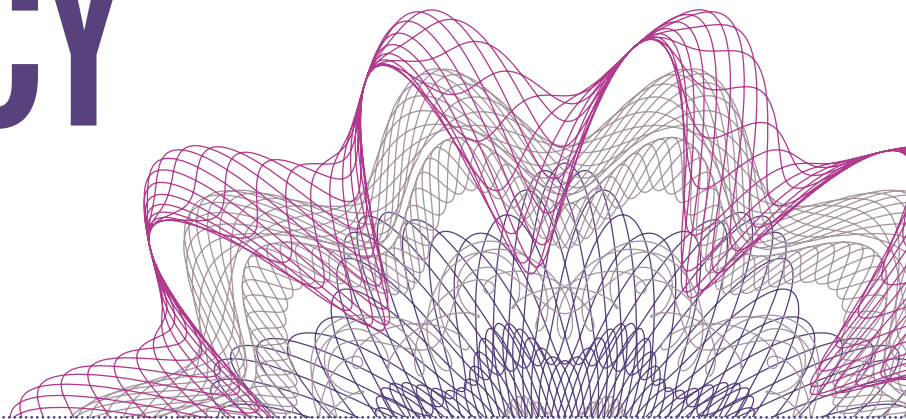
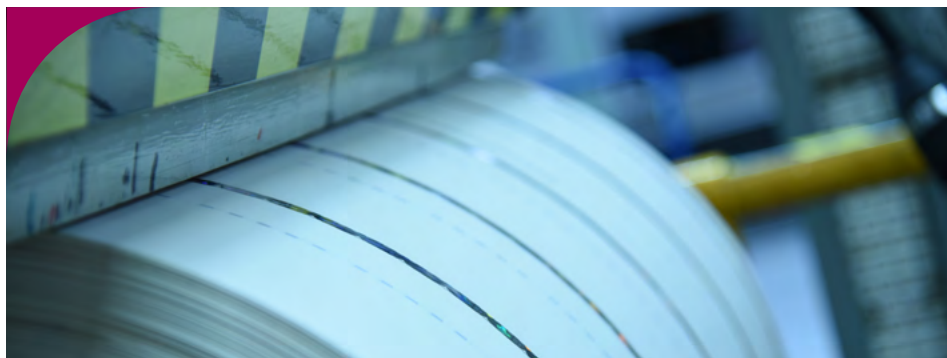


# CURRENCY NEWS™

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## All Change for De La Rue's Paper Business



**An unusually active few months in the banknote paper market has continued with the announcement by De La Rue that it has entered into a strategic agreement with private equity firm Epiris for the group's paper business, comprising the Overton and Bathford paper mills, for an enterprise value of £68 million. The new paper business will be named Portals De La Rue.**

Some sort of strategic change was widely anticipated, the company's CEO Martin Sutherland having stated last year that it was in talks with a number of other papermakers about what a potential joint venture might look like to drive improved efficiency in its paper business, and to reduce its exposure to the market.

Portals was founded in 1712 and has been supplying the Bank of England since 1722. It was acquired by De La Rue under the leadership of then CEO, Jeremy Marshall, back in 1995 for £682 million. The company had extensive interests beyond security papermaking, which were rapidly sold off, leaving the two security paper mills in Overton and Bathford along with Portals Packaging Tapes, which continues to supply security threads, holographic components and polymer banknote materials, and remains part of De La Rue.

The name Portals was dropped in 2007, with the company becoming fully integrated into De La Rue's Currency Division.

Under the terms of the new agreement, Epiris, together with management, will acquire a 90% shareholding in Portals De La Rue through a newly formed company WhickerCo Limited, for cash of c. £61 million, payable upon completion. This equates to an enterprise value (company total value) of £68 million. De La Rue will retain the remaining 10% interest and a seat on the Board.

The business is expected to generate sales of around £120 million by year end (March 2018), and EBIT of £10 million. It has a capacity of approximately 13,000 tonnes per year, supplying paper for 12 billion banknotes and around 70 different passports. Around 45% of sales are intra-company transactions, and the remainder external.

As part of the transaction, Portals De La Rue will commit to supply pre-agreed volumes of paper to De La Rue with a pre-agreed price mechanism for the next ten years. This will meet most of the group's anticipated internal requirements for finished banknotes and security documents. In addition, De La Rue will be Portals De La Rue's preferred supplier for security features.

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## Crane Currency Opens in Malta

**Crane Currency has officially opened its print and production hall on the Mediterranean island of Malta, just 53 weeks after the ground-breaking ceremony that signalled the start of construction of the 15,000 sqm site.**

The Prime Minister of Malta, Dr Joseph Muscat, opened the facility, which will represent an investment of approximately \$100 million in terms of the construction of the factory, the machinery and the equipment procured.

During his speech at the ribbon-cutting event, which was attended by local dignitaries, suppliers, staff and media, the Prime Minister said, 'I am sure that with their solid experience across industries, Crane Co will become another mainstay brand name associated with Malta's industry highfliers.'

Annemarie Watson, the new President of Crane Currency commented, 'we are proud of this achievement, of the tremendous work done by the crews here in Malta to expand our banknote printing capacity.'



Prime Minister of Malta, Dr Joseph Muscat and Annemarie Watson, President of Crane Currency.

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# New Home for Arjowiggins Security

**Sequana has announced that it is in exclusive negotiations with the investment group Blue Motion Technologies to sell the banknote papermaker Arjowiggins Security.**

The sale is subject to an information/consultation procedure with the relevant works councils, with the transaction expected to close before the end of the first quarter of 2018 after a recapitalisation of the company. The sale will mark the final exit by Sequana from the security papermaking market, having sold off several other interests in recent years.

Sequana announced a strategic review of Arjowiggins Security in February last year, to deal with what it termed a continuously deteriorating paper market for banknotes. This sale, it says, along with that of VHP, will enable the group to fully divest from the banknote paper business that has caused it substantial losses over the last two years.

In reality, however, Sequana's withdrawal from the market has gone on rather longer than that. In 2015, two businesses within Arjowiggins Security – Revenue Protection and Identity & Access Control – were spun out into separate subsidiaries (Arjo Solutions and Arjo Systems) and subsequently sold to Impala. The former was in turn sold to Inexto in 2016, while the latter was acquired by HID Global last year. Sequana also sold the security paper mill in Salto, Brazil to Fabriano – the combined proceeds being used to pay off its debts of €125 million.

These sales left Arjowiggins Security with two paper mills – VHP in the Netherlands (sold to Oberthur Fiduciare last year), and the Crevecoeur mill in France, the subject of this latest sale.

Arjowiggins Security has been supplying security paper for 200 years and has references in 140 countries. Until the sales of Salto and VHP, it was the largest stand-alone commercial security papermaker and, until relatively recently, was a star performer in the Arjowiggins business (one of Sequana's three divisions). In 2014, it had sales of c. €272 million (of which Salto accounted for €70 million), and EBITDA of €23.7 million (accounting for 27% and 44% respectively of that of the Arjowiggins division). The following year, this had fallen to €226 million but EBITDA remained steady at around €23 million. In 2016, however, sales had nearly halved to €128 million (18% of Arjowiggins turnover) and it recorded a loss of €13 million.

