a means of payment, can we ensure the trust of citizens in their currency.

Here, the EU proposal for a regulation on the legal tender of euro coins and banknotes is a milestone to safeguard the role of euro cash which must be accepted as a means of payment everywhere in the EU and accessible for both citizens and businesses. The ECB will actively contribute to the progress of this legal act, in particular by working on the indicators to measure access to cash.

A key reference point for all these discussions are our studies on the payment behaviour in the euro area. Towards the end of 2024, we will publish our payment attitudes study SPACE 3 presenting the latest data on the use of cash as well as assessments on access and acceptance of cash.

To ensure the trust of citizens, we also work on the development of new euro banknotes to make them fit for the future. Here, we are focussing on technical innovations of the product, on reducing the environmental impact of the banknotes and the cash cycle and, last but not least, on the redesign of the notes. After choosing 'European culture' and 'Rivers and birds' as possible themes for future euro banknotes, in 2024 we will select the motifs that best illustrate these themes. Following this, work will start on preparing a design competition.

No matter what we will see in 2024, we are fully committed to keeping cash accepted and available.



Outlook for Cash a Complex Tapestry

■ David Hensley, Director, Enryo

The outlook for the cash industry in 2024 is a complex tapestry woven with threads of decline, resilience, and potential adaptation. Here are some key things to watch out for.

Continued Decline

Cashless adoption: The trend towards cashless payments is likely to continue, driven by the convenience and security of digital transactions. Mobile wallets, contactless payments, and peer-to-peer transfers will chip away at cash usage, especially in urban areas and among younger generations.

Regulation: Governments may introduce policies discouraging cash use, such as limiting cash transactions for large amounts or levying surcharges on cash payments. This could further accelerate the decline of cash.

Unexpected Resilience

- **Unbanked populations:** A significant portion of the population across the globe still lacks access to bank accounts or reliable internet connectivity. This demographic will continue to rely on cash as their primary means of payment.
- **Emergencies and infrastructure disruptions:** Cash remains a crucial fallback option in emergencies or when digital infrastructure fails. Power outages, cyberattacks, and natural disasters can highlight the continued importance of physical currency.
- **Cultural preferences:** In some cultures, cash holds a strong social and symbolic value. These preferences may resist the shift towards cashless transactions, slowing down the decline of cash in certain regions.

Potential Adaptation

- **Cash innovation:** The cash industry is not sitting idle. Central banks and mints are exploring innovations like polymer banknotes, enhanced security features, and anti-counterfeiting technologies to make cash more secure and durable.
- **Cash-in, cash-out networks:** Expanding networks of ATMs and cash deposit-withdrawal points can maintain access to cash in remote areas and for unbanked populations.
- **Collaboration with FinTech:** Partnerships between cash-based services and FinTech companies could unlock new possibilities, such as cash-to-digital conversion services or cash-backed digital wallets, blurring the lines between the two worlds.

Overall, the future of the cash industry in 2024 remains uncertain. While the decline is likely to continue, its pace and impact will vary depending on factors like regional differences, regulations, and cultural preferences. It's also important to remember that cash, despite facing challenges, will likely maintain its relevance for a significant portion of the population for the foreseeable future.



A Year to Plan Ahead and Adapt

■ Ruth Euling, Managing Director Currency, De La Rue

Predicting the future is always challenging. 56% of chief economists currently expect the global economy to weaken in 2024 whilst another 43% foresee unchanged or stronger conditions, according to the World Economic Forum. This isn't a surprise when considering the uncertainty ahead.

The Red Sea crisis is disrupting supply chains. Paper substrate supply has already faced challenges after the loss of approximately 30,000 tonnes of paper substrate capacity in recent years. So, it's important that issuing authorities plan further ahead (compared to normal) to ensure their needs are met.

It's especially important to plan further ahead in the context that several new banknote series were delayed between 2020 to 2023. This has led to a growing backlog of overdue banknote design projects.

Three years ago, in the January 2021 edition of Currency News we correctly predicted the ongoing transition to polymer banknotes – it came true with 29% of all issuing authorities and 18% of all denominations now on polymer. SAFEGUARD® celebrated 10 years, billions of banknotes and over 100 notes last year. This significant trend towards polymer is set to continue.

