



# CURRENCY NEWS™

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## De La Rue Goes Private in £263M Atlas Deal

De La Rue, the 211-year-old British icon known for printing some of the world's most secure banknotes, is turning the page. In a move that marks the end of its public market journey, US-based Atlas Holdings (through its vehicle ACR Bidco Limited) will acquire the company for £263 million in an all-cash deal.



Under the terms of the agreement, Atlas is offering shareholders 130 pence per share. This offer represents a 19% premium on the share price prior to the announcement and a 38% premium over the price before De La Rue's announcement last year to sell its Authentication Division.

The deal, set to be executed via a court-sanctioned scheme of arrangement, is expected to wrap up in the third quarter of 2025.

Following the sale of the Authentication Division to Crane NXT for £300 million, De La Rue's activities will be confined to banknote printing, polymer substrate production and the development of threads and optical security features. Atlas says it sees a rare opportunity. With De La Rue exiting the brand protection and digital traceability space, it's a leaner, sharper business. One that still holds global reach, deep trust, and technical leadership in currency printing.

For Atlas, this is a classic play. The Connecticut-based private equity firm specialises in buying and then revitalising industrial companies with long-term value but short-term headwinds. In De La Rue, they see strength in need of support – a high-potential business weighed down by public market pressures.

The acquisition also comes with reassurances. Atlas has signed a Memorandum of Understanding with De La Rue's Pension Trustee to protect members of the defined benefit scheme. There are no plans for drastic operational changes, although a modest 4% workforce reduction is expected, mostly linked to the company's reshaped structure.

The De La Rue board, advised by Deutsche Numis, unanimously supports the offer and plans to recommend that shareholders vote in favour. Atlas has also secured irrevocable commitments and a letter of intent from shareholders.

## ... De La Rue Goes Private in £263M Atlas Deal

representing 40.3% of De La Rue's issued share capital.

An alternative buyer was also in play – PSFC Entities – who made an offer of 125 pence per share in January, and increased this to 135 pence per share after news of the Atlas offer broke. But the offer was preliminary and conditional, with no committed financing in place, and therefore no certainty that a firm offer would be made.

The acquisition by Atlas is expected to close in the third quarter of 2025, subject to regulatory and shareholder approvals. Upon completion, De La Rue will be delisted from the London Stock Exchange and will operate as a private entity within Atlas's portfolio.

De La Rue CEO Clive Vacher called the acquisition 'the beginning of an exciting new chapter', one that secures long-term stability for customers, staff and shareholders'. Atlas is the right partner, and he looks forward to working with Atlas and its teams to deliver on this exciting opportunity, he added.

### An end to uncertainty

The delisting brings to an end a near-decade of uncertainty for De La Rue, which once towered over the industry. Whilst it remains a dominant force in banknote design and production, the need to chase short-term results to keep shareholders (a notoriously short-sighted bunch) happy put it at an acute disadvantage amongst banknote producers, as did the transparency requirements of a publicly listed company that meant it had to share not just its successes, but also its failures, to the world at large.

The attributes needed in the banknote market – long term planning and commitment, and the patience of an elephant – were not open to De La Rue in the way they have been to its competitors, who have all prospered in recent years. De La Rue, soon to be freed from the chilling effects of public ownership, will hopefully be able to do likewise again under its new owner.

# The Consumer Decides

**On 4 April Microsoft turned 50 years old. Amazon is just over 30, Meta is 21 and the iPhone is just 18. Will they last as long as Microsoft?**

Today only 30 companies in the UK's 100 largest companies by market capitalisation listed on the London Stock Exchange were in the top 100 in 2000. The situation is similar for the S&P 500, which lists the largest US companies based on market cap, profitability, and liquidity, with only 80-100 companies remaining from 2000. However, it is interesting to note that Microsoft has remained among the top ten largest companies in the S&P 500 from 2000 to 2025.

Compare those figures with the currency industry. Monnaie de Paris lays claim to be the oldest mint, founded in AD 864. The Royal Mint, founded in 886, is a relative newcomer.

Putting China's paper money to one side, banknote papermakers and printers are rather newer, evolving out of general paper making and printing. The papermaker Fabriano was founded in 1264, Tumba in 1760 (now part of Crane Currency) and Crane itself in 1775. The printer Orell Füssli was founded in 1519, De La Rue in 1813, Goznak in 1818, Oberthur in 1842, G+D in 1852 and Canadian Bank Note in 1897.

### Why do some companies come and go, why do some endure?

The CEOs of companies involved in making cash will, no doubt, tell you it is due to their commercial acumen, strategic decision making and operational excellence. Perhaps the answer lies in the underlying technology of cash, the business case behind it and the usefulness of the product.

Coins and banknotes are a monopoly of the state. The value and role of currency is such that risks cannot be taken with its supply, security or quality. Long term relationships built on trust are required between central bank and supplier. In addition, currency is self-funding through seigniorage. The result is that the relationship between currency producers and central banks is unusually stable, long sighted and high value. The rhythm of the relationship is long and steady.

If you look at the 'white fiver' issued by the Bank of England in 1793 through until 1957 virtually without change, and today's banknotes, the technology involved is similar to the difference between an analogue phone and an iPhone. The race to keep ahead of the counterfeiters has seen advanced materials in substrates, inks, applied features, machine readability and production methods. The pace of change continues – see sidebar.

Much has been written about the strengths of coins and banknotes, from privacy

to resilience to their accessibility. There are constant arguments about whether digital payment methods can truly replace cash, and the risks of easy convenience leading to its demise in a fit of absent minded carelessness.

Cash has already outlasted cheques, it looks like it will outlast the plastic card, and it is fighting a mighty rear-guard action against the digital wallet, instant payments, central bank digital currency etc.

### Will cash producers last?

We have seen many fine long standing cash producing companies, both private and state owned, close. Nobody is owed a living. But there is something about cash based on its unique strengths, and that there is something almost human about it, which suggests it will be around for a long time yet.

Machines are good, but they don't connect with and allow connection between humans as cash does. Keep cash relevant, secure and available, and suppliers will give Microsoft et al a run for their money.

A previous Technical Director at De La Rue, John Haslop, would lecture the sales team not to under price their banknotes because there is more technology in a banknote than an iPhone. A banknote is a combination of up to nine different layers of material and print in perfect register. A security thread can have nearly a dozen layers of material in a 30 micron thick product, all in perfect register.

A banknote must operate in the desert and frozen wastelands, whether kept in a wallet or somewhere indescribable, whether put through a washing machine or left in the heat and UV glare of the sun or buried in the garden for years.

It must work when there is power and when there isn't, whether the user is literate or illiterate, if they can see or cannot, whether they have a PhD or didn't go to school, whether you are a child or very senior. Machines, trained professionals and the completely uninterested must know if the note is genuine.

A coin and banknote goes into circulation without a use by date and without a user manual. It must work from the first day of issue to whenever it is returned. It is a legal document. It has to work. It has to be accepted. And it has to be pretty, or beautiful, or at least handsome!



# New Currency for Curaçao and Sint Maarten

**A country that has issued not just a new family of banknotes and coins, but a whole new currency, is Curaçao and Sint Maarten, where the Caribbean guilder (Gg) went into circulation on 31 March, replacing the Netherlands Antilles guilder.**

The change has been a long time coming, given that the Netherlands Antilles – comprising Curaçao, Aruba, Bonaire, Sint Maarten, Sint Eustatius, and Saba – was dissolved in 2010, with Curaçao and Sint Maarten becoming autonomous countries within the Kingdom of the Netherlands. It was then decided that the two countries would form a monetary union with a shared central bank and one currency – the Caribbean Guilder (Cg) – but the old currency continued to circulate whilst stocks lasted.

The new series is denominated in banknotes of Cg 10, Cg 20, Cg 50, Cg 100, and Cg 200 and in coins of 1, 5, 10, 25, and 50 cents, and Cg 1 and 5. The theme is 'The World Under the Sea' and both notes and coins have been designed with a distinctive Caribbean identity, celebrating the natural beauty, cultural heritage, and biodiversity of the two island nations.

The colourful new banknotes were design and produced by Crane Currency with a landscape front and portrait reverse. Each features a different form of marine life and significant building or beach. Security features include a watermark with electrotpe, MOTION SURFACE® stripe, SPARK Flow® in the shapes

of shells which change from blue to green, and 3mm wide RAPID HD® Detect micro-optics threads.

The coins have been produced by Royal Canadian Mint. The designs include depictions of iconic landmarks, coat of arms, King Willem-Alexander's effigy, orange blossoms, and marine imagery (seashells, turtles, and ocean waves). There are similar but distinct designs for Curaçao and Sint Maarten, with both sets circulating interchangeability on each island.

The coins are made from multi-ply nickel plated steel utilising cyanide free bronze plating. Each coin has a unique edge finish to allow easy distinction between denominations for the visually impaired. In addition, the higher denominations include unique features such as bi-metallic and tri-metallic constructions.