According to Sequana, the problems at Arjowiggins Security have been due to over-capacity in the market and sharp pressure on prices. Whilst this is undoubtedly true in the current market, Sequana itself has had serious problems in recent years (including a court ruling last year, which it is contesting, to pay €130m to BAT relating to dividend payments by a former subsidiary, which resulted in Sequana applying for creditor protection under safeguard proceedings).

Could the hollowing out of Arjowiggins Security to pay off its debts, and subsequent problems at Sequana, have contributed to the weakening of a respected and innovative papermaker, with a number of innovations in substrates, threads and watermarks to its credit?

It is to be hoped for the company that its new owners provide a more certain and stable future.

## Ink Giant Sun Chemical Buys Luminescence

**Sun Chemical and its parent company, DIC Corporation, have announced the acquisition, for an undisclosed fee, of the family-owned security ink manufacturer Luminescence Holdings Ltd.**

The acquisition, says Sun Chemical, will create a new global player and an enormous growth platform for the company in the \$2.7 billion security ink market.

Luminescence, founded in 1987, is based in the UK, and has two production sites. Its portfolio includes offset, intaglio, flexo, gravure, screen and inkjet inks, along with special inks from colour-shifting, fluorescent and thermochromic all the way through to machine-readable. It also produces taggants. Some 20% of its staff are engaged in R&D and it has customers in more than 140 countries around the world.

Sun Chemical, meanwhile, is the world's largest manufacturer of inks and pigments, supplying the packaging, publishing, commercial, industrial, and digital markets.

The security division manufactures security inks and pigments for currency, secure documents and branded goods, including a range of offset and iridescent inks (the former are euro-validated), along with dyes for banknote neutralisation systems.

According to Felipe Mellado, Chief Marketing Officer for Sun Chemical and Board Member, 'Luminescence has a fantastic reputation in the security market for technology and service. Sun Chemical has the world's largest research and development capabilities in the ink marketplace.'

'What these two companies bring together is a truly exciting global supplier that will further strengthen our service to customers.'

According to Luminescence, it will continue to operate in exactly the same way as previously with all the key personnel, directors and managers in place.

'All of us here at Luminescence are committed to continuing to offer the very best security inks available. We believe that the global reach and strength of Sun Chemical, combined with our technical knowledge and reputation, will create a stronger company going forward. This development opens exciting new areas for the company and together we intend to become the partner of choice for all security printers', it said.



# Cash Management Companies on the Up – Mostly

**Loomis reported a successful year for 2017. Revenue grew by 3% to SEK 17.29 billion, while EBITDA increased by 10.7% to SEK 2.09 billion, taking the operating margin from 11.2% to 12.1%.**

President and CEO Patrik Andersson, commented: 'I'm proud to say that we reached all of the targets we set.... It gives me great pleasure to be able to report that over the strategy period as a whole we strengthened our positions both in the USA and in Europe.'

Brinks also had a successful year. Revenue in 2017 (GAAP) increased by 11% to \$3.347 billion, the most significant increase of 29% occurring in South America, where the company has made a number of acquisitions. Operating profit grew by 48% to \$274 million. The non-GAAP operating margin increased from 7.4% to 8.8%.

Doug Pertz, President and CEO said: 'our plans to drive organic profit growth through our global 'breakthrough initiatives' continue to gain traction, and we are building a new layer of profitable growth through core acquisitions, six of which were completed in 2017, with a seventh expected to close in the second quarter of this year.'

The company's 2018 non-GAAP guidance includes revenue growth of 8% to approximately \$3.45 billion and operating profit growth of at least 30% to a range between \$365 million and \$385 million.

NCR Corporation reported slightly reduced revenue (-0.4%) for 2017 at \$6.51 billion. However, operating profit increased by 12.9% to \$676 million, improving the operating margin by 1.2% to 10.4%.

Chairman and CEO, Bill Nutti, said that 'while ATM revenue was lower than expected in 2017, growth in unattached software, cloud, and recurring revenues allowed us to build a stronger foundation going into 2018. NCR continues to position itself as one of the world's largest cloud companies, facilitating omni-channel commerce and digital transformation. We enter 2018 excited about the year ahead and confident in our company strategy.'

Diebold Nixdorf did not, by contrast, have such a good year. Following the merger between Diebold and Wincor Nixdorf (in late 2016), it reported a 7.2% fall in revenue to \$4.6 billion compared with its pro forma accounts for 2016. The greatest fall in sales by geographical area was in the Americas (-13.6%), and by solutions in Banking (-9.6%). The company recorded an operating loss for 2017 of \$83.6 million, compared with a pro forma loss for 2016 of \$159.8 million.

The outlook for 2018 for continuing operations is for the company to make an (adjusted) operating profit of \$380-410 million.

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## Sri Lanka Cuts Cost of Coins

**The Central Bank of Sri Lanka (CBSL) is to issue a new series of stainless steel coins consisting of the Rs 1, 2, 5 and 10, as part of a programme to alleviate coin shortages and reduce costs.**

Up until 2013, the coins were either brass- or nickel-plated steel. In 2013, however, the CBSL embarked on new strategy to deal with the challenges of increased minting costs (which had gone up by over 60% between 2000 and 2012 to £26 per 1,000), continuing public demand (currently 131 coins per head of population and volumes in circulation increased from 1.63 billion in 2010 to 2.8 billion by late 2017), and the fact that most coins do not circulate but are hoarded, creating artificial shortages.

According to J P R Karunaratne of the CBSL in his presentation at the Coin Conference last October, this new strategy has involved countrywide coin collection and public awareness programmes.

It has also involved changing the coins' metal composition. It moved from a 'CBSL defined metal' approach to a 'bidders defined metal' approach, with bidders suggesting different metals and prices. The lowest price was selected and, that year, the first stainless steel coins (the Rs 2 and Rs 10) were issued.

They were a great success. Savings of 7% were achieved, resulting in other denominations following suit, increasing savings on production to 32%. The public liked the lighter coins, and minimum incidents of discoloration were reported.

The CBSL is continuing with this policy with its new redesigned all-stainless steel new series. A tender was called in 2016, and the new coins will go into circulation at some point this year.

## Crane Currency *(continued)*

'Today's ceremony is testimony to Malta's business-friendly environment and skilled workforce. These and its great location made Malta an obvious choice for our banknote printing works and Customer Experience Centre.'

Crane Currency Malta is the first new commercial banknote printing facility to be built in several decades, says the company, and offers the latest in printing equipment and technology to support the most demanding customer requirements. 'As banknotes move away from 'ink on paper' to security features like Crane's *MOTION*® micro-optics and highly engineered substrates, the capabilities of printing works have had to evolve. Crane Currency Malta reflects this technological evolution in its layout and equipment', it said.

The facility currently has one banknote printing line, with offset and intaglio equipment from Komori and a *NotaScreen* from KBA-NotaSys. A second line will be installed this summer, and plans for a third line are also on the drawing board, which would give the factory a capacity of approximately 3 billion notes per year.