Three years ago we also predicted the ongoing industry-wide focus on our environmental impact – an area where competition truly drives us all to be better. This trend is also set to continue. We're proud to be the first currency provider to sign up to the Science-Based Targets Initiative and the only one recognised as a European Sustainability Leader by the Financial Times. We expect others to follow us.

The nuance around sustainability is shifting though and the conversations are being more mature. Water usage will gain more focus in 2024. Polymer banknotes use 96% less water than paper banknotes throughout their lifecycle – a fact that will become increasingly important. We also predict a shift in emphasis on banknote waste as our industry explores how 'waste' can enable necessary objects without requiring virgin materials.

As we advance in this area we need to recognise that the costs and time associated with growing sustainability demands can be significant. As an industry we need to work together to ensure we become more sustainable in a considered and fair way.

And finally, some well-known security features are nearly 20 years old and pattern-based movement is no longer state-of-the-art. We are seeing a growing younger population that don't know how to authenticate banknotes. We know this comes with an increased risk of counterfeits being passed as genuine notes. We predict a shift towards novel image-based effects that can't be replicated commercially and aid public education by being intuitive to authenticate.

These new security features will be based on the latest surface-relief micro-structure and holographic technologies. True depth effects, smartphone interactivity and complex movements will be cleverly integrated into banknotes. Intelligent design, especially when combined with the untapped potential of SAFEGUARD® polymer, will unlock new and engaging design and security feature possibilities.



Focus Moves from Reconnection to Unity

■ Mark Cartwright, Executive Director, Mint Directors Association

As the incoming Executive Director of the Mint Directors Association (MDA), I am looking forward to consolidating the newly formed association to enable it to deliver upon its mission. The MDA is the ideal vehicle for all industry participants to connect, exchange information and demonstrate models of good practice for the betterment of the entire minting ecosystem.

In reflecting on 2023, I consider it a year of re-connection after nations re-opened their borders post-pandemic. Despite many of us becoming increasingly comfortable with utilizing technology to maintain business (and personal) relationships, a virtual meeting is still no substitute for the real thing.

This was evidenced by the outstanding participation at the successful 2023 Mint Directors Conference (MDC) hosted by the Royal Canadian Mint in Ottawa. 255 people across the full breadth of industry were in attendance and immersed themselves over the two-day summit.

Key themes included the importance of the maintenance of cash as payment option for citizens around the world, as well as the growing expectations relating to environmental, social and governance responsibility from both citizens and governments alike.

MDC provided the perfect platform for conference attendees to exchange perspectives, hear from industry experts, rekindle old connections and establish new ones.

Building on the 2023 theme of re-connection, in my view a key focus area for 2024 should be unity. There is much to be gained by working collegiately, casting a critical collective eye across the entire system to identify opportunities to establish our credentials as an industry of high integrity, environmental good practice and creators of significant public value.

The MDA will be working tirelessly to be the forum where meaningful exchanges take place and to promote awareness of the mint industry's role, contribution and significance during 2024. I sincerely hope that you can support us on this journey.

I will leave you with a quote I enjoy from Freeman Dyson, an eminent American Physicist: 'the purpose of thinking about the future is not to predict it but to raise people's hopes.'



Latest Cash Trends in the United States

■ Kathleen Young, Executive Vice President and Chief of FedCash Services, Federal Reserve



US currency and coin in circulation continues to grow year-over-year, with \$2.35 trillion dollars circulating in 2023¹. Cash demand has stabilized post-pandemic and remains strong both domestically and internationally, and cash continues to be the third most used payment method².

For the last three years, cash use has changed little, with consumers using cash for approximately one in five payments (19%) since 2020. Consumers' store-of-value cash holdings have continued to exceed pre-pandemic levels.

Through collaborative efforts with the US Coin Task Force, the coin supply chain has stabilized after nearly three years of circulation challenges following the pandemic. Coin circulation patterns normalized in 2023, aided by demand that is below historical averages. The Federal Reserve continues to work with coin supply chain partners to understand how coin usage patterns have changed in the post-pandemic economy.

The Federal Reserve Banks offer FedCash® Services to help ensure that depository institutions have sufficient supplies of currency and coin to meet public demand. Through FedCash Services, we are committed to advancing technology and delivering greater standardization of services across the Federal Reserve System to improve efficiency, security and risk management of currency and coin processing.