The Caribbean guilder is pegged to the US dollar at the rate of \$1 to Cg 1.79, and the exchange rate between it and the Netherlands Antilles guilder is 1:1. The two currencies will co-circulate until 30 June 2025, after which the latter will be taken out of circulation.

More information about the new notes and coins will be provided in the May issue of Currency News™.



## Komori Secures 1st Banknote Order with BEP

**Komori Corporation has announced that it has won a major order for multiple banknote printing systems from the Bureau of Engraving and Printing (BEP). This order was awarded following a comprehensive bidding evaluation process and, whilst the company has supplied other security presses to the BEP, this is thought to be the first exclusively for banknotes.**

Although the company hasn't given details of the order, it is understood that it relates to sheetfed offset machines destined for installation at the BEP's Western Currency Facility (WCF) in Ft Worth, Texas.

According to Steve Craig, Group General Manager of the company's Security Press Business Group, 'we are truly honoured to have received this large-scale order from the Bureau of Engraving and Printing under the US Department of the Treasury. We look forward to building a long-term relationship of trust with BEP. Moving forward, we will continue to dedicate ourselves to delivering the finest printing technology to customers around the world.'

Koenig & Bauer Banknote Solutions has also won an order for sheetfed offset machines for installation at the BEP's new currency facility (the so-called District Area Currency Replacement Facility, or DCRF) in Beltsville, Maryland. This comes on top of the order they announced last year for a series of new intaglio lines for both facilities.

However, uncertainty now surrounds the future of the new \$1.4 billion DCRF, a state-of-the-art facility intended to replace the ageing 100+ year old printworks in the centre of Washington DC, which was due to be completed by the end of the decade. It is rumoured that it will fall victim to the swingeing cuts to federal budgets being implemented by the new Trump administration and its Department of Government Efficiency (DOGE). Construction work has been suspended whilst 're-evaluation' takes place, intimating that it could be shelved altogether.

Part of the rationale for the new printworks, and indeed for the new equipment in WCF as well, is the new Catalyst currency series, production of which is already underway with the first of the new notes due for introduction in 2026, and subsequent notes issued at two yearly intervals thereafter.

There was speculation that this series – which will feature new anti-counterfeit features as well as tactile features for the visually impaired – would also be axed, but apparently it is still going ahead, albeit with some likely modifications.

# News In Brief

## ■ Tuvalu Gets Its 1st ATMs

Tuvalu is home to 11,000 people and now, for the first time, five ATMs as well, thereby opening up electronic banking for the tiny Pacific island's inhabitants.

The ATMs, along with 30 POS terminals, have been installed on Funafuti, the country's main island, including at its airport.

Until now, Tuvaluans have had to physically visit a bank to get money, and lengthy queues form outside as workers withdraw salaries on pay day. Shops will also be able to process electronic payments for the first time.

The cash machines will initially only accept prepaid cards, however. The Bank plans to introduce debit and credit cards that can be used internationally at a later date. Tuvalu is a group of nine small islands in the South Pacific which won independence from the United Kingdom in 1978, and which uses the Australian dollar as its currency.

## ■ Health and Safety Benefits of Going Cashless

UK researchers have identified a possible unexpected benefit of the rise in contactless payments: fewer children are turning up at hospitals after swallowing coins or sticking them up their noses.



In a paper titled 'Coin-cidence? Have Cashless Payments Reduced the Incidence of Upper Aerodigestive Foreign Body Insertion' the authors tracked the rise of contactless payments against a fall in foreign body (FB) retrieval procedures involving the alimentary tract, respiratory tract and nasal cavity

Covering the period 2000-2022, they found that, particularly following the fall in cash payments from 2012, there was a 'statistically significant' decline in the number of procedures for removal of FBs performed – by 29%.

Coins are implicated in more than 75% of swallowed FBs in children under the age of six, said the researchers. A review of endoscopies for FBs shows that 66% of

the ingested FBs were coins. The fall could help save the UK's health service around £2.8 million per year.

## ■ Spain Considers Cash Rounding

Spain is reportedly the latest country considering cash rounding, after a proposal has been tabled to eliminate the one and two cent coins. According to EuroWeekly, the proposal is actively being discussed with the European Central Bank, with phasing out of the lowest denomination coins across the eurozone 'increasingly likely' although there is yet to be official communication on the matter.

The news closely follows the German National Cash Forum's cash rounding advocacy last month, which asked the country's Federal Ministry of Finance to 'advocate for, and press ahead with, a binding statutory rounding rule in Germany'. The Forum also suggested that the rule should be applied across Europe as uniformly as possible.

## ■ TRM Takes Equity Stake in Metal Recovery Firm

The Royal Mint (TRM) has made an equity investment in Excir, the Canadian clean-tech company that is its partner for precious metals recovery.

TRM first partnered with Excir in 2020, and in 2024 opened a multi-million-pound state-of-the-art facility at its manufacturing site in Llantrisant, South Wales, using Excir's technology to extract gold from electronic waste. (It is estimated that approximately 7% of the world's gold is trapped in circuit boards from end-of-life electronics such as TVs, laptops and mobile phones).

The strategic investment, which involves an approximate 8% equity stake in Excir, strengthens the partnership and aligns the companies' interests in expanding the Precious Metals Recovery business, says TRM. In particular, it secures a more sustainable and circular source of precious metals, whilst addressing the growing environmental challenge of e-waste.

As part of the investment, TRM has also gained a seat on Excir's Board of Directors, contributing to the future direction of the business.

The Precious Metals Recovery plant has the capacity to process up to 4,000 tonnes of printed circuit boards (PCBs) from e-waste each year. The recovered gold is currently being used in luxury jewellery collection, 886 by The Royal Mint.

## ■ GardaWorld Completes Private Buyout

GardaWorld Security Corporation, the world's largest privately-owned security

services company, has announced the closing of the company's recapitalisation, announced late last year, which values the business at C\$14 billion (see CN November 2024).

This follows the acquisition of the majority of the equity interest of its largest investor, BC Capital, which has retained a small stake. Founder, Chairman, President and CEO Stephan Crétier, together with select members of management, now hold approximately 70% of the equity. Global investment and private equity firms, including BC Capital, hold the rest. The transaction represents the largest private buyout in Canadian history.

GardaWorld offers guarding services, AI-enabled security technologies, risk management, CIT services and cash automation solutions (the latter through its subsidiary Sesami).

According to Crétier, 'the closing of this transaction strengthens our ability to continue transforming and shaping the global security landscape. We are fortunate to have investment partners, stakeholders and customers who recognize the same potential in our business. Whether addressing complex security challenges or local security needs, we deliver solutions that ensure resilience for all our clients across the globe.'

## ■ Zimbabwe on Track to Return to Mono Currency

The Governor of the Reserve Bank of Zimbabwe (RBZ) has stated that the central bank is making concerted efforts to ensure delivery of new Zimbabwe Gold (ZiG) banknotes 'in the shortest possible time', and that steps toward de-dollarisation are making progress.

The gold-backed ZiG currency was launched a year ago in denominations of 10, 20, 50, 100 and 200 ZiGs (and 1, 2 and 5 ZiG coins). Even though – so far – only the ZiG 10 and 20 are actually in circulation, he said that RBZ is working on enhancing the quality and design of the banknotes in line with international standards, but that the process could take from six months to two years.

The Zimbabwe dollar was abandoned in 2009 following years of hyperinflation, and a variety of other currencies have been used ever since, notably the US dollar. The new currency was introduced as the first stage in de-dollarisation, and so far appears to be working, with the currency and the price of basic goods relatively stable, paving the way to a transition to a mono currency regime in the next five years.

Local currency transactions currently account for about 35% of all settlements in the economy, representing an increase from around 15% last year.



## Sensors and Polymer Fuel Spectra Growth

**Spectra Systems reported a strong performance for fiscal year 2024, which for the first time included the financial results for Cartor Security Printers (CSP), which it acquired in December 2023.**

Revenue for the year was \$49.19 million, an increase of 142.5% over 2023, driven primarily by pre-production contracts, strong demand for the company's materials from a long-standing central bank customer, and the revenue generated by CSP.

Adjusted EBITDA (before stock compensation expenses) was up by 78% to \$14.93 million. Net income was \$8.52 million, an increase of 40.9%.

The company's Physical and Software Systems business, which develops features and sensors for high speed banknote authentication, achieved sales of \$30.96 million and EBITDA of \$13.3 million, up by 70.44% and 65.26% respectively. The company noted its optical materials business had significant growth potential, notably from its enhanced and upgraded smartphone technology which has been validated on an industrial scale by CSP.

The Secure Transactions business, responsible for gaming software, made an EBITDA loss of \$0.8 million on revenue of \$1.956 million, compared with an EBITDA profit of \$0.13 million on revenue of \$1.67 million in 2023. The company noted it expected to achieve significantly higher revenues and positive earnings in 2025.

The Security Printing business (ie. CSP) achieved revenue of \$16.27 million and adjusted EBITDA of \$1.64 million, but noted \$0.265 million of additional development expenses in 2024 to complete substrate requirements, including the incorporation of a new security feature.