Crane Currency has one printing line at Tumba in Sweden, and a cooperative arrangement with Dar as Sikkah, the Moroccan printworks, to access additional capacity. But the company, which is growing rapidly, needed more of its own capacity and the opportunity to locate this in Malta coincided with the announcement by De La Rue, who has had a factory in Malta since the early 1970s, that it was closing down banknote production. This decision was subsequently reversed, but the pool of trained production staff in a country where English is widely spoken was clearly a major attraction for Crane, along with – it said – the island's transport facilities and its strategic location between Europe, Africa and the Middle East.

Although the formal opening took place this month, production actually started before Christmas. In addition to the new line(s) for later this year and next, work is also ongoing on the new Customer Experience Centre, which will provide working space to engage with customers on design and technology, and also showcase the company's capabilities in production and security.

# News in Brief

## Estonia and Low Value Coins

Eesti Pank, Estonia's national central bank, is the latest in the eurozone to consider the elimination of 1 and 2 cent coins. It has floated a proposal for vendors to round off cent values up or down to the nearest 5 cent in order to reduce demand, before potentially – in due course – eliminating the coins altogether.

According to the Bank, 'on average two truckloads of 1 and 2 cent coins exit Eesti Pank every year that are handed as change to buyers in shops and are used very little after that. The proposal of the central bank is to discuss if there could be less of those cents in circulation that are very seldom used by the people'.

The plan is that people can continue to pay with 1 and 2 cent coins for purchases, but the coins will not be available as change. Estonian retailers have broadly welcomed the proposal, and recent opinion polls have shown that around 60% of Estonians are also in favour.

Five other countries in the eurozone have switched to rounding off 1 and 2 cent coin values: Finland, the Netherlands, Belgium, Ireland, and (beginning this year) Italy

## Canadian Mint Sues Over Poppy Coins

The Australian government is being sued by the Royal Canadian Mint (RCM) for patent infringement relating to coloured circulating 'Poppy Coins' coins issued by the Royal Australian Mint, which is owned by the government, in 2012 to mark Remembrance Day.

The \$2 coins have a small red poppy on the reverse, the production of which is said to entail a method developed and first used by the RCM in 2004. A patent application was made in 2006, but it was not granted until 2013 (by which time the Australian coins were already in circulation).

The technology in question is inkjet printing, which applies spot colour at high speeds that fill the pores in the metal surface with ink. It is quicker, and more durable, than the more common technique of pad printing and so is suitable for the volume production of circulating coins.

The RCM wants the A\$2 million worth of the Australian coins retrieved or destroyed, and is asking for the Royal Australian Mint to be permanently restrained from infringing its patent. It is also demanding that profits from the coins are surrendered or damages paid.

## 2017 Results for Crane Co

Crane Co, the engineered industrial products manufacturer that owns Crane Payments Innovation (CPI) and, as of last month, Crane Currency, has reported sales of \$2.8 billion for 2017, up 1% on 2016. Excluding special items, full year 2017 operating profit was \$423 million, an increase of 6% over 2016. The full year 2017 adjusted operating margin was 15.2%, compared to 14.5% in 2016.

The company has four business segment, including Payment and Merchandising Technologies which is made up of CPI, Crane Merchandising Systems and now Crane Currency. Sales for the segment last year grew by 4% to \$776.7 million and operating profit by 9.5% to \$148.4 million (these figures do not include sales and profit from Crane Currency).

Crane Co is expecting core sales growth of 2-4% in 2018, a modest benefit from favourable foreign exchange, and approximately \$400 million of sales contribution from the Crane Currency acquisition.

## New Judges for IACA Awards

The International Association of Currency Affairs (IACA) has recruited three distinguished new reviewers to evaluate the nominations for its Excellence in Currency 2018 Technical Awards.

Gerry Gaetz is President and CEO of Payments Canada, and previously served as Chief, Currency at the Bank of Canada.

Dr Nopporn Pramojaney is the former Assistant Governor, Banknote Management Group, Bank of Thailand.

Dr David Tidmarsh is Chairman, Currency Publications Ltd (publishers of Currency News).

According to IACA, all three reviewers bring extensive knowledge and understanding of currency that will enhance the evaluation of the nominations for IACA's Technical Awards.

IACA will accept nominations for its awards in two categories up until 23 February – 'Best New Currency Feature or Product' and 'Best Currency Innovation'. IACA's awards committee members will review each of the nominations to determine the finalists, which will be presented to all of IACA's delegates for a vote to determine the award winners.

IACA will announce the winners on 21 May in Dallas at Banknote 2018.

## Central Banks Awards for Currency Providers and Managers

Central Banking Journal has announced the winners of its 2018 awards, which were launched in 2014 to recognise outstanding performance by individuals and organisations within the central banking community.

The Banknote and Currency Manager of the Year award has gone to Norges Bank. The Bank has issued two out of the five notes in its new series and, said the judges, has redefined how its banknotes are designed, incorporating top-notch security and an innovative awareness campaign (see pages 6-7).



Landqart is the recipient of the Banknote and Currency Services Provider of the Year award for its *Durasafe* substrate, and the durability and security that this offers.

De La Rue has won the Consultancy and Advisory Provider of the Year award for *DLR Analytics*, its new tool for central banks that aggregates data to help them investigate the lifecycle of their cash, thereby reducing costs and helping forecast future demand.

The three awards are among 18 that are now made by Central Banking Journal. The panel of judges is made up of the Central Banking editorial team and advisory board, who are all former central bankers from around the world.

The awards will be presented at a special ceremony in London in early March.

# Euro Counterfeit Ratio Lowest in 14 Years

**The European Central Bank (ECB) has released its banknote counterfeiting figures for the second half of 2017, which show a slight increase compared to the same period in 2016.**

A total of 363,000 counterfeit notes were withdrawn during the second half of 2017, an increase of 9.7% compared with the first half of the year. When compared with the same period during 2016, the total number of counterfeit notes increased by 2.8%. For the year as a whole, therefore, 694,000 counterfeit notes were withdrawn – up by 1.46%.

The number of notes in circulation increased in 2017 by nearly 6%, and with over 21 billion notes, the counterfeit figure represents a ratio of 33 ppm, the lowest in 14 years.

The majority of counterfeit notes, some 85%, were denominations of €20 and €50. Most of the notes, 97.8%, were identified in the countries using the euro, with 1.7% found in EU member states and the remaining 0.5% located in other parts of the world.

These recent figures show a continuing reduced number of counterfeit notes being withdrawn, following a peak in 2015 of almost 900,000.

The drop seen the following year coincided with the release of the Europa €20 banknote in January 2015 – the €20 and €50 denominations are consistently the most commonly counterfeited banknotes.

The €20 banknote is seeing a small decline in counterfeits, accounting for 35.2% of all counterfeits during the second half of 2017. This is down from 36.9% during the first half of the year and 37.8% during the same period in 2016.