A recent example of modernization within FedCash Services includes the development and deployment of a new fleet of machines, sensors and software to support Federal Reserve cash processing operations for the next 20 years. These machines include a common detector interface (CDI2) creating an international standard for sensor integration.

The recently launched Federal Reserve E-Manifest Service, part of the US cash industry's Cash Visibility initiative that support GS1 Standards, greatly improves transparency and efficiency of cash supply chain logistics. The FedCash E-Manifest Service replaces manual process of matching paper manifests for currency deposits and orders at Federal Reserve docks with technology that enables scanning and electronic exchange of data.

Investments like these support both scalability and resiliency strategies for FedCash operations, and in both cases the use of industry standards benefit not just the Federal Reserve, but the domestic and international cash community as well.

Over the next several years, the Federal Reserve Banks will modernize processing capabilities by replacing aging equipment and driving further efficiencies in the space, and we will also be preparing for the release of a new family of US banknotes. Our success in these efforts, meeting our Federal Reserve mission and remaining good stewards of the public's funds, will depend on close collaboration, unprecedented coordination and strong relationships among all US cash industry stakeholders. Ultimately, collaboration with industry partners is essential to building a resilient cash supply chain that meets public demand.

1 Federal Reserve Board: Federal Reserve Balance Sheet – Factors Affecting Reserve Balances – H.4.1 – www.federalreserve.gov/releases/h41/

2 Federal Reserve Bank of San Francisco: 2023 Findings from the Diary of Consumer Payment Choice (May 5, 2023) – www.frbsf.org/cash/publications/fed-notes/2023/may/2023-findings-from-the-diary-of-consumer-payment-choice/

Speaker Highlight – 2024 Banknote Conference

The Banknote Conference is the industry's premier technology-focused event with a long and rich history of hosting the world's technology experts from central banks, printing works, and industry suppliers and providing an unparalleled opportunity to discuss emerging trends, technologies, and innovation.

So say organisers Currency Research, who have unveiled an impressive list of speakers for this year's event, which takes place in Fort Worth, TX from 13-16 May.

The program is a dynamic blend of activities featuring four pre-seminar workshops, and two tours; the first offering an exclusive visit to the newly expanded Bureau of Engraving & Printing facility, the second concluding the conference with a tour of the Dallas Federal Reserve and closing reception.

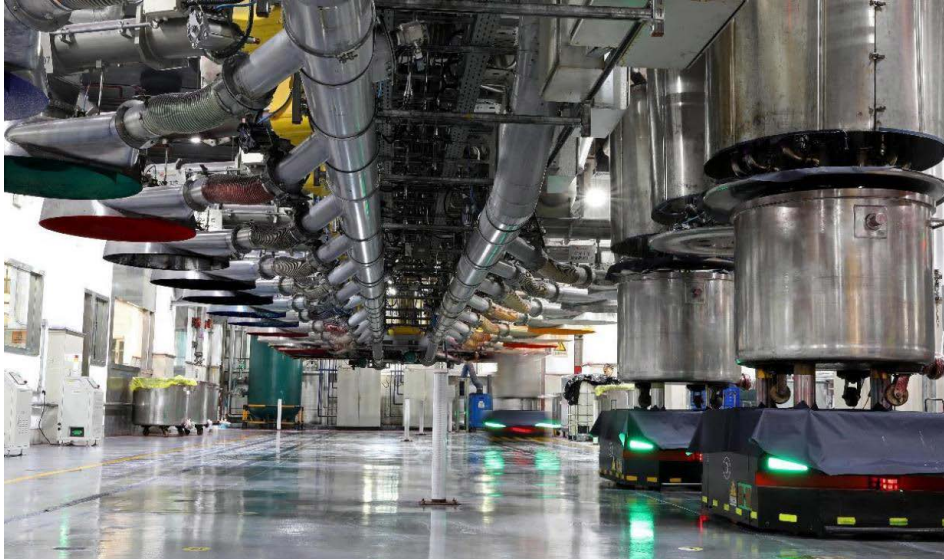
On the main stage, meanwhile, Currency Research anticipates the participation of over 50 distinguished speakers. Some of those who have already confirmed their involvement are:

- Chief Lynn Malerba, US Treasury Department as Keynote Speaker
- Kathleen Young, the Federal Reserve as Keynote Speaker
- Rosbert Humphrey, Director Currency Management Department, Eastern Caribbean Central Bank
- Márten Gomer, Senior Advisor Banknote Department, Swedish Riksbank
- María del Carmen Alvarez, Treasury Head of Department, Central Bank of Uruguay
- Christine Alupo, Director Currency, Central Bank of Uganda
- Diego Oller, Gerente General de Producción, Casa de Moneda Argentina
- Georges Chalhoub, Director Cash and Operations Department, Banque du Liban
- Jan-Mark Geusebroek, Policy Advisor – Cash Department, De Nederlandsche Bank
- Iain Brooks, Director Product Manager, Bank of Canada
- Linda Rodríguez and Guilmar Moncayo, Banco de Mexico.
- Paloma Varela and Sylvain Calluau, European Central Bank
- Dana Safiulina, National Bank of Kyrgyzstan
- Pairote Balun, Central Bank of Thailand
- Nana Koberidze, Head of Cash Circulation and Currency Production Division, National Bank of Georgia
- Mahesh Kumar, BRBNMPL

For the full program and further information, visit banknoteconference.com

CBPM Undergoes Transformation from Information Technology to Intelligence Technology

Currency News™ reported in November 2023 on the Guangzhou Banknote Printing Company and its ‘intelligent’ factory. Now China Banknote Ink Co (CIBC) is following on with an Integrated Operation Centre (IOC).



CIBC, a subsidiary of China Banknote Printing and Minting Corporation (CBPM), produces security inks, protective coatings and digital inkjet inks, and has now adopted many of the innovations being used in Guangzhou in the context of making inks.

Overview

The IOC collects and uses real-time data about the production flow, energy consumption, environmental surveillance, plant safety, etc., drawing data from different systems – video surveillance, firefighting, peripheral border, utilities, environment, access control, vehicle flow.

This data is used to create a digital twin across every part and process of the plant, including the buildings themselves, which is then displayed on screens in the form of diagrams and data sets and used to manage every aspect of daily production.

End-to-end data

While the process steps of creating ink are well known, CIBC is highly automated, and data driven in all it does. In the feeding area, auto-guided vehicles (AGVs) drive automatically. The AGVs, carrying buckets, feed an exact amount of materials into each tank based on the pre-set formulas. Each mill is individually computer controlled showing different changing parameters, including temperature and pressure, and the real-time state of machine operations.

Control is achieved by over 1,000 devices and facilities having sensors linked by the Internet of Things (IoT). They measure, in real-time, details such as the changing surface temperature of inks in production. Any abnormality or emergency can be analysed and tackled in good time. This IOC system makes visible on screens every production process, equipment operations, the flow of staff and vehicles, as well as energy consumption etc., allowing all to be monitored and optimised.

Investing for the future

What has been achieved so far is only the first step for the IOC. CBIC continues to invest in the digital modeling of key devices and facilities to cover all aspects of internal management of machines, staff, and production lines.

When talking about the future, Mr Zong Nan, Deputy General Manager, refers to how the big data sets collected by the IOC will allow ‘SMART Management’ and ‘Fast Reaction’.

An example of intelligence technology being used in product storage and logistics is when finished products are moved in and out of the warehouse. Attached RFID sensors are detected, and IOC will accurately record the amount of moved products. When the finished products are transported to different customer locations by trucks, people in the IOC can monitor the situation during the transit, with the

location and real-time video image shown on the screen.

When used in the context of quality control, intelligence technology is used to control the execution of production processes. If there is an error, the IOC will respond and intervene to avoid any quality problem.

Mr Zong Nan gives an example of how, using self-learning AI algorithm, software will be able to spot people entering areas that don't have the correct safety protection equipment and set off alarms.

CBIC has used the IOC data to enhance management processes across different areas. Data sharing in a highly visual real-time format has allowed the development of a ‘backbone’ network of management, improving the overall efficiency of the organisation’s management. For staff working in CBIC, they may not have a clear picture of the blueprint of this network, but they should feel the positive changes it has brought.