CSP now anticipates receiving full qualification of its polymer substrate with built-in covert security – Fusion™ – by a central bank that has been evaluating the substrate for over two years. This will enable it to restructure the business around polymer substrate production and to market it to a select group of customers in areas where contracts are long term and Spectra's technology can be the differentiating factor to win business and increase margins.

According to CEO Nabil Lawandy, 'the combination of the sensor revenues expected with the execution of the manufacturing contract, the expected sensor maintenance contract in 2025, the increased opportunities for optical materials with smartphone verification, and downstream polymer substrate sales, give the Board confidence for significant increases in revenues, cash generation, and continued long-term growth'.

## People in the News

■ **Abdul Qader al-Husriya** has been appointed Governor of the Central Bank of Syria. He takes over from **Maysa Sabreen**, who was the first woman to hold the post and who was appointed as interim Governor following the ousting of the former President, Bashar al-Assad, last year.

■ **Karim Souaid** has been named as the new Governor of the Banque du Liban. He replaces **Riad Salameh**, who left in 2023 after 30 years in the post and who is currently awaiting trial for corruption. **Wassim Mansouri** served as the interim Governor pending the appointment of Souaid.

■ Veridos, the joint venture of Giesecke+Devrient and Bundesdruckerei, has announced the departure of its CEO, **Marc-Julian Siewert**, who is moving on to become CEO of the G+D

subsidiary secunet. His replacement is **Bernd Kümmerle**, currently G+D's Managing Director of Banknote Solutions. The changes will come into effect in July.

■ Blanking manufacturer and powder technology provider Reischauer has appointed **Thomas Koeninger** as its new Managing Director. He was previously International Production Director at Bulmint.

Reischauer was acquired by Heimerle + Meule (now HM Precious Metals) in late 2023 and now forms part of its Minting Division. The Managing Director of HM Precious Metals, **Thomas Weiss**, has announced his appointment as Head of the Minting Division and member of the Board of the parent company.

## Giesecke+Devrient Reports Strong Growth

**Giesecke + Devrient (G+D) reported its highest revenue in the company's history, with sales of €3.132 billion for 2024 surpassing its previous record of just under €3 billion in 2023. The company also reported incoming orders of €3.3 billion, again an all-time high, suggesting that the growth strategy is set to continue.**

Organic revenue growth was 5% (6% at constant exchange rates). Operating profit (EBIT) of €187 million was a 6% improvement over 2023, and also a record. G+D, in its press release, stated that its future-proof portfolio proved to be a strong driver of business success in the challenging economic times.

G+D was founded in 1852 and today has a workforce of more than 14,000, and 123 subsidiaries and joint ventures in 40 countries. The business is divided into three segments – Digital Security, Financial Platforms and Currency Technology – across which the so-called SecurityTech group offers integrated security technology that closely links digital and physical solutions. This portfolio, says the company, enables it to strengthen the trust of citizens and consumers in the digital age and is actively shaping the digital transformation of society.

Central to the company's strategy is combining and simultaneously implementing the digital and sustainable transformation of society. In its Transition Plan, G+D outlines its path to achieving global net zero emissions by 2040 and, in its results, noted that the short-and long-term climate targets of the plan were validated by the Science Based Targets initiative (SBTi) for 2024.

The company states that it is continuously working to improve its profitability, optimise processes and leverage synergies, as well as making targeted investments in its IT infrastructure and portfolio. It is utilising cutting edge technologies such as artificial Intelligence (AI) to streamline internal processes, expand its customer offering and fuel continued business growth.

### Outlook for 2025

The company is confident that, with its three robust segments and resilient portfolio, it is well-positioned for the future, confident about the 2025 fiscal year and anticipates continued revenue growth.

According to Ralf Wintergerst, Chairman of the Management Board and Group CEO, 'our strategic transformation is yielding positive results. We are continuing our growth story and will continue to make investments. SecurityTech is one of the major growth industries of the future'.

(For more insight into the G+D's digital transition, see the interview with Wolfram Seidemann, in the February 2025 issue of Currency News – 'A Foot in Both Camps – How G+D is Navigating the Digital Transformation in Money').

# Central Banks and Cash Round-Up

Our periodic series of articles covering cash information in central bank annual reports is playing catch-up, particularly as it is around this time of year that a number of central banks issue their annual reports for 2024 (and in some cases, previous years).

This month, we turn our attention to Latin America (Belize, Peru, Paraguay and Ecuador) and Europe (Denmark and the ECB).

## ■ Central Bank of Belize (CBB)

The CBB has focused on strategic initiatives to improve the services that the institution offers to the country. By the end of 2023, it had completed a technology upgrade to improve the speed and quality of its operations, reporting, and analysis, as well as moving forward with the tendering of a new family of notes (which were unveiled this January).

**Cash in circulation:** BZ\$685.5 million was in circulation at the end of 2023, an increase of 13.7% from the BZ\$603.8 million reported in 2022. The most widely circulated denominations, the BZ\$50 and BZ\$2, accounted for 23.5% and 19.1%, respectively, of the total. The use of coins also rose significantly, increasing by 8.1% and totalling BZ\$43.3 million

Despite the rise in circulating coin, banknote usage dominates the economy, with 93.7% of all circulating currency comprised of banknotes. In addition, cash in domestic banks' vaults also increased from BZ\$80.7 million to BZ\$98.8 million in 2023.

## ■ Danmarks Nationalbank (DNB)

Towards the end of 2023, DNB launched several cash initiatives, and continued to work on these in 2024.

**New banknote series:** ensuring cash remains a secure means of payment, DNB is developing a new and upgraded banknote series, due for release in 2028-29. Leading up to the new series, the current banknotes are being updated, and security-enhanced versions of the 100 and 200 krone banknotes were issued in 2024.

The new series will feature four prominent Danes – Hans Christian Andersen, Tycho Brahe, Inge Lehmann, and Arnarlunguaq – with sea-themed motifs on the reverse. Design work began in collaboration with illustrators Signe Parkins and Thomas Pålsson, and Crane Currency was chosen to translate the illustrations into high-security technical designs.

**Banknote recall:** older banknotes (1944-1997 series) and the 2009 (ie. current) series 1,000 krone note will cease to be legal tender after 31 May 2025. In 2024, DNB received DKK 18.8 billion in recalled notes, mainly the 1,000 krone.

**Coins:** following Queen Margrethe II's abdication, a special 'Passing of the Crown' coin was issued in November 2024. Coins bearing King Frederik X's portrait are expected in late 2025. DNB has also signed a new four-year coin production agreement with Spain's FNMT, replacing the Mint of Finland which has closed down.

**Cash in circulation:** total circulation ended the year down by 20.3% at DKK 48.2 billion. This has been driven by the recall of the older banknotes and the 1,000 krone. The value of the other 2009 series banknotes actually increased, by DKK 3 billion, of which DKK 2.9 billion was in 500 krone banknotes alone. Much of this increase is believed to result from exchanging 1,000 krone banknotes for the 500 krone.

The total value of coins in circulation was DKK 6.1 billion, which has remained stable.

**Counterfeiting:** the number of registered counterfeit banknote cases dropped by half, from 1,499 cases in 2023 to 750 cases in 2024, mostly involving 1,000 krone notes.

## Banco Central del Ecuador (BCE)

Ecuador has been dollarised since 2000 and there does not appear to be any interest in returning to a national currency, even though the country ranks as the Latin American nation that has the highest allegiance to cash as a payment option. 49% of its citizens prefer cash as their principal method of payment, and especially, the usage of coins for small transactions.

As such, the BCE must conduct a series of special initiatives to make certain that there is enough cash on hand to enable citizens and businesses to pay for the goods and services they use.

**Cash in circulation:** the BCE imports dollar banknotes and coins from the US to distribute as needed by the economy. In 2023, new banknotes worth \$2.7 billion were imported, an increase of 11.45% compared to 2022.

The circulation of coins has also seen a steady annual increase, mainly as a result of higher coin deliveries by the BCE to the public and increasingly lower quantities being returned. The national coins are known as Ecuadoran dollar cents (centavos de dólares del Ecuador) and are in the same denominations as US cents.

**Production:** given COVID-induced restrictions on cash production in the US, the BCE instigated a programme for minting Ecuadorean cents to meet growing demand at least for an initial three-year period (from 2023-2025). This programme is being carried out in collaboration with the UK's Royal Mint and is expected to insert \$44.3 million into circulation, replacing more than 287 million coins at a cost of US\$10.6 million to the institution. But it will also generate savings in seigniorage for the Ecuadorian state of \$33.7 million.