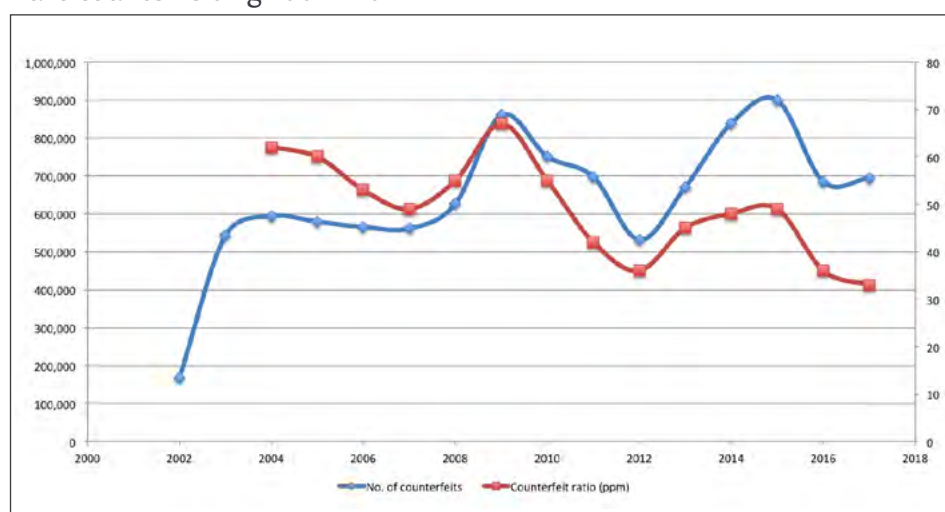
In contrast the €50 is seeing a rise in counterfeits, accounting for 52.5% of all counterfeit notes withdrawn during the second half of 2017 – up from 47.6% during the first half of the year and 42.5% during the same period in 2016.

However, with the release of the Europa €50 banknote last April, it is expected that these figures are likely to reduce during 2018, as seen following the release of the Europa €20.

Of the other banknotes commonly used in everyday payment transactions, the figures for the €5 and €10 banknotes remain low at 1% and 1.8% respectively. Counterfeit banknotes of €100, €200 and €500 denominations were 6.5%, 0.8% and 2.2% respectively.

The ECB will be issuing the final two notes in the Europa series – the €100 and €200 – together in 2019. The €500 is not being reissued.

Euro counterfeiting 2002 - 2017



## CPS Signs Contract with the US Federal Reserve

**Cash Processing Solutions Ltd (CPS), the cash processing technology and solutions group, has announced that, as a result of a two-year tender process, it has secured a significant contract with the US Federal Reserve Bank (FRB).**

The contract is to participate in a competitive development for the FRB's next generation of high speed currency processing equipment (NextGen). Under the contract, CPS will design, develop and manufacture a high-speed currency processing system with the associated software solutions to meet the Federal Reserve's note processing requirements. The contract has now commenced and will run through to the end of 2020.

This competitive process is expected to lead to the provision of the FRB's NextGen requirement which will replace the current fleet of high speed cash processing machines with state-of-the-art next generation systems.

Mark Gould, Product Director – Cash Product Office (CPO) at the FRB, noted that, 'effective cash processing equipment is critical to the mission of the Federal Reserve's cash function, enabling us to meet demand for US currency, ensure the quality and integrity of currency in circulation, and maintain cost-effective operations.'

Adam Lawrence, Chief Executive Officer at CPS, commented 'the US Federal Reserve's NextGen program is an innovative and ambitious program and we are delighted the FRB has selected CPS to work closely with them on this. The project demonstrates the focus that CPS has on innovation and is a significant investment in our future product roadmap. It will give CPS the opportunity to show its strengths as a trusted partner and provider of end to end banknote processing solutions.'

Christopher Hyman, CPS Chairman remarked that 'securing this prestigious contract with one of the world's largest central banks, the FRB, is a major step on the transformation journey that CPS started when it was acquired by Privet Capital in May 2016. CPS has made great strides forward over the last year, investing in all areas, and with this contract and the appointment of Adam to lead the business, it is well positioned for future growth. To partner with the Federal Reserve Bank during the competitive development phase of their NextGen program will be a catalyst for even further transformation.'

UK-based CPS was, until two years ago, part of De La Rue. Its systems process over 100 billion banknotes per annum from operations in 106 countries, supported by a team of over 500 people.



# Norges Bank – Never Mind the Cod, is the Cashless Society Coming?

Norges Bank, Norway's central bank, is widely to be considered in the vanguard of innovation regarding cash circulation, facilitating this taking place mainly outside the central bank and outsourcing central bank operations, including destruction of banknotes. It is also the central bank of a country that, along with its Scandinavian neighbours, is at the forefront of moves towards a more cashless society. At the same time, however, it is still investing in cash, as evidenced by the new banknote series which is partway through being issued, and which earned it the annual 'Banknote and Currency Management Award' from Central Banking Publications (see page 4).



Leif Veggum.

Currency News spoke to Leif Veggum, who joined the Cashiers Department in 2000 and was appointed its Director last year. He has played a central role in the changes that Norges Bank has implemented to cash operations in order to increase efficiency in cash distribution, which have included both redefining the Bank's role and responsibilities, and reorganising the services and tasks for which it is responsible.

**Q:** How much cash (notes and coins) is circulating in Norway – in terms of value and volume? How does this compare with five and ten years ago?

**A:** The figures going back to 2007 are provided in the table below. They show annual averages, in millions of NOK and pieces.

In terms of the broader picture, both the value and the number of notes in circulation was stable from 2008 until the end of 2016, with a 5% decrease in 2017. A turning point, perhaps? For coins, the situation is stable in terms of both value and volume.

**Q:** Norway is one of the countries perceived to be at the forefront of moves to a cashless, or at least a less-cash society. How do the trends in cash usage compare with those of other payment methods? And what are the preferred alternatives?

**A:** The relative importance of cash as means of payment has been reducing over many years. Cash in circulation as part of M1 has been decreasing, and is now around 2.5%. We don't have precise figures, but surveys among the public and data indicate that 10-12 % of all transactions, and 20-25% of transactions in supermarkets and convenience stores, are settled with cash. Measured in value, the figures are lower.

Card usage has been increasing over many years, and in 2016 every inhabitant made on average 417 card payments. The average value per card payment has been decreasing. Debit cards are the most popular, although mobile payments via apps are becoming more popular, especially related to p2p.

**Q:** Is decline in cash demand being driven by less demand or is it essentially supply-side driven?

**A:** Difficult to give a precise answer, probably both.

New payment solutions using mobile apps seem to get more popular and are probably replacing cash payments. On the supply side, the availability of cash services has been reduced. Even if the degree of cash-back in shops seems to be reduced, cash withdrawals are still available for the public. But the main problem seems to be reduced possibilities to make cash deposits. Banks are closing branches and reducing other deposit services. Reduced opportunities for deposits will probably result in reduced demand for cash.

**Q:** Norway was a pioneer in outsourcing the circulation of cash. Can you describe the evolution of this outsourcing, and the current model?

**A:** There were two important steps: first, to redefine the responsibility of the central bank, and second, to outsource activities that remain the central bank responsibility.

The starting point back in 2000 was to redefine the role of the central bank in the cash cycle to achieve an efficient cash distribution in the context of an overall efficient payment system. The decision was to take a clearer role as a wholesaler and terminate all activities that were regarded as being the responsibility of the retailers (banks), eg. activities related to cash sorting for others.

