

Our markets

We operate in three main markets – currency, identity and product authentication, all of which have strong prospects for long term sustainable growth.

Currency market



The total amount of cash in circulation has been growing at c3% a year globally over the past decade and is expected to continue to increase at a similar rate in future years.

The total amount of cash in circulation has been growing at c3% a year¹ globally over the past decade and is expected to continue to increase at a similar rate in future years. Population growth and increasing number of ATMs are amongst the main drivers for cash growth.

Most banknotes and the substrates on which they are printed are produced by state print works (SPWs) and state paper mills (SPMs) of the respective issuing countries. The rest of the demand is fulfilled by commercial banknote printers and paper or alternative substrate makers. This situation has remained relatively stable over the past decade.

While many customers buy finished banknotes from one supplier, some follow a multi-supplier model which involves disaggregating their note buying into individual components: substrate, security features and printing.

Global banknote issuance

Billions of notes

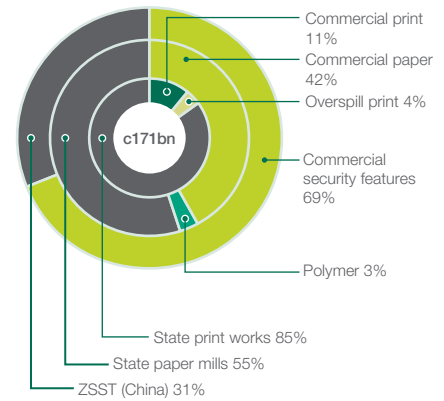