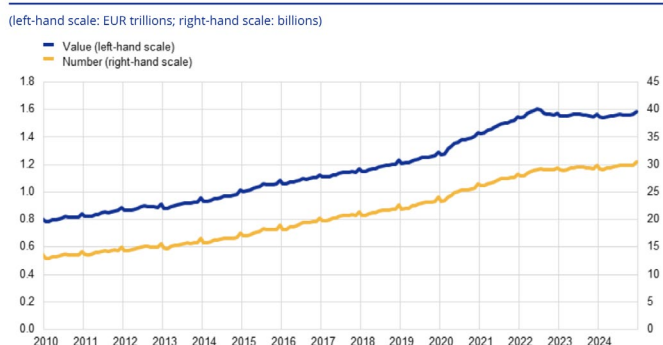
**Destruction and exchange:** when banknotes are worn out, the BCE withdraws them from circulation and sends them to the US to be replaced by new ones. In 2023, banknotes worth \$2.55 billion were returned, 3.22% less than in 2022.

The BCE exchanges damaged banknotes for new ones, as well as banknotes for coins and vice versa. In 2023, banknote and coin exchange transactions through customer service windows totalled \$95.19 million, 5.19% less than in 2022, while coin dispensers exchanged \$15.23 million, 19.76% more.

## ■ European Central Bank (ECB)

Cash remains the most common payment method among European citizens. By the end of 2024, the circulation of euro banknotes increased moderately, amounting to 30.5 billion banknotes with a total value of approximately €1.6 trillion. This represents a 2.4% increase in volume and a 1.3% increase in value compared to the previous year.

Number and value of euro banknotes in circulation



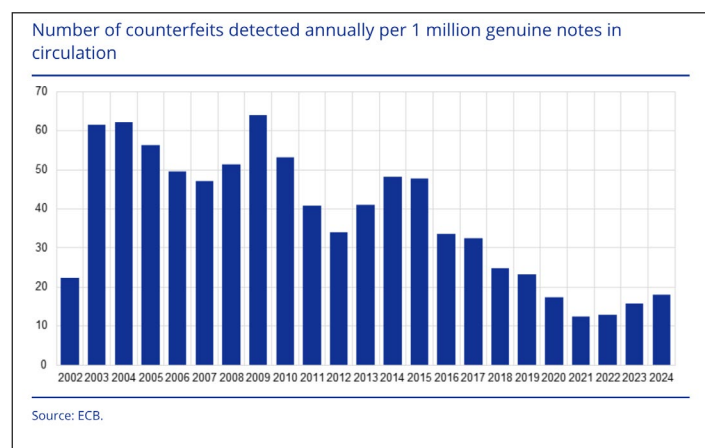
Source: ECB.

The trend of recycling cash through deposit-capable ATMs continued to grow. An increasing number of commercial banks are handling banknote recirculation in-house, which reduces the need to send cash back to central banks. This model has improved efficiency and lowered the environmental impact of cash logistics.

In addition, the circulation of euro coins saw steady growth. In 2024, the net issuance of euro coins in the euro area was similar to the trends observed in the previous two years, totalling 3 billion coins with a face value of €953 million.

**Counterfeiting:** the ECB reported detecting 554,000 counterfeit euro banknotes in 2024, which is equivalent to just 18 counterfeit notes per million genuine banknotes in circulation.

Most counterfeit notes were of poor quality, easily identifiable by users who applied the simple ‘feel, look, tilt’ method. The ECB attributes the continuing low rates of counterfeiting to improved security features and public awareness campaigns. Additionally, the use of banknote authentication machines and enhanced staff training have bolstered early detection efforts.



**New euro banknotes:** progress was made in 2024 on developing the next generation of euro banknotes. The ECB's Governing Council selected two thematic concepts – ‘European Culture’ and ‘Rivers and Birds’ – to guide the design of the new series. A public design contest will be launched in 2025, with final designs expected to be selected by 2026.

The new banknotes will incorporate advanced security features and be more environmentally friendly. The ECB is exploring the use of 100% organic cotton paper for the substrate by 2027, along with improved production techniques to reduce environmental impact. This initiative is part of a broader strategy to modernise the euro while ensuring that cash remains safe, inclusive, and sustainable.

According to the ECB report, the actions it has taken in 2024 underscore its dual commitment: preserving the integrity and relevance of cash while embracing innovation in digital payments. As Europe transitions into a new era of physical and digital currency, the groundwork laid in 2024 will shape the future of how Europeans conduct transactions.

## ■ Banco Central del Paraguay (BCP)

In 2023, the BCP published its renewed 2022 Annual Report to mark the 70th anniversary of its foundation as well as the 80th anniversary of Guaraní banknotes (PYG).

**Cash in circulation:** this jumped by 2.5% in 2022, to 6.4% of GDP. The total value of banknotes and coins in circulation at the end of 2022 was PYG 18.5 trillion or roughly US\$2.7 billion.

The total number of banknotes in circulation was 333.87 million, of which 45% was made up of the largest denomination, the PYG 100,000. The total number of coins in circulation was 895.06 million and the largest share was for the PYG 100 coin, with 33.9%, while the other three coin denominations, the PYG 1,000, PYG 500 and PYG 50 had, respectively, a 23.1%, 22.3%, and 22.7% share of the total distribution.

**Destruction:** In order to ensure that banknotes in circulation are in good condition, the BCP permanently withdraws banknotes whose physical condition has deteriorated due to use and the effects of time, replacing them with new banknotes. Deteriorated banknotes are destroyed under a strict counting and security control process, supervised by the BCP's Internal Audit Department and the Comptroller General of the Republic. In addition, the BCP website has a link to a ‘live’ banknote destruction video that can be accessed by anyone during banknote destruction operations.

Banknote destruction has been on the rise, with 16.3 million destroyed in 2020, 42.9 million in 2021 and 50.8 million in 2022. The face value of the banknotes destroyed in 2022 was PYG 2.4 trillion.

## ■ Banco de la Reserva del Perú (BCRP)

Peru's economy had some highly volatile moments in 2023, from climactic disasters due to the El Niño coastal rains and severe droughts in the south of the country as well as significant socio-political conflicts. Surprisingly, the BCRP's well-placed monetary policy resulted in inflation that was much lower than expected in 2023, resulting in a reduction in consumption and private investment, abnormally low since 2021.

**Cash in circulation:** this represented 7.5% of GDP at the end of 2023, a figure that has been reducing steadily from 9.9% in 2020 to 9.5% in 2021, and 8.5% in 2022. The value of banknotes in circulation at the end of 2023 was PEN 83.2 billion, compared to PEN 86.1 billion at the start of the year. By volume, the total number of banknotes in circulation was 1.2 billion. The most widely used banknotes were the PEN 100 and PEN 50, representing 49.4% and 19.9%, respectively, of all banknotes in circulation.

For circulating coins, which include nine commemorative circulating coins that have been regularly minted since 2020 as well as two new ones in 2023, the BCRP noted a growth of 5.4% and 4.4%, respectively, in annual coin volumes and in monetary value.

**Counterfeiting:** in October 2023, the police confiscated almost 4 million PEN 20 banknotes from the old series (the new series was introduced between 2021 and 2023). In fact, part of the need for a new series was due to frequent forgeries of the optically variable ink used, as well as threads being removed and partially applied on counterfeit banknotes. In the previous series of banknotes the ink used was SPARK® and in the latest family, this was changed to SPARK Live. The older, peelable security threads have been replaced with RollingStar®, Galaxy® and RAPID® Detect machine-readable threads for improved security.

**Destruction:** the 2011 series has continued to co-circulate with the new series. Worn or damaged banknotes must be returned to the BCRP for destruction and, since 2019, any banknote that is missing the security thread will not be accepted for trade for an equivalent banknote of the new series. In 2023, 415.6 million banknotes with a face value of PEN 19.1 billion were destroyed. The PEN 10 and PEN 100 represented 28.9% and 25.9%, respectively, of all banknotes destroyed. On the coin side, the BCRP destroyed 14.6 million coins with a total value of PEN 6.8 million.

**Right to use cash:** BCRP is responsible for promoting the use of different methods of payment, and as such, has moved towards digitalisation of many payment systems. Consequently, the number of digital transactions per capita per year has risen from 152 in 2022 to 266 in 2023.

Peruvians, however, are heavy cash users, with over 90% of the population stating that their preferred method of payment is in cash.



# Orell Füssli – Combining Trust and Technology in an Increasingly Digital World

In the February issue of Currency News™, we ran an interview with Wolfram Seidemann of Giesecke+Devrient on how the company is navigating the digital transformation in money. But G+D is not the only banknote solutions provider diving into the digital world. Orell Füssli, with a legacy spanning more than 500 years, is also firmly established as a leader in high security printing. And, like G+D, it is expanding its expertise to include digital security solutions as well.



Michael Kasch

Currency News™ spoke to Michael Kasch, Managing Director of Orell Füssli Security Printing (OFS), who detailed the company's expansion into digital solutions, and how banknote printers are well-placed to lead the charge by coupling digital technology with the all-important trust factor.

**Q:** First, could you tell us a little about your background.

**A:** My background is in chemistry, which continues to help me today in understanding difficult or complex technical products, processes and services. I started in the 1990s developing optically variable pigments for Wacker Chemie, which turned out to be very useful as anti-copying materials. The company first began developing inks with G+D, with this growing sector coming to the attention of the rest of the industry, including SICPA. They subsequently purchased the business, and me with it.