All commercial activities were taken over by NOKAS, which the central bank established in 2001 together with private banks. The definition of our responsibilities as wholesaler were finalised in 2005 and defined to meet the demand for coins and notes, meaning to supply banks from five central banks depots around in the country and to shred unfit notes.

The second step was the outsourcing of the operation of central bank depots and shredding of unfit notes (to NOKAS).

The model has so far proved to work well and there has so far not been any need for adjustments.

**Q:** How does the Bank ensure the availability, security and quality of cash when it isn't involved in its circulation?

**A:** We are involved as the wholesaler and as the regulator. We define the regulation regarding banks' deposits and withdrawals at Norges Bank. According to this regulation, the banks are responsible for quality sorting according to our guidelines.

Moreover, we believe in the use of incentives. The most important is related to our interest compensation scheme, whereby we compensate banks for the interest they lose by storing quality sorted cash in private depots instead of depositing it with us. This reduces transport volumes and also secures quality sorting according to our standards. Based on sampling, we ensure that sorting is done according to our guidelines. We also monitor the quality of banknotes in circulation, taking samples and checking if the quality is within defined targets.

	2017		2012		2007	
	Value	Volume	Value	Volume	Value	Volume
Notes	42,427	124	46,379	127	45,858	116
Coins	4,536	1,485	4,800	1,770	4,581	1,632

Altogether, we have a good concept to secure the necessary quality and would not have been in a very different situation if we had performed everything in-house.

As regards availability, we are present in each region with a central bank depot and offer flexible regulation for central bank services.

**Q:** *Has this delegation and commercial bank outsourcing accelerated cash decline in Norway?*

**A:** To achieve a more efficient distribution system, the banks were given more responsibilities. They were the best qualified parties to find good solutions for supplying cash to their customers. More responsibilities led to higher costs. Cash services are basic services in running a bank. Our expectation was that the banks would start to price the cash services to cover at least a major part of these costs. This only happened to a limited degree. Instead we saw a focus on reducing costs, mostly by downscaling infrastructure and by outsourcing.

**Q:** *The Norwegian government has voted a law forcing banks to provide cash services. But what specific services are required? Are there sanctions in case of non-compliance?*

**A:** The law states that banks have a responsibility to meet their customers' needs and expectations related to withdrawals and deposits of cash. The Ministry of Finance is currently in a process to clarify what this means. We are, together with the FSA, involved.

**Q:** *It is reported that some politicians want to see Norway entirely cashless by 2030. How likely do you think this is?*

**A:** No political party has such a statement in its programme as far as we know. On the contrary, it seems to be a consensus among the politicians that it should be up to the end-users to decide whether to use cash or account money. To secure a real choice, cash must to a certain extent be available.

**Q:** *Norway, Sweden and Denmark all appear to be moving in the same direction regarding cash (or lack of it). This is in sharp contrast to other European countries such as Germany, Switzerland and Austria where cash still dominates. Is there any particular reason why Scandinavian countries are different? And do you see yourselves as the norm, or the exception?*

**A:** Probably several explanations, tradition, culture... Currently we seem to be exceptions: however, we expect to see signs of the same developments in other countries.

**Q:** *Moving now to the new currency series, can you give some background as to the development of this – in terms of design, philosophy and also rationale? And given the move away from cash, why is a new series being introduced at all?*

**A:** As central bank we are responsible for providing banknotes that can function efficiently as means of payment. A reduction in the use of banknotes doesn't change this. Providing secure notes includes making sure that they have security at the same level as notes from comparable countries. The reason for developing a new banknote series was that as other countries have issued new series, we saw that our current series would become relatively less secure, and that upgrading of the current series was not a good alternative.

For the design we wanted to have a common theme, connecting the different denominations and telling a story that is helpful for communicating the public security features.

Criteria for selection of the theme were defined; the theme should be widely accepted, focusing on Norwegian identity, be relevant for several years, possible to be visualised, allowing for easy recognisable icons, etc.

The sea was selected as the theme, based on its historical and current importance for Norway. All denominations have motifs that show the importance of the sea for the development of culture, prosperity and welfare in Norway.

Another philosophy in the project has been to use mainly internal resources, except for the printing, and to take full responsibility where we have the necessary in-house competence. We have involved external experts and the public in selection of the theme, suggestions for design etc., and we consulted and discuss with colleagues, printers and providers of features. But all in all the project is being run with fairly low use of resources.

**Q:** *Where are you currently in the process?*

**A:** The NOK 100 and NOK 200 notes were issued last May. We are in the final stage of printing the next two denominations, the NOK 50 and the NOK 500, and preparing for issuance of these early autumn this year. In parallel we are working to finalise the line work on the last denomination, the NOK 1,000, which is planned to be issued autumn 2019.

**Q:** *The 'Cod is Coming' video to publicise the new NOK 200 has become a viral hit. Central banks are not known for their quirky sense of humour. What prompted this video? Do you have any similar plans for the next notes to come out?*

**A:** The idea to make the video was conceived in our communications department. We were looking for a PR concept that could reach as many as possible via social media, and found that humor would be an efficient tool. A remake of the music video 'Torsken komme', which is very popular and well known in Norway, had the relevance and the potential we were looking for.

We are still in the planning phase for next new notes; however it could be risky to try to match the 'Cod is Coming'.



'The Cod is Coming' from the Norwegian comedy trio KLM – dressed up first as fisherman and then as central bankers – singing about the marvels of cod, and the new notes. The rap video also featured a cameo appearance by Øystein Olsen, Governor of the Norges Bank.

**Q:** *What other steps are being taken to educate the public, cash handlers etc?*

**A:** The more common ones are:

- Contact and cooperation with companies supplying and supporting equipment for banknote handling and sorting, as well as the association for blind people, retailers and financial institutions;
- A menu of materials for different groups on our website, including self-educational programs for cashiers;
- Printed materials;
- Social media;
- App.

**Q:** *Has the new series had an impact on demand?*

**A:** It is still early days; however we do not see major impacts.

Continued on page 8 >

# Norges Bank *(continued)*

**Q:** Can cash provide a back-up solution in case of an emergency (cyber-attack, systemic bank failure) in a low- cash environment such as Norway?

**A:** Cash is the back-up solution in the sense that it is the only alternative means of payment to bank account money for the public. The possibility to switch to central bank money supports confidence in bank account money, and cash is the only alternative when systems for using bank money don't work.

The question is how realistic this back-up solution is when the infrastructure for cash supply to the bank customers has been scaled down. What the legally established obligation for banks to meet their customers' demand for cash means, both in normal situations and in extraordinary situations, is now being looked into by the Ministry of Finance.

**Q:** Are there specific challenges to manage cash cycle in a low-cash environment?

**A:** The cost of cash is very much related to the storing and distribution and not so much to actual settlement/use. The challenge when volumes decrease will be to maintain the infrastructure. Efficient solutions require cooperation in the way that commercial players are given possibilities to develop solutions that can be used by all banks and their customers. And the central bank may of course have to rethink its role.

Today the situation is not critical; however that could be the case if the availability is reduced and the volumes further decline down to a critical level.

**Q:** Where do you think Norway will be on the cash/less-cash cashless spectrum in, say, five years' time?

**A:** It is certainly difficult to forecast the future use of cash; this is very much dependent on the behaviour of the public and technological inventions. We are trying to understand the basic drivers of the development and, based on these, we expect a further decline in use.