Mr Zong Nan made the comment that the IOC is contributing to ‘management analysis and decision making by gathering data in the system.’ He also said that the system’s ‘modular design for new procedures and new business can meet the needs of business development in time.’

In two years time a new modern intelligent logistics center will open that will include enhancements such as the intelligent storage of materials, automatic transfer, and automatic packaging and management of outbound products.



CIBC sees this as an important new element of its intelligent production and operation map. The vision is that materials will be transported directly from the warehouse to the production area through the overhead sky corridor, and the finished products will also be automatically transported to the warehouse by AGVs.

Final thought

The goal of all this innovation, some in place, some still planned, is that through the automatic acquisition, collaborative sharing, analysis, and judgment of information data, CBIC can make quick and timely decisions, arrangements, and disposals for many things from production to management, with full process tracking and tracing of products from raw materials, production scheduling, manufacturing, testing, warehousing, and logistics.

Cash Sustainability Forum 2024

COP 28 in December last year provided evidence that the climate is changing, and we are struggling to do what is needed to mitigate or adapt to the change. Given this is the only planet we have, and we are all on this place together, sustainability is relevant to us as individuals and to our work.

In that context, Reconnaissance, co-publisher of Currency News™, will hold its second Cash Sustainability Forum (CSF) 24-26 June in Frankfurt in Germany. Dedicated to cash and the cash cycle, the CSF aims to help central banks and the cash industry to minimise the environmental impact of cash.

The call for papers is open. CSF is for central banks and every stakeholder involved in the production, issue and circulation of banknotes and coins. The organisers welcome papers that detail work done, and results achieved to reduce the environmental impact of cash.

In the run up to the CSF, Reconnaissance will publish a paper focusing on the recycling and recirculation of cash. If cash can be recycled close to the point of exchange, then less fossil fuels are used, and circulation velocity can increase. The paper will provide detailed information

on how to do this well. It is being written with the support of central banks and stakeholders throughout the cash cycle. A workshop at the CSF will cover its findings.

The CSF is being organised in association with the Mint Directors Association, the ATM Industry Association (ATMIA) and Security Ligue.

The CSF and the white paper are the latest steps in Reconnaissance's long running programme of sustainability work, starting with the publication 'Cash: a Roadmap to Sustainability' which preceded the November 2022 CSF in Edinburgh. Since then, it has published a white paper, supported by three webinars, on how to dispose of unfit banknote at the end of their lives. It has also supported the International Association of Currency Affairs (IACA) with a webinar about including sustainability in tenders for the purchase of banknotes.

www.cashsustainability.com

ODDS Continues Big Debate

The programme for the third Optical and Digital Document Security™ (ODDS) conference – which takes place from 8-10 April 2024 in Lisbon, Portugal – is now available.

The conference – the successor to the renowned Optical Security Document event formerly held in San Francisco – will continue the debate around physical, digital and virtual security documents, notably in relation to the transition from physical identity and fiduciary documents to digital records and transactions. All against a backdrop of rapid advances in game-changing technologies such as artificial intelligence (AI) and quantum computing.

ODDS 2024 will feature two half-day seminars, 30 papers, and a panel discussion, presented by a range of organisations active in the optical and digital security field. These include security document producers, younger, specialist companies establishing their role, academic and other research organisations, and start-ups.

The conference opens with a keynote speech from Jordan Brough of the US Homeland Security Investigations Forensic Laboratory, who will explore how AI could be used to create convincing fakes, and what government issuers should be doing to fortify their products against AI-enabled fraud.

A selection of other topics covered during

the conference include:

- 'Artefactometry by artificial intelligence for marked objects', by Advanced Track & Trace.
- 'Optical variable devices on secure documents – where next?', by Reconnaissance International.
- 'Micro-optics in the fourth dimension', by Rolling Optics.
- 'A computer-generated holography solution', by Kwangoon University, South Korea.
- 'Development of innovative machine-readable luminescent features', by SICPA.
- 'Utilizing two-colour colourshifts for highest security', by OVD Kinegram.
- 'Protection through personalized watermark-like features' by MOZAIQ Switzerland.
- 'Particle-based colour change security feature', by Diametryx.

The conference will be accompanied by a table-top exhibition, offering delegates a 'show, tell and handle' experience to complement the 'tell' experience in the presentations.

opticaldigitalsecurity.com.