I then became Managing Director for SICPA Germany in 2005. Around 2009, I took on additional sales activities and responsibilities on behalf of the Lausanne parent company and became responsible

for banknote solutions sales in the German speaking countries and, subsequently, other countries too, such as Canada.

In 2019 I was given the opportunity to become the Managing Director of Orell Füssli Security Printing, which was a perfect match for me, given my background.

**Q:** Our readers will obviously be familiar with Orell Füssli, but could you briefly summarise its history and activities?

**A:** The company was founded in 1519, initially using letterpress to print books and bibles. Today, Orell Füssli is a company listed on the Swiss Stock Exchange, active in security printing and technology, book retailing and publishing. We are a group of companies that focuses on two main areas: education and security.

The education area includes the book retail business and publishing houses. The security area includes security printing and offers solutions for banknotes and ID documents. We also offer components for banknote serialisation and security documents, in addition to equipment for passport production, track and trace systems, and numbering units, through the subsidiary Zeiser.

Verifiable digital credentials represent an additional new and interesting business field to be developed in the coming years by Procivis, a subsidiary of Orell Füssli.

**Q:** What has Procivis brought to Orell Füssli so far?

**A:** Procivis' software for decentralised digital identities and credentials enables trust, security and efficiency in the digital world.

At the forefront of product innovation, technology, and market development, Procivis is an expert in Verifiable Credentials, (mobile) trust solutions, Self-Sovereign Identity, E-ID, mDL, identity wallets, wallet integration and cryptography.

We are expanding our presence in the digital realm through various projects, focusing on both identity and currency initiatives.

**Q:** Would you say that OFS has the market understanding needed to enter digital spaces?

**A:** Procivis is a significant asset for the implementation of our growth strategy with digital products. It provides an in-house core competency in software, requiring a skill set that differs from our traditional business of banknote and passport printing. Software development is a distinct field, necessitating different approaches and expertise.

However, it is crucial to have individuals who understand both the traditional economy and classic products. This understanding helps to clarify the boundaries and requirements of security documents for the software development side. Security must be upheld in both the physical and digital realms.

**Q:** How does OFS see the physical and digital space overlapping, interacting and working?

**A:** The digital space is still under development. There is an agreement that physical documents will exist for a very long time, but the question is, how significant will the stake of the corresponding digital products be? Will these be complementary, or will they replace some of these altogether? This is something that nobody can predict right now.

As banknote printers, we firmly believe that our physical product will continue to endure even as the digital landscape indicates a potential shift toward exclusive digital offerings within the next decade. Personally, I don't think this transition will happen quickly. Instead, it will be a gradual process. To be successful, it is essential to understand what comes next and what will effectively address the challenges we face.

A key part of this is trust. For any company to be accepted in the digital security space, it must be seen as trustworthy. Without trust, even the best products won't succeed. This is where traditional security printers come in. They are well known and trusted in the industry, and their reputation can help new digital products succeed.

**Q:** Others in the banknote industry are turning their attention to digital currency, and in particular CBDC. Is that where you see cash going in the future?

**A:** A retail CBDC is the closest digital representation of the physical banknotes we use. Retail CBDC has been piloted and even implemented in a few countries. The ECB has also announced the digital euro. The need for a reliable offline solution remains also with a retail CBDC in case of a power outage or unavailability of internet access. Offline payments are a focus when addressing specific challenges in retail CBDC.



Wholesale CBDCs are steadily progressing and have been successfully integrated into existing financial infrastructures in several countries, showing strong performance in cross-border settlements, interbank payments, and securities transactions.

First, countries have either announced or even introduced wholesale CBDC solutions. The next logical step could be the introduction of retail CBDC. However, the challenge of presenting a retail CBDC is much greater than the introduction of a wholesale CBDC. The business case for a wholesale CBDC exists in nearly every economy and the number of stakeholders involved is limited, whereas the same level of need for a retail CBDC in various countries is not such a clear case.

**Q:** *A few years ago, OFS launched a hybrid banknote, DUAL®. Do you see a future for hybrid banknotes, or was this more of a gimmick?*

**A:** It was definitely not a gimmick. It was a prototype still being discussed with central banks and is raising interest from many parties. We still believe – and central banks acknowledge this – that this might be an interesting transition technology for certain areas where a retail CBDC is about to be introduced.

This hybrid product, known as a 'connected banknote', is a retail CBDC product. It functions only with a retail CBDC payment system infrastructure because this connected banknote can be converted into the digital form of CBDC. The DUAL, a connected banknote, effectively solves the offline payment aspect of retail CBDC – currently the only true offline solution we know of that works without the need for a powered device.

The topic becomes particularly relevant once the decision has been made to introduce a retail CBDC, especially when aiming to accommodate a wide range of user preferences and payment behaviours. While some individuals value the convenience of digital assets, others prioritise the trust, autonomy, and control offered by traditional payment methods.

Cash offers several advantages that remain unmatched by digital alternatives. It enables offline payments, functions without the need for infrastructure or connectivity, and serves as a resilient fallback during system outages. As a bearer instrument, it protects personal privacy, allowing people to transact with instant settlement without third-party intermediaries. Moreover, it plays a crucial role in financial inclusion, as anyone can use it, regardless of access to banking, digital tools, or technical literacy.

As a transitional product, DUAL bridges the gap between the physical and digital worlds. It allows users to retain the benefits of physical cash while providing the flexibility to convert it into its digital form, ready to be sent around the world in

seconds. DUAL supports individual choice, ensures continuity in payment habits, and contributes to a more inclusive and resilient payment ecosystem.

We are still following up on DUAL, representing a physical banknote that interacts with a CBDC solution. It acts as a transitional bridge between traditional and CBDC-based payment systems. It can be used as a classic banknote; however, the owner can transfer its value to a digital wallet by scanning the private key with a mobile device. The transfer of value is fast, transparent, secure and easy to use.

Our partner on the connected banknote is TrustNoteD, who provides the digital component of the DUAL solution. The physical component, the actual banknotes, are supplied by Orell Füssli.

**Q:** *OFS has more recently launched the BEES® (Banknote Environmental Evaluation Software) programme. Was this developed with Procivis, or has there been development of a software and digitisation capability separate from the ID side?*

**A:** The security printing division independently developed the BEES software.

Suppose a central bank would like to understand the environmental impact of its current banknote design or systematically improve the environmental footprint with a new banknote design. In that case, Orell Füssli can assess a banknote's environmental impact during the design process and help central banks to understand the implications of their materials and choice of security features. With BEES, Orell Füssli offers a consulting service to central banks that results in a modular estimation of the environmental impact based on the functional design of the banknote.

First and foremost, BEES puts central banks in the position to take these decisions when they matter – in the design phase of the product. The traditional way without BEES would be a life cycle analysis after launching the product, but this stage is too late to influence the product characteristics. Ultimately, BEES supports our customers to achieve the best possible balance of sustainability and security without compromising either.

BEES is just one of several aspects of our consultancy service towards central banks in the field of sustainability.

**Q:** *Can you describe other examples of processes, or products, that either have been (or could be) digitised, or have been created for the digital world?*

**A:** A big area process-wise is shortening the production time of certain pre-press products. This then allows us to shorten the set-up of machines for a new job. One example is remote approval of sheets with

central banks, so it is not always necessary to travel to get the approval.

Our quality control is also much more digitalised than it used to be. This helps shorten certain reaction times and allows production to run faster without any interruptions and having to wait for interim results to know whether we are on the right track or not. That is a continuous process, of course, but it again has to do with the digitalisation of processes rather than the digitalisation of products. Both are taking place in parallel.

One of our digital product examples is the Escher® method, which showcases various digital 3D intaglio workflows and techniques specifically in the context of banknote design and production. This method opens up new avenues for banknote designers and poses challenges to counterfeiters at every stage.

Another example is our public-facing smartphone app called JAGUAR, which enables users to instantly verify the authenticity of banknotes. We introduced the JAGUAR feature as part of our new CYPHER EVO house note, developed in collaboration with Koenig & Bauer Vision & Protection, during this year's Intergraf Currency+Identity conference (see CN March 2025).

**Q:** *OFS is at the 'high end' of the market, price-wise. Do you see digitisation as a key to maintaining your competitive edge?*

**A:** We are known for high quality, but it's a misperception to automatically link us to high prices. We maintain high capacity utilisation at the printworks, and we produce banknotes for several countries worldwide. This includes multi-year contracts secured with new anchor customers.

Of course, to maintain a competitive edge, we need to review our processes and adjust them accordingly. We have integrated new digital processes to improve productivity. This ongoing effort aims to refine our processes and increase throughput, especially considering the specific economic conditions in Switzerland, where costs are generally higher than in other regions.

We have shown that OFS is competitive – whilst also offering Swiss precision, neutrality, and our independent advice.

**Q:** *Looking to the future, where do you see OFS in 10 years' time?*

**A:** Our digital products will significantly enhance our product portfolio, including digital visas and IDs, as well as potential digital twins of our physical products.