However we still expect cash to be commonly used in five years' time. Cash has a much more important role than what the actual use would indicate: contingency for electronic means of payment, offer possible shift from private account money to central bank money, hinder bank monopoly in the payment system and play the role as legal tender.

# People in the News

**Adrian Orr** has been named as the new Governor of the Reserve Bank of New Zealand. He previously served as a Deputy Governor for four years. He replaces **Graeme Wheeler**, who stepped down in September at the end of his five year term.

**Alejandro Diaz** de Leon has been appointed the new Governor of the Bank of Mexico. He was formerly a Deputy Governor and replaces **Agustin Carstens**, who is moving to Basel to run the Bank for International Settlements.

**Yang Chin-long** is to succeed **Perng Faian** as the Governor of the Central Bank of China (Taiwan).

Former finance minister **Mohammed Mansour Zammam** has been appointed Governor of the Central Bank of Yemen, replacing **Mansr al-Qaiti**.

**Cleviston Haynes** has been appointed as Governor of the Central Bank of Barbados for a period of five years. A former Deputy Governor, he has served as interim Governor since last February, following the departure of **Delisle Worrell**.

The Bank of Mauritius has appointed **Yandraduth Googoolye** as its new Governor. He has served as First Deputy Governor since 2006 and replaces **Ramesh Basant Roi**.

**Dwina Septiani Wijaya** has taken over as CEO of the Indonesian state printer Perum Peruri from **Mr Prasetyo**, who has retired.

**Erick Lacourrège** has been appointed Director General of Service to the Economy and Branches of the Banque de France. His prior position as Director General of Banknote Manufacture has been filled by **Vincent Bonnier**, previously Deputy Director. He, in turn, has been replaced as Deputy Directory by **Florence Screve-Szeles**.

**Jakub Skiba** has been appointed President of Polish Security Printing Works (PWPW) and a member of its Supervisory Board. He was formerly Secretary of State of the Interior and Administration and has also served on the Board of the National Bank of Poland. He replaces **Piotr Woyciechowski**, who was dismissed from his position last October.

**Philippe Barreau**, formerly Managing Director of SICPA, has taken up a new position as Group Executive Vice President at IDEMIA for the Citizen Identity and Public Security business units. IDEMIA, headquartered in France, is the new name for OT-Morpho, itself created as a result of the merger of ID giants Safran Identity & Security (Morpho) and Oberthur Technologies.

**Mouhcine Naji** has been appointed Managing Director of Dar A-Sikkah, the printworks of Bank Al Maghrib, replacing **Noureddine Guessous**, who retired at the end of last year. He was previously the Deputy Managing Director, and has a long experience in banknote production and cash operations management.

**Hamoud Amara** has been appointed Managing Director of the printworks of the Central Bank of Algeria. He replaces **Aziz Hamlat**, who retired in 2017. He was previously the Banknote Production Manager, and is an active member of the African Association of Banknote and Security Documents Printers. He will be in charge of the modernisation of the printworks, and in particular the transition from web- to sheet-fed printing technology.

**Andy W Mattes** has stepped down as President and CEO of Diebold Nixdorf. The announcement was made in December, 'with immediate effect'. A search has been started for his successor. In the interim, the office of CEO is being shared between **Christopher Chapman**, Chief Financial Officer, and **Juergen Wunram**, Chief Operating Office.

**Jens Seidl** has joined Currency Research as Vice President, Consultancy. Previously he was with the travel money and financial service provider Travelex, undertaking a variety of roles since 2000 including Director for Global Wholesale Banknotes and Cash Operations. Jens has 28 years of experience in the industry and has built, managed and implemented transformation programmes for cash centres across five continents.



Jens Seidl.



# Banknote 2018: Technology in Focus

Technology drives the banknote industry and, says Currency Research, there is no better forum to meet and discuss the latest innovations, technology trends, and research developments than its Banknote Conference in Dallas, Texas from May 21-24.

## Welcome Address

Doug Pertz, CEO of The Brink's Company, will discuss changes in cash management and what they could mean to the banknote industry.

## Expert Discussions

The refreshed Banknote 2018 format includes several expert panel discussions focused on pivotal topics.

- **The Counterfeiting Threat Environment: Counterfeiting Trends – Who, What, and How** – *Moderated by Larry Felix (Chairman, Banknote 2018)*

What are the latest threats? How can deterrence be improved? Fabrice Capiez (Banque de France), Ton Roos (ECB), and Marc Surrency (Federal Reserve Board) are among the panelists who will share their perspectives, research, and insights on counterfeiting techniques, tools, and distribution methods, to help delegates understand the threat environment and the importance of continued innovation.

- **The Evolution of Printing, Feature, and Substrate Development: Resiliency Testing & Adversarial Analysis – Methodologies and Efficiencies** – *Moderated by Michael Lambert (Federal Reserve Board)*

This panel will help explain the new frontier of adversarial analysis: What are the typical procedures of a feature supplier and what are the methodologies of a central bank? Can there be efficiencies gained from redundant testing? Can and should there be standardisation around testing? Alejandro Alegre (Banco de México), Jean-Michel Grimal (ECB), and Nick Pearson (Crane Currency) are some of the panelists.

- **The Evolution of Printing, Feature, and Substrate Development: Are Level 1 Security Features Doing Their Jobs?** – *Moderated by Shaun Ferrari (Currency Research)*

Central banks invest significantly in researching and incorporating Level 1 security features, followed by public education campaigns. Yet, surveys show that the public is hardly aware of these features. Jan Binnekamp (De Nederlandsche Bank), Lior Lichtman (Bank of Israel), SK Maheshwari (Bharatiya Reserve Bank Note Mudran), Peter Muehlfelder (KURZ), Hugues Souparis (SURYS), and Stephen Surko (BEP)

will discuss the effectiveness of Level 1 features and how the industry can optimize their use.

- **The Cash Handling Environment of the Future: The Cash Cycle Today and in the Future – Challenges and Opportunities** – *Moderated by Richard Wall (Bank of Canada)*

Key cash stakeholders including Mike Bielamowicz (Glory Global Solutions), Anikó Bódi-Schubert (Magyar Nemzeti Bank), Dragan Djenadija (Loomis AB), Brian Hayr (CCL Secure) and Robert Morrow (Crane Payment Innovations) will discuss the cash cycle of today and what it might look like 10 years from now. How is the proliferation of automation in the cash cycle affecting currency distribution decisions for the future? How will the role of central banks, BEMs and banknote producers change as advanced note acceptance and evaluation technology becomes ubiquitous throughout the cash cycle?

- **The Cash Handling Environment of the Future: Sensor Development and How is it Evolving?** – *Moderated by Roland Costa (Federal Reserve Bank of Richmond)*

How are central bank requirements changing and how might the evolution of features and data capture for verification influence sensor development? As banknotes become more sophisticated, do sensors become more customised? The progress of CDI2 as a gateway for third parties to enter the market, effectively separating machine/transport from sensor development, will also be discussed by Michael Andersen (Reserve Bank of Australia), Tim Driscoll (Authentix), Christian Juettner (G+D Currency Technology), Andreas Vrabl (Austrian Institute of Technology), and Darren Wick (Cash Processing Solutions/CPS).