A Full Programme for HSP EMEA in Sofia

The next HSP EMEA 2023 event will be held in Sofia, the capital of Bulgaria, on 4-6 March 2024 and the organisers are expecting a sell-out event, with key decision makers from central banks, suppliers and printers coming together to discuss and learn about a range of topics from cash usage and trends in the region, sustainability and resilience in print to physical and digital technologies, security features and design.

The event will be preceded by three seminars – two of which relate to currency. One from counterfeit expert Kerre Corbin will provide an in-depth analysis of a major counterfeiting case in the UK (Operation Timerbrier).

The other, on the Future of Cash, will be led by Antti Heinonen, former Director of Banknotes at the ECB and Guillaume Lepecq, founder of the CashEssentials think tank. It will focus on understanding the changing cash environment and what stakeholders are doing to optimise the cash cycle and ensure the future viability and sustainability of cash.

The main event will be formally opened by the Bulgarian National Bank and the opening session will also hear from the ECB on its new report into the environmental footprint of euros. After the initial session, the programme then splits into twin tracks covering currency and ID.

The four currency-dedicated currency sessions cover Latest Developments, Design and Security, Production and Sustainability and Anticounterfeiting Solutions. The final session brings both currency and ID back together to look at some of the latest innovations spanning both sectors.

The event will also host the annual Regional Banknote of the Year awards, a conference dinner, post-conference football match and optional tours to Oberthur Fiduciaire's printworks, those of the Bulgarian National Bank and Demax Holograms.

www.hsp-emea.com.

Gifting Money – My Personal Experience

■ By Xiu Ding Chen, Currency News consultant

This is the first in a series of articles that explores the cultural aspect of money that goes beyond its function as a means of payment or store of value. Many societies have a long-standing tradition of gifting money (banknotes and coins) to mark auspicious occasions – births and birthdays, weddings and other special events, where the value of the gift is as much social as it is financial.



We start the New Year, appropriately, with a personal view of the tradition of gifting money to celebrate Chinese New Year, and its origins.

Chinese New Year is the festival that celebrates the beginning of a new year on the traditional Chinese lunisolar calendar. This year, it will fall on Saturday, 10 February, and the Year of the Wood Dragon will start. The Dragon symbolises power, nobility, luck and success in traditional Chinese culture and will bring growth to everyone.

The Chinese New Year is traditionally a time to feast and visit family members.

When I recall the Chinese New Year celebrations of my childhood in Shanghai in the early 1980s, vivid memories come flooding back. The joy on people's faces, the aromas and sounds from the kitchen. The stylish new clothes I proudly wore, the tons of cakes and fruits brought by visitors. But the most exciting moment for me was to wake up on the New Year's morning and look under my pillow, where my grandparents had placed red envelopes containing brand new banknotes on New Year's Eve.

In the following days of the Chinese New Year, I received more red envelopes from other family members. This ensured my

annual 'income' for sweets and treats. It was always a challenge to negotiate with my parents how much of the money I was allowed to keep and how much I had to hand over to them.

Now, I have my own income and am married, so I no longer receive red envelopes for Chinese New Year. However, thanks to new technology, we have introduced the tradition of digitally 'fighting' for money. In my father's family, we have a large WeChat family group with over 20 members. Some family members create digital red envelopes with symbolic value in the group chat, and everyone tries to grab them in the first second and transfer the amount into their digital wallet.

It's really fun and creates a very unique and strong sense of togetherness, particularly as my family is spread across several countries around the world. Although we don't see each other physically, we feel connected at that moment.

Of course, despite the widespread use of digital payments, it is still very important to hand over the physical red envelopes for those who can meet in person.

The legend of Yasui Qian

The money which elderly people would give to those who are still in education during the Chinese New Year is often

called Yasui Qian, meaning money which suppresses ghost.

According to a legend, there was a small demon with black body and white hands, named 'Sneaky', which appeared every year on the 30th night of the New Year to harm people. It would touch the head of a sleeping child three times, after which the child would fall ill and turn into a demented fool.

People were afraid their children would be harmed by the evil spirit, so they lit lamps and stayed awake during the night.