Nevertheless, we will remain a producer – hopefully a well-known and highly regarded producer – of banknotes as well as physical ID documents. As I said, they will

# Koenig & Bauer Expands Digital Authentication Offering

As noted in the December issue of Currency News™, as part of its recent restructuring Koenig & Bauer has spun out its inspection systems and protection technologies into a separate business unit – Vision & Protection (V&P) – headed by Julian Schubert, formerly Vice President of Data, Vision and Authentication Solutions.

Historically synonymous with secure printing for banknotes, secure documents, and high-value products, Koenig & Bauer (K&B) is advancing its transformation from a traditional machinery manufacturer into an agile technology group.

Over time, the Banknote Solutions business unit, which focuses on high-security printing technologies, has also expanded into the digital realm, beginning with the launch of the formerly known ‘Sound of Intaglio’, an image-processing technology for authenticating banknotes through their unique intaglio characteristics.

This function is now part of the broader DAKTYLO offering, which forms part of V&P's portfolio of non-invasive and invisible authentication technologies that are also sustainable, since they require no additional materials or processes.



ValiCash™

The company took further strides with ValiCash™, an app designed for high-security document identification and authentication, providing real-time ‘pass’ or ‘fail’ results. ValiCash represents a significant step in K&B's broader digital authentication journey, laying the groundwork for further innovations to bridge the gap between physical and digital security.

## Strengthening portfolio

K&B has expanded its security and authentication offerings with new technologies and collaborations. One such collaboration is with Graphic Security Systems Corporation (GSSC), which enhances K&B's anticounterfeiting portfolio by jointly improving GSSC's steganographic technology and combining it with K&B's printing and security feature expertise.

K&B's authentication solutions now span multiple sectors, offering methods for securing printed products of any kind. These solutions include the aforementioned DAKTYLO, based on the Sound of Intaglio process, which captures and classifies the printing characteristics, and can robustly and quickly identify printing technologies – providing real time ‘pass’ or ‘fail’ result – without the need for a special ink or manipulations in the pre-press.

Another is OVJERA, which utilises the uniqueness of material variance and production characteristics, capturing this on an optical level to assign a precise identity to each object.

They also include Stegano, an invisible data-embedding technology that integrates information into printed products for minimally invasive verification and plausibility checks, and that can be used with virtually any type of printing process.

## Expanding security triangle

K&B's authentication strategy is based on the ‘Security Triangle’, a model for high-security documents, packaging, and other secure items. While the classic triangle (Design, Materials, Process) remains the standard, advancements in industrialisation and automation have led to the integration of optical quality inspection into the value chain.



The classic triangle of security (© Koenig & Bauer).

The name Vision & Protection sums up the core skills and synergies of the new division. Whilst the at first glance the juxtaposition seems odd, they are part and parcel of the same solution, the data generated from K&B's high speed optical inspection systems being the backbone or pillar of the different codes that enable authentication.

The features are not only intended for currency (although one of the first demonstrations has been on the new CYPHER EVO house note produced in collaboration with Orell Füssli Security Printing – see CN March 2025). They can be used in any sector requiring counterfeit protection and authentication, which in reality is just about every sector of manufactured goods, among them pharmaceuticals, electronics and high end fashion.

K&B's focus is clear: to create a secure future through a blend of high-precision printing, sophisticated design features, and cutting-edge digital solutions for any industry sector that requires them.

## ... Combining Trust and Technology in an Increasingly Digital World

still be there in 10 years and remain a very important stake in our portfolio of offerings. Our positioning is not defined by being the largest player in the market but by being recognised as a neutral, independent, and unbiased security printer. One that

central banks and governments can trust to provide expert guidance and deliver the most suitable, high-quality solutions to meet their specific needs.

Bridging technologies, linking the physical directly with the digital, is essential.

Digitalisation is happening on our own or with industry partnerships, but at the core of our activities is incorporating these digital products into the physical world. There is far more of this to come in the next few years.



# How Commercial Bank Cashiers View Security Features of Modern Banknotes

■ By Aleksei Faleev, Currency Expert

At the High Security Printing™ (HSP) Asia conference in Bangkok last December, currency and counterfeit expert Aleksei Faleev gave a presentation on a survey conducted among cashiers in Kyrgyzstan to gauge their knowledge of and preferences for banknote security features. He has subsequently written this article based on that presentation.



If the cashiers were allowed to design a banknote it would look something like this.

Commercial bank cashiers in Kyrgyzstan need to take a two-day course before they start work to learn how to determine the authenticity of local and foreign banknotes. In connection with the issuance of the fifth series of banknotes of the national currency – the som – in Kyrgyzstan in 2023-2024, trainers, who are former experts from the central bank, conducted a survey of some of these cashiers.

153 people took part in the survey from August to November 2024. The course participants were mainly young, aged 18-33 (81%). They were found to have excellent knowledge of the local currency, as well as US dollars and Russian rubles (73% each), satisfactory knowledge of euros (40%) but a very superficial understanding of the currency of neighbouring Kazakhstan (the tenge).



A selection of the currencies used in the survey.

The main elements on a banknote when checking its authenticity, according to the cashiers, are the watermark (75.2%), security thread (71.2%), UV security (58.2%), SPARK® element (54.2%) and hologram (47.1%).

The most memorable watermark, according to the majority, is a portrait watermark and the denomination digits made by the electrotpe. Portraits of people were preferred over those of, say, buildings or animals.

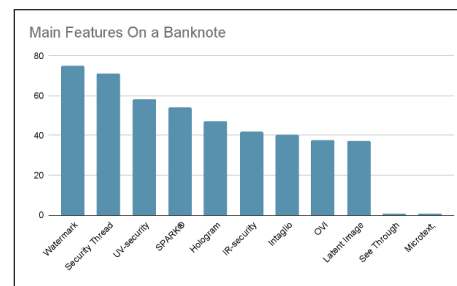
Windowed security threads are, according to survey participants, the most secure (compared with embedded threads). Most often (in 74.6% of cases), cashiers check for the presence of a movement effect on the security thread, as well as the presence of an ultraviolet glow in various colours (62.1%). In addition, cashiers pay attention to the change of colours on the security thread (49%), and the Cleartext (49%).

The survey participants recognised MOTION® thread as the most secure thread (56.8%); the second place was awarded to RAPID® thread (24.2%).

88.9% of respondents check the relief effect of intaglio printing on the front of the notes, but only 52% on the back.

The hologram on the second series €100 and €200 banknotes is considered by 39.2% to be the most secure, both due to the Satellite hologram element and the KINEGRAM REVIEW® effects.

Among other optically variable elements, the SPARK® element is preferred as the main authentication feature by more than 68%, while micro-optic security is chosen by 15%, and hologram security by 13.1%. 48.4% name security fibres with two or three colours to be the most effective (as appear in the new Kyrgyz som series and the second euro series).



Main features checked on banknotes by cashiers in the survey.

Under UV light, cashiers check the following (in descending order of preference): serial number (79.1%), security fibres (62.7%) and in security threads (49.7%).

Checking IR features is considered very important (93.5%). It is easier for them to remember and check the disappearance of half of a person's portrait and denomination numbers in IR (83.7%), but more difficult to memorise which fragments of other images should be transparent, or the location of IR stripes (only 57.5% are able to remember such features).

The following are suggestions for security features in the ideal banknote from a cashier's point of view:

- A watermark, with a portrait (of a person) and denomination by electrotpe
- A MOTION security thread with movement effect (such as that on the US\$100). Ideally, the thread should have luminescence under UV and microtext that can be seen in transmission
- In principle, the presence of intaglio is necessary only on the front of the banknote.
- Security fibres should be visible under UV light
- The banknote's security platform should include a SPARK® element and a hologram, similar to those of the €100 and €200 banknotes of the Europa series
- For UV security, the serial number and security thread should glow, and the security fibres in different colours
- For IR security, the disappearance of half of the portrait and part of the denomination digits under IR light is ideal.

Aleksei Faleev worked as an Expert and Head of the Expert Division of the Cash Management Department at the National Bank of the Kyrgyz Republic from 2000-2016. He has developed his own author's course on 'The Determination of Authenticity of Banknotes of Different Currencies for Bank Cashiers in Kyrgyzstan'.

# Note and Coin News

## Kazakhstan Continues Saka-Style Banknote Roll-Out

On 25 December 2024, the National Bank of Kazakhstan (NBK) introduced a new design for the 2,000 tenge banknote. On March 28, 2025, it was the turn of the 1,000 tenge.



These mark the third and fourth banknotes respectively in the 'Saka Style' series (the first, the 5,000 tenge, was issued in March 2024 and the second, the 10,000 tenge, in June last year). The design is inspired by elements of the 'Saka style', recognised as the origin of traditional Kazakh ornamentation, reflecting the nation's heritage—from the unique culture of nomads to modern Kazakhstan.

As with all the notes in the series, the front is in vertical orientation, and the reverse is horizontal with a suite of advanced security features common to all.