- **Emerging Technologies and the Future of Banknotes: Industry Awareness – Alternative Payment Technologies** – *Moderated by Gonzalo Santamaria (Currency Research)*

Innovation in payments and digital currency are accelerating at breakneck speed. What impact are these emerging payment technologies having on consumer behavior? The panel, including Victoria Cleland (Bank of England) and Lydia Yip (Hong Kong Monetary Authority), among others, will review critical issues surrounding these newest technologies and contextualize their potential, plus the impact they may have on banknote usage.

## Technical presentations

Industry sponsors will provide their latest innovations, research, and concepts for the future, with presentations grouped around the context of the expert panel discussions.

## New pre- and post-conference programs

For the first time in its 20-year history, Banknote 2018 is adding programs that reinforce the technology focus of the conference.

On Monday morning, the 'Technology Ideation Workshop' offers those with technical acumen the opportunity to explore, discuss, and evaluate new and innovative possibilities under development at university research departments.

At the 'Making Banknotes Work for People Seminar', the International Banknote Designers Association (IBDA) will demonstrate the value that data from perception studies brings to banknote designers and central bank management professionals when elaborating a new series design concept.

Running in parallel with the workshop and seminar on Monday morning, delegates can join an exclusive walking tour on the production floor of the Western Facility of the Bureau of Engraving and Printing (BEP), with a presentation by BEP Director Len Olijar and Deputy Director and COO Charlene Williams on the history of the BEP.

Following the conference conclusion on Thursday, state-run printworks delegates are invited to the State Printworks Summit to discuss cash cycle changes and emerging electronic payment trends – and their effect on print volumes. The Summit will include discussion around common production and other printworks-specific issues.

A tour of the 'Dallas Fed' is also available on Thursday afternoon. Delegates will see the Fed prepare and release currency to armored carrier companies on behalf of depository institutions; receive and store currency deposits in a multi-level, automated vault; and verify each note on sophisticated processing equipment to identify counterfeit and destroy unfit notes.

## Enhance banknote planning

'CR works to maximize value for our delegates who travel from all over the world to gain knowledge and hear their peers' perspectives,' said Currency Research President, Marci Chavez. 'This intensive immersion into the subject matter will have long-ranging benefit for those who attend and participate.'

[www.banknoteconference.com](http://www.banknoteconference.com)

# Same Value, Fewer Numbers for Mauritania's New Currency

**The Central Bank of Mauritania has launched its new ouguiya banknote family as part of its monetary reform programme, which has seen the currency redenominated. *Currency News*<sup>™</sup> takes a brief look at the reform and the subsequent new series.**

Mauritania is located in the Maghreb region of Northwestern Africa and is the eleventh largest country in Africa. Its economy has changed significantly during the past two decades. GDP growth in the country was historically sluggish, but has accelerated in recent years, growing by 135% between 2009 and 2017. Over the same period, money supply nearly doubled. The country's sees a promising economic outlook, due to mining and oil production, which will impact on monetary demand and therefore, by association, cash.

The ouguiya (the name derives from the Hassaniya Arabic pronunciation of awqiyah, meaning 'ounce') was introduced in 1973, replacing the CFA franc. The series prior to the latest family was issued in 2004, in denominations of UM 100, 200, 500, 1,000 and 2,000, all of which were upgraded over the course of 2010-2015. In 2010, a high denomination UM 5,000 was introduced, and upgraded two years later.

The old series was printed on various paper and composite substrates as well as on polymer – the three lower denominations were on *Hybrid*<sup>™</sup>, the UM 1,000 note on *Guardian*<sup>™</sup> polymer, and the two higher denominations on paper.

## High demand

There is a high demand for banknotes in the country, particularly large denominations, equating to an annual average demand of 36 million notes per year. The value notes in the country are often in poor condition, particularly the lowest note denominations which have a high usage in daily transactions. According to the Bank, this is partly attributable to the 'exorbitant' costs associated with processing (exacerbated by so many different versions of the notes), which has resulted in them not being withdrawn from circulation in a timely manner.

Counterfeiting also is a problem in Mauritania. Although there have been upgrades since the notes were first issued in 2004, some of the security features were becoming outdated and ineffective in combatting the high levels of counterfeits.

To address these and other factors affecting the economy, Mauritania has undergone a monetary reform whereby its currency has been redenominated at a factor of 1:10.

The government has said that the move to a new currency is to protect its purchasing power, reduce the amount of currency in circulation, facilitate banking and reduce the risk of counterfeiting. Since New Year's Day, 1 new ouguiya equates to 10 old ouguiyas.

The Central Bank of Mauritania began circulating its new note and coin family on 1 January. With one less zero than the notes they replace, the new series consists of UM 50, 100, 200, 500 and 1,000 ouguiyas, whilst coins are available in ½, 1, 5, 10 and 20 ouguiyas (in a public survey carried out last May, 80% of respondents said they would prefer the two lowest value notes to be coined). The UM 1,000 banknote is currently valued at approximately \$2.80.

The five coins vary in size, increasing slightly with each coin's denominational value. Whilst the ½, 1 and 20 ouguiyas coins have a smooth, circular edge, the 5 is a heptagon, having seven sides, whilst the 10 ouguiyas is a decagon with 10 sides.

The design theme is based on flora, fauna and cultural symbols.

Each of the five banknotes are printed on *Guardian*<sup>®</sup> polymer substrate, which the Bank expects will increase their lifespan by at least a factor of three.

They have been printed by the Canadian Bank Note Company (CBN), and the design is distinctly modern compared with the previous series, with images of heritage sites and landscapes. All have a clear window which includes CCL Secure's *AURORA*<sup>™</sup> optically variable switching ink feature. The clear window also contains the blind embossed *WINBOSS*<sup>™</sup> feature, depicting the denominational value of each note, as well as *METALIX*<sup>™</sup> ink.

Other features include CBN's *TOUCH*<sup>®</sup>, a tactile feature consisting of raised dots aimed at assisting the visually impaired, as well as perfect register patterns and ultraviolet features.

Mauritania is the first country in Africa to issue a whole series of banknotes on *Guardian*<sup>™</sup> polymer. The Governor of the Central Bank of Mauritania, Abdel Aziz Ould Dahi, said 'polymer notes are safer, more durable, and cleaner than other banknotes. They provide greater resistance to counterfeiting and improve the quality of the circulating banknotes. They are also more environmentally friendly and, because they last longer, they are cheaper than paper banknotes. We have been working extensively with CCL Secure and Canadian Bank Note Company to ensure a smooth transition and I am grateful to their teams for their help in the process.'

## Public education

The Bank, as well as surveying the public as part of its reform programme, has undertaken an extensive public education campaign with the theme 'moins de chiffres, même valeur' (fewer numbers, same value), which has included advertising, social media, a dedicated website, call centre and an app.

The Bank has programmed a staged withdrawal of the old series of banknotes, starting with the UM 5,000 which was withdrawn from circulation at the end of January. The UM 2,000 and UM 1,000 will be withdrawn this month and in March respectively, and the remaining banknotes will be withdrawn in June.