There was a family named Guan living in Jiaying province. On the night of the 30th day of the year, Mr and Mrs Guan, afraid that the demon would harm their child, let him stay awake and play. The child used red paper to wrap eight coins and then unwrapped the package again. When bedtime came, he put the eight wrapped coins beneath his pillow. The couple did not dare to close their eyes and stayed awake next to him. In the middle of the night, a gust of wind blew open the door of the room and blew out the lamp, the little man with his white hand touched the child's head, at which point the pillow emitted a bright light, the demon hastily retracted his hand screaming and fled.

The Guan family told everyone about the story of the eight coins wrapped in red paper to scare off the spirit. From then on, everyone learnt to wrap eight coins in red paper and give them to their children to put on their pillows after the New Year's Eve dinner, and sure enough, the children were never harmed again. It turned out that the eight coins were changed by the eight immortals, who secretly helped the children to scare away the evil spirits.

Therefore, people call this money '压祟钱 – Ya Sui Qian', money which suppresses ghost. Since the word '祟 Sui' and the word '岁 Age' have the same pronunciation, it became known as 'New Year's Money'.

Over time, parents began to give their children new banknotes with interconnected serial numbers to mark New Year. This is because the term '联 (lián) sounds similar to '连' (lián), implying auspicious wishes for the children to '连连发财' (lián lián fā cái), meaning continuous prosperity, and '连连高升' (lián lián gāo shēng), suggesting continuous success and advancement.

Part of the culture of giving is the use of the red envelopes to enclose the money (a custom widespread in Asia) – which themselves are often a work of art. According to a survey published by a Chinese Wealth management company, the amount of each envelope varies from 50 RMB to 3,500 RMB (c. \$7-\$490). The amount is usually an even and thereby lucky number.

Note And Coin News

China Celebrates Year of the Dragon

The People's Bank of China (PBC) has issued a 20 yuan commemorative legal tender banknote to celebrate 2024's Lunar Year of the Long (Chinese Dragon), which begins on 10 February. 100 million notes have been printed, with purchasers limited to 20 notes each.



The 70 x 145mm note is printed on polymer in gold ink with a reddish tinge, denoting jubilation and auspiciousness. Both sides are printed in a vertical orientation. A large gold, green, and red rampant dragon dominates the front of the note. The numerical denomination is in colour-shifting green ink. The back features a trio of children doing a dragon lantern dance holding traditional lanterns, one of which is dragon shaped.

A holographic stripe appears on the front of the note. When viewed at an angle, multicoloured dynamic images of the Ruyi cloud pattern (Ruyi means 'wish comes true'), twining branches of a peony and the Chinese character for good fortune (福) can be seen.

The note also includes a transparent window, in which can be seen the above Chinese character for good fortune and the Ruyi flower in gold.

The Chinese zodiac cycle accommodates 12 animals, each of which is said to reflect specific human attributes. The animals are the rat, ox, tiger, rabbit, dragon, snake, horse, sheep, monkey, rooster, dog, and pig.

In addition, the PBC has issued a set of commemorative coins in gold, silver and copper alloy.

The bimetallic alloy coin has a face value of 10 yuan (\$1.4) and is legal tender. 120 million have been produced. The reverse side features an image of a Chinese long that combines traditional Chinese paper-cutting art with decorative New Year elements, complemented by flower lanterns and lingzhi – a mushroom symbolising good fortune in China.

The front, in common with the precious metal coins, features a combination of auspicious traditional Chinese designs.

According to local reports, demand for both the banknotes and coins has been exceptional, with pre-orders hitting record levels and some immediately selling for higher prices on second-hand trading platforms.

In other news...

The Central Bank of Argentina has approved the printing of 10,000 and 20,000 peso banknotes, amid continuing high inflation. The current highest denomination is the 2,000 peso.

The 10,000 peso will feature portraits of Manuel Belgrano (19th century politician and military leader considered one of the founding fathers of Argentina) and María Remedios del Valle (independence fighter known as the Mother of the Homeland) on the front, and an artistic recreation of the Pledge of Allegiance to the Flag, which took place in February 1812, on the reverse.

The 20,000 peso will feature a portrait of Juan Bautista Alberdi, the 19th century political statesman, on the front and scenes from his childhood on the reverse.