The front of both notes feature a branch of the 'Tree of Life' with a soaring bird (from the Issyk Kurgan, 5th-4th centuries BCE, part of the Golden Man's headdress, symbolising the sacred connection between nature and beliefs). They also feature a DNA spiral and a stylised infinity symbol,

representing the bond between humanity and nature.

The 1,000 tenge banknote, which is brown and beige in colour, also includes an artifact depicting a spring-loaded element in the form of a curled predator as a symbol of fortitude and endurance, while the predominantly green-coloured 2,000 tenge depicts a horned animal as a symbol of abundance and wealth.

The reverse of the 1,000 tenge features Tobet and Tazy dogs and a circular Kazakh ornament symbolising a 'shield' as a guardian of values. It includes ancient symbols representing the four cardinal directions and a solar sign at the centre, symbolising creative energy and life.

In the centre of the banknote, as a background, there is an image of the steppe hills of Kazakhstan, inscribed in a stylised infinity symbol.

The reverse of the 2,000 tenge also features the shield, along with images of Saiga antelopes, an artifact depicting the head of a saiga antelope and a background featuring the contours of an infinite Kazakh ornament, inside which is an image of Lake Burabay.

Both banknotes incorporate several advanced security features to ensure authenticity and quick verification.

Intaglio printing creates a tactile relief, with the national emblem of Kazakhstan applied using high-relief metallic gold ink. High-relief tactile elements are placed along the edges, allowing visually impaired individuals to identify the banknote.

A dynamic RAPID® Vision micro-optics windowed thread displays a pulsating effect, shifting between green and blue for the 2,000 tenge as the viewing angles changes, and between blue and orange for the 1,000 tenge.

On both notes, the RollingStar® Patch on the front depicts a golden artifact. When tilted, the patch reveals a switching effect between the digital denomination and an ornamental pattern.

The watermark incorporates an electrotone effect, where the denomination is clearly visible when held to the light.

The reverse features a SPARK Flow® Dimension colour-shifting element in the form of a saiga antelope's head on the 2,000 tenge and a coiled predator on the 1,000, which change from gold-to-green when the notes are tilted.

The new 2,000 tenge banknotes will enter mass circulation in the second quarter of 2025 and the new 1,000 tenge in the second half. This interval ensures sufficient time for distribution across all regions of Kazakhstan and the adaptation of equipment, such as ATMs, payment terminals, and other cash-handling devices.

## In Other News...

■ The Bermuda Monetary Authority's (BMA) new \$5 polymer banknote has won the International Bank Note Society's (IBNS) Bank Note of the Year Award for 2024.



Designed and printed by De La Rue on SAFEGUARD® polymer substrate, the banknote incorporates innovative security features including an ARGENTUM™ tuna fish and Enhanced GEMINI™ patterns that appear under ultraviolet light. The note, issued as part of the BMA's 'Same look, Smarter design' campaign emphasising the increased durability and security of Bermuda's currency, was among the first to feature a portrait of King Charles III.

The new polymer note has a half window that is fully and partially transparent, depicting a cloudy sky and an underwater scene viewable from both sides. Surrounding the window, security features

such as ILLUMINATE™ and ROTATE™ are fully integrated into the iridescent ink design of waves, multiple fish, and a sun, which appear when the notes are tilted.

With almost 100 new banknotes released worldwide during 2024, only 21 were deemed of sufficiently new design to be member nominated. Almost from the onset of voting the Bermuda \$5 note was the overwhelming favourite among the 2,000 IBNS members eligible to vote.

■ The Bank of Central African States (BEAC) has released a new family of circulating coins for member countries of the Economic and Monetary Community of Central Africa (CEMAC), which include



## ... Note and Coin News

Cameroon, Central African Republic, Chad, Equatorial Guinea, Gabon, and the Republic of Congo.



The new CFA franc coins follow a new banknote series issued in 2022. Nine new coins have been issued, ranging from 1 franc to 500 francs and include – for the first time – a 200 franc coin. The designs aim to highlight sub-regional integration and the economic emergence of the CEMAC states, with a particular focus on education, women in society, modern agriculture, and the protection of fauna and flora.

Minted by Monnaie de Paris, the 500 franc is trimetallic with an aluminium-bronze centre and outer ring, and copper nickel middle ring, and the 200 franc bimetallic with an aluminium-bronze centre and stainless steel outer ring. The edges of the 100 and 50 francs are shaped both as a security measure and to facilitate easy identification between the new and old coins. They and the lower denominations are all made from plated steel both to reduce costs and deter the endemic practice in the countries of the currency union of coins being shipped to Asia and melted down for their metal value.

■ Guernsey's new banknote designs will draw upon original artworks by islanders, but will not have a portrait of King Charles III, the States' Treasurer has said.

The notes were last redesigned in the 1990s with a portrait of the late Queen Elizabeth II. According to States' Treasurer Bethan Haines, 'it is only the last set of notes that Guernsey produced that included the monarch... we wanted to return to them being purely about Guernsey and more timeless.'

The family of £1, £5, £10 and £20 polymer notes are set to enter circulation in 2027 and will feature images of the island's natural and built landscape, including its flora and fauna, and historic buildings. The three successful designers were selected from 26 submissions following an open call to local artists last year.

Once finalised, the designs will be handed over to De La Rue to convert into banknotes.

■ The Bank of Papua New Guinea has unveiled the design of a commemorative 50 kina banknote and 50 toea coin to mark the 50th anniversary of independence. 20 million each of the notes and coins will be issued on 28 August. They are being produced by Note Printing Australia and the Royal Australian Mint respectively.

The GUARDIAN™ polymer banknote features the Queen Alexandra's Birdwing (the world's largest butterfly, found exclusively in Papua New Guinea's tropical rainforests), the Blue Orchid (the national flower) and the Raggiana Bird of Paradise (the national bird).

The 50 toea coin features a coloured inlay of the country's flag. Both note and coin also feature the 50th anniversary logo.

The Bank will also issue a commemorative 100 kina banknote marking the death of Sir Julius Chan, a founding father of the nation, who died earlier this year. The note will be issued as part of the independence anniversary celebrations too.



The commemorative currency designs were unveiled by Prime Minister, James Marape, Governor of the Bank of Papua New Guinea, Elizabeth Genia, and Note Printing Australia CEO, Malcolm McDowell.

■ The National Bank of Belarus has issued a new limited edition commemorative 80 ruble note honouring the 80th Anniversary of the Victory in the Great Patriotic War (World War II). It is the first of two this year, and – with a print run of 80,000 – is not intended for general circulation.

The pink note depicts the monument of the Brest Fortress Hero memorial complex on the front. The reverse side features an image of a mother's hand holding a child's hand against the background of the

Minsk Gate architectural complex, and an apple flower.

The Bank is also issuing 2,500 silver commemorative coins with a nominal value of 20 rubles, and 5,000 cupro-nickel 1 ruble coins.

■ Lebanon's Parliament has amended a law paving the way for the Banque du Liban to issue new high denomination banknotes. The current highest denomination is the 100,000 Lebanese pound (LBP), but if the plans go ahead, new LBP 500,000 and LBP 1 million banknotes will be introduced.

■ The National Bank of Ukraine (NBU) is initiating a public discussion on the future design of the hryvnia. The current design dates back to 1992 and, even though there have been four technology upgrades since then, the concept has remained the same, with portraits of historical figures who have made a significant contribution to the development of the Ukrainian state on the front, and images of architectural monuments related to their activities on the reverse.

NBU Governor Andrii Pyshnyi has asked whether or not the appearance of the national currency should speak about the present and future, rather than the past. He has also stated that there are no immediate plans to change the design, but that the central bank wants to start these discussions with Ukrainians, particularly in the context of the current conflict.

■ The Bank of Cabo Verde is to put new 1,000 and 2,000 escudos banknotes (equivalent to around €10 and €20, respectively) into circulation with new security features. The design of the banknotes will remain more or less the same as the existing ones (issued in 2014), but it is understood that the 1,000 escudos will include a holographic stripe in place of the current patch, and the stripe on the 2,000 will be enhanced. Both will include improved UV features as well.

■ The Central Bank of Russia is considering adding the image of the Russian flag to new banknotes, according to Vasily Prokofiev, the Director of the Cash Management Department.

'Adding an additional image to the banknote design is equivalent to changing the graphic design of the entire banknote, which in turn requires the release of a new modification of the banknotes' he is quoted as saying.

Separately, it has been announced that an updated design of the 500 ruble is underway, and the redesign of the 10 and 50 ruble banknotes will begin in 2026. They are the final three denominations to be redesigned as part of the current upgrade.

# New Currency Family Celebrates the Natural Beauty of Zambia

Zambia is a landlocked country in Southern Africa known for its abundant mineral resources, particularly copper, and home to the renowned Victoria Falls and a rich cultural heritage. It has a population of around 19.6 million and its currency is the Zambian kwacha (which is subdivided into ngwee).