# Australia Unveils New A\$50

The Reserve Bank of Australia has unveiled the design of the new A\$50 banknote, the third in its new series. As with the existing banknote, the new A\$50 features portraits of Aboriginal writer and inventor David Unaipon and the first female member of an Australian parliament, Edith Cowan. The new banknotes will be released into general circulation in October 2018 and follow the new A\$10 banknote issued last year and the A\$5 in 2016.

In line with those notes, the A\$50 includes a top-to-bottom clear window with dynamic features such as a reversing number. There is also a SPARK patch with a rolling colour effect and microprint featuring excerpts from David Unaipon's book and Edith Cowan's maiden parliamentary speech.

Also in line with the two other notes so far in the new series, the A\$50 includes representations of a wattle and a native bird – in this case the *Acacia humifusa* and a Black Swan.



## In other news...

- The South African Reserve Bank is to issue a set of commemorative banknotes this year to mark what would have been Nelson Mandela's centenary. The notes will cover all denominations – the 10, 20, 50, 100 and 200 rands. In addition, The South African Mint will issue a new R5 circulation coin.

The existing Mandela series, issued in 2012, as well as the existing R5 coin, will remain legal tender and will continue to be issued, with the new commemorative notes and coin co-circulating. They will be introduced on 18 July.

- The Central Bank of Uruguay has issued new 100 peso and 1,000 peso banknotes, which have a similar design to their predecessors, but contain upgraded security features. These include optically variable ink on the 100 peso and SPARK Origin on the 1,000 peso, both used to depict a map of Uruguay seen on the front of the notes.

Other key features include windowed threads on the front of the notes – a metallic thread is used for the 100 peso note whilst the 1,000 peso incorporates a holographic thread. The banknotes also include a tactile feature to enable the visually impaired to identify each denomination.



- The National Bank of Romania has begun issuing banknotes and coins which incorporate the country's new coat of arms within the designs following a revision of the country's laws. The new banknotes, which also have the date '1 ianuarie 2018' printed on the front, and coins will continue to use the same graphic elements and security features as those already in circulation.

According to the Bank, the new notes and coins will be gradually rolled out based on currency demand in the country and will circulate alongside the currency already in circulation.

- The Czech National Bank has announced that it will issue upgraded CZK (Czech zloty) 100 and 200 banknotes which will be put into circulation during 2018, following a presentation to the public scheduled for May 2018.

The Bank advises that whilst the new notes will retain the existing overall design concept, they will be adapted to include modern security features that provide the banknotes with advanced protection against counterfeiting whilst enabling 'easier processing using technical equipment'.

The current CZK 100 and 200 banknotes, first circulated in 1997 and 1999 respectively, will remain legal tender once the new banknotes are issued.

- The Central Bank of Seychelles will be issuing a new 10 rupee coin later this year to replace those introduced in December 2016, which have shown signs of tarnishing and rusting.

It is thought that the metal composition of the coins were not compatible with the island's humid climate and deteriorated when in contact in seawater. Whilst the design and colours of the new 10 rupee coin will stay the same, it will have an updated metal composition of nickel plated steel and nickel plated brass, making it more resistant to the environmental conditions in which they will circulate.

5 million new coins bearing the year 2018 are to be delivered to the Seychelles and circulated during the first quarter of 2018.

- The Saudi Arabian Monetary Authority (SAMA) has reportedly started phasing out the 1 riyal banknote, following the introduction of a bimetallic coin of equivalent value in December 2016 as part of the issuance of the country's sixth currency series.

According to SAMA, the coin is expected to have a lifespan of 20-25 years, compared with the 12-18 month lifespan of the 1 riyal banknote.

- The Central Bank of the Republic of Uzbekistan is reportedly considering the introduction of a new high value banknote, whilst replacing its lower denomination banknotes with coins.

The highest banknote denomination currently available in the country is the 50,000 som, followed by the 10,000 som, introduced in August and March 2017 respectively as part of a currency optimisation programme aimed at addressing the rapidly declining value of the som. Since August 2017, the value of the 50,000 som banknotes has halved and is now only worth \$6 on the international market.

Coinciding with the proposed introduction of a high value banknote, the Bank is also considering coining the lowest value banknotes – the 25 and 50 soms.

- The Central Bank of Sierra Leone has announced plans to introduce new banknotes in 2021, to mark the country's 60th anniversary of independence. The notes will carry images of presidents spanning the last two decades – with the current President, Ernest Bai Koroma, featuring on the 10,000 leone.



# All Change for De La Rue *(continued)*

Following completion, the existing management team of De La Rue's paper business will remain with Portals De La Rue. 16% of the shares have been allocated to the management, which includes Ross Holliday, Head of Operations for the paper business, who becomes CEO. Colin Childs, who was De La Rue's Finance Director until 2015, has been appointed Chairman.

This divestment will, says De La Rue, limit its exposure to the external paper market, while securing paper supplies and helping to maintain the group's leading position as an integrated banknote and security document supplier.

It will also enable De La Rue to strengthen its balance sheet and to focus on providing innovative technology solutions for the currency, identity and brand protection markets.

De La Rue expects to incur approximately £4 million in exceptional costs this financial year in relation to the transaction. After completion, which is likely to take place in the first half of this year, De La Rue expects to reduce its ongoing overhead costs by around the same amount by 2019/2020.

Commenting on the announcement, CEO Martin Sutherland said: 'we are pleased to have found the right partner for our paper business. It is another significant milestone as we transform De La Rue into a less capital intensive, technology-led product and service provider.'

'This transaction strengthens our balance sheet and enables us to invest further in technology and the strategic growth areas of security features, polymer, identity solutions and product authentication'.

De La Rue has been supplying banknotes for central and commercial banks around the world for over 200 years, and – says Sutherland – will continue to do so, supported by Portals De La Rue.

'In Epiris, we have found a strong partner with extensive experience in the banknote substrate market that will have a singular focus on growing the paper business for the long term. This is good for De La Rue and its customers, as well as for Portals De La Rue, its customers and employees.'

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## Events

**19–21 FEBRUARY 2018**

**HIGH SECURITY PRINTING EMEA**

Warsaw, Poland

[www.hsp-europe.com](http://www.hsp-europe.com)

**21–23 MARCH 2018**

**INTERGRAF SECURITY PRINTERS CONFERENCE**

Dublin, Ireland

[www.securityprinters.org](http://www.securityprinters.org)

**16–19 APRIL 2018**

**CASH CYCLE EUROPE (ICCOS)**

Dublin, Ireland

[www.europe.iccos.com](http://www.europe.iccos.com)

**22–26 APRIL 2018**

**MINT DIRECTORS CONFERENCE**

Seoul, South Korea

[www.mdc2018.com](http://www.mdc2018.com)

**21–24 MAY 2018**

**BANKNOTE CONFERENCE**

Dallas, TX, USA

[www.banknoteconference.com](http://www.banknoteconference.com)

**11–13 JUNE 2018**

**HIGH SECURITY PRINTING LATIN AMERICA**

Punta Cana, Dominican Republic

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

**12–13 JUNE 2018**

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