The new notes are expected to go into circulation in June.

Bank Al Maghrib, Morocco's central bank, has introduced the second note in its new series – the 200 dirham.



The theme is economic and industrial development achieved under HM King Mohammed VI's leadership. On the front is his portrait, along with the Mohammed VI Bridge. The reverse shows the Mohammed VI Tower and the new Marrakech-Ménara Airport, along with designs symbolising the development of industry and digital technology in Morocco.

The 200 dirham features a Motion windowed security thread and SPARK® Live for the denomination numeral.

The notes were designed and produced by the Moroccan printworks and Bank Al Maghrib subsidiary Dar As Sikkah.

The Central Bank of Solomon Islands (CBSI) has upgraded the security of its \$100 and \$50 banknotes, replacing the transparent Optiks® window feature with an embedded NEXUS™ 18mm wide micro-optic stripe from De La Rue that extends the full height of the notes. The stripe features the denomination numeral, along with the text 'CBSI', and the images of a shark and crocodile, taken from the Solomon Islands coat of arms.



The Bank of Papua New Guinea has issued a commemorative banknote and coin to mark the 40th anniversary of its establishment. The 100 kina note is the same as its circulating counterpart, but incorporates an overprint of the Bank's logo, 10 million pieces have been produced, along with 10 million commemorative 2 kina coins.

The National Bank of Georgia (NBG) will issue a commemorative 50 lari banknote in 2025 to mark the 30th anniversary of the national currency, and is holding a competition for its design.

The competition is open to both resident and non-resident individuals and entities. The note will be produced on polymer and will contain a transparent window, holographic or micro-optics stripe, optical variable magnetic ink. The dominant palette must be multi-coloured and noticeably different from the colours of existing lari notes. The Bank has specified a contemporary design for the front of the note, reflecting the national currency and Georgia as a modern European state, while the design on the reverse should be traditional, depicting the history of Georgian money and statehood.

The closing date for design sketches is 11 March. There will be prize for the winning design of GEL 10,000.

More information can be found on the NGB website – <https://nbg.gov.ge/en/media/news/the-national-bank-of-georgia-announces-a-competition-for-the-selection-of-the-first-collec>

...Note And Coin News

■ The State Bank of Pakistan (SBP) is to introduce new banknotes across all denominations, a move prompted by a rise in counterfeiting, particularly of the highest denomination Rs 5,000.

The notes will feature new designs and serial numbers and incorporate state-of-the-art international security features, SPB has said.

As with the National Bank of Georgia, the SPB is holding a competition to elicit innovative and thematic design ideas for the new series. The Art Competition is open to local artists, designers and art students, who have until 11 March

to submit their designs, which can be for one, more or all of the seven denominations. The SBP is suggesting themes including, but not limited to, social and cultural identities, demographic diversity, climate change and environment protection, economic development, natural landscapes, architectural heritage and national symbols.

The top three designs for each of the existing seven denominations will be recognised and awarded cash prizes. Those designs will then be shared with professional banknote designers and the final designs for submission to the Federal

government will be selected through a competitive process.

The SBP has stated that it intends to complete the process of issuing the new series within the next two years. Any decision on the withdrawal of the existing notes will be taken once the new banknotes are issued and in circulation in sufficient quantities.

The current series is in denominations of Rs 10, 20, 50, 100, 500, 1,000 and 5,000 note. The designs date back to 2006, although there have been several subsequent security upgrades.

Events

4-6 MARCH 2024
HIGH SECURITY PRINTING EMEA
 Sofia, Bulgaria
hsp-emea.com

8-10 APRIL 2024
OPTICAL & DIGITAL DOCUMENT SECURITY
 Lisbon, Portugal
opticaldigitalsecurity.com

13-16 MAY 2024
BANKNOTE CONFERENCE
 Fort Worth, TX, USA
events.currencyresearch.com

3-5 JUNE 2024
HIGH SECURITY PRINTING LATIN AMERICA
 Santiago | Chile
hsp-latinamerica.com

24-26 JUNE 2024
CASH SUSTAINABILITY FORUM
 Frankfurt, Germany
cashesustainability.com

28-30 OCTOBER 2024
THE COIN CONFERENCE
 Lisbon, Portugal
thecoinconference.com

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