Pursuant to Section 17 (1) of the Bank of Zambia Act, 2022, on 31 March 2025, the Bank of Zambia marked a historic milestone in its currency history by introducing a new family of Zambian currency into circulation. This new series consists of six banknotes (K500, K200, K100, K50, K20, K10) and six coins (K5, K2, K1, 50N, 10N, and 5N). The currency showcases Zambia's rich heritage, with its unique flora and fauna as the central theme; hence it is called the 'Heritage Series'.

The redesigned banknotes feature enhanced security features to combat counterfeiting, with two higher-value denominations (K500 and K200) introduced to promote more efficient transactions. Additionally, the redefined note-coin boundary introduces the new K5 and K2 coins, while the lower-value notes (K10 and K20) are made with durable substrates to ensure longevity in circulation.

The aesthetic design of the new banknotes honours Zambia's remarkable natural beauty, with iconic symbols such as the African Fish Eagle, endemic flowers, waterfalls, and Zambian wildlife, and have a fresh and more modern appearance than the series they replace.

Notably, improved tactile marks with distinct patterns for each banknote have been introduced in response to the needs of the visually impaired community. These enhancements make it easier to distinguish between denominations. Additionally, the varied sizes of the notes and coins further support ease of identification.

Similarly, the six coins, which are steel-plated, feature clearly differentiated edge serrations, providing another tactile cue to help visually impaired individuals identify the denominations with confidence.

The Bank engaged Koenig & Bauer Banknote Solutions (KBBS) as the consultant for the design of the new notes. The K500, K200, K20, and K10 denominations are being supplied by Giesecke & Devrient Currency Technology, while Crane Currency is supplying the K100 and K50 denominations. The K5 coins are being minted by the Mint of Poland, the K2 and 50N coins by the Royal Canadian Mint and the K1 coins by Monnaie de Paris (the Paris Mint).

In February 2025, the Bank launched a nationwide currency sensitisation campaign to educate the public about the features of the new currency and provide information on the exchange process.

The existing banknotes will continue to circulate alongside the new currency

family from 31 March 2025, until 31 March 2026, ensuring smooth transactions for the public. The exchange of old notes for the new currency will be free of charge. Additionally, the K1, 50N, 10N, and 5N coins will remain legal tender even after 31 March 2026.

## Key security features

The new currency series includes several advanced security features:

### ■ K10 and K20

- Durasafe substrate with a RAPID® security thread, providing visible movement when tilted.

### ■ K50 and K100

- Cotton substrate with RollingStar® (RS) i+ thread and SPARK® Flow Prime.
- The K50 has a 3.5mm RSi+ thread, colour-shifting from green to magenta, with a dynamic 'bloom' effect.
- The K100 has a 3.5mm RSi+ thread, colour-shifting from gold to jade, also with a dynamic 'bloom' effect.

### ■ K200 and K500

- Cotton substrate with Galaxy® thread and SPARK Flow Prime.
- The K200 features a 4mm Galaxy thread, colour-shifting from gold to green. The thread flips from '200' to the Bank of Zambia logo.
- The K500 features a 4mm Galaxy thread, colour-shifting from magenta to green. The thread flips from '500' to the Bank of Zambia logo.

### ■ K2 and K5 coins

- The K2 is a bicolour coin with a bronze plated outer ring and nickel-plated inner core with a latent image that changes from the letters BOZ to the numeral 2 once tilted.
- The K5 is a nickel-plated coin with a latent image that changes from the letters BOZ to the numeral 5 once tilted.

According to the Bank, the introduction of the Heritage Series is a significant step forward in Zambia's currency evolution. By enhancing security features, improving durability, and incorporating designs that celebrate the nation's natural beauty, the Bank of Zambia has ensured that the new currency is both secure and reflective of the nation's rich heritage. This redesign responds not only to advancements in currency security technology but also to the challenges users experienced with the previous series.

Furthermore, the new series fosters a stronger connection to Zambia's cultural and natural identity.



# Cape Town Presents MDC 2025 Coin Awards

The 32nd Mint Directors Conference (MDC) has recently concluded in Cape Town, South Africa. The event hosted the MDC Coin Awards, which were presented during the MDC Gala Dinner at Cape Point Vineyards.

The Coin Awards recognise industry achievements in the design, production, packaging, and distribution of commemorative and circulating coins worldwide and were made in six different categories, two of which are covered here.

## ■ Best Circulating Coin or Coin Series

In this category, The US Mint was awarded the winning prize for its ninth American Women Quarter™ issue honouring Mexican-American journalist, activist, teacher, and suffragist Jovita Idar. The reverse design of the coin depicts Idar in the centre with her hands clasped; inscribed within her body are several phrases depicting some of her greatest achievements and the regional newspapers that she contributed to.



Second place went to Monnaie de Paris for its new 10, 20, and 50 cent circulating coins. These three coins honour three exceptional women – Simone Veil (10 cents), Joséphine Baker (20 cents), and Marie Curie (50 cents) – who were all pantheonized for their many contributions to France's influence.



Third place was presented to the Bavarian State Mint for its €5 insect series which commemorates the importance of insects for humans. Nine different designs were produced, each featuring a different colourful insect produced by selective colour printing atop pre-embossed motifs. Designs include 'The Insect Kingdom', a seven-spot ladybird, Old World swallowtail butterfly, red mason bee, banded demoiselle damselfly, green grasshopper, grove hoverfly, stag beetle, and stone bumblebee.



## ■ Best Sustainability Initiative

The Perth Mint was awarded the winning prize in this category for its transition to sustainable packaging. For its SpongeBob and Friends 1oz silver proof coloured coin and Frida Kahlo 2oz silver antiqued coloured coin, the Mint packaged the releases in presentation boxes comprised entirely of a combination of FSC cardboard and FSC paper, with a coin insert made from paper pulp. The paper and cardboard elements replace the traditional plastic components, with the new materials being both biodegradable and recyclable.



Second place went to the US Mint for its Denver wastewater treatment plant renovation and water reuse programme. The project aims to replace the current chemical treatment with vacuum distillation technology for water purification. Removal of the chemicals improves water quality, enabling the Mint to reuse this water in the coin manufacturing process. Steam condensate heat will be harnessed for re-use in the manufacturing plant – to power other processes or to heat the building, for example.



Third place was presented to Monnaie de Paris for its Rugby World Cup collection, whereby it produced the 2023 event medals solely from recycled components. The 1,491 medals were created using 2,953kg of metal recovered from 31 tonnes of recycled mobile phones, with materials from 138 phones used for each medal. Working in partnership with Orange's 'RE' programme, 206,000 used mobile phones were collected through amateur rugby clubs.



[mintdirectorsconference.com/mdc2025-south-africa](https://mintdirectorsconference.com/mdc2025-south-africa)

# New Cash Environmental Resource Launched

Reconnaissance, co-publisher of Currency News™, launched a new website on 22 April (World Mother Earth Day) as a cash community asset to capture and consolidate initiatives, work and research from every part of the cash cycle and provide tools to support organisations on their pathway to a greener future.

Since 2021 Reconnaissance has run two dedicated Cash Sustainability Forums (in Edinburgh in 2022 and Frankfurt in 2024), produced 'Cash: a Roadmap to Sustainability', written white papers on the 'Repurposing of Unfit Banknotes' and 'Cash Cycle Recirculation and Local Recycling: from Policy to Practice', run a number of sustainability webinars,

hosted sustainability sessions as part of the programme of its conferences, and presented on sustainability at other events.

It has also worked with industry bodies including IACA, ATMIA, ICA, the MDA and Cash Essentials on sustainability and has written extensively about sustainability in Currency News, as well as its sister

publications Coin & Mint News™ and Cash & Payment News™.

Much of this work is available on the new website, alongside links to central banks and industry organisations who publish on sustainability.

Reconnaissance is now keen to take this resource to the next level by including as broad a range as possible of news, information and reports from stakeholders – ranging from central banks and issuers through printers and mints to suppliers and all others involved in the cash cycle.

To this end, it is actively inviting organisations to contact it via the website with contributions, feedback and input.

Visit the new website at [www.cashsustainability.com](http://www.cashsustainability.com).

## Events

26–29 MAY 2025

CURRENCY CONFERENCE

Bangkok, Thailand

[currencyresearch.com](http://currencyresearch.com)

9–11 JUNE 2025

HIGH SECURITY PRINTING  
LATIN AMERICA

Rio de Janeiro, Brazil

[hsp-latinamerica.com](http://hsp-latinamerica.com)

9–11 SEPTEMBER 2025

CBDC CONFERENCE

Nassau, Bahamas

[www.cbdc-conference.com](http://www.cbdc-conference.com)

15–17 SEPTEMBER 2025

OPTICAL & DIGITAL  
DOCUMENT SECURITY

Warsaw, Poland

[opticaldigitalsecurity.com](http://opticaldigitalsecurity.com)

3–5 NOVEMBER 2025

THE FUTURE OF CASH

Warsaw, Poland

[thefutureofcash.com](http://thefutureofcash.com)

1–3 DECEMBER 2025

HIGH SECURITY PRINTING ASIA

Kuala Lumpur, Malaysia

[hsp-asia.com](http://hsp-asia.com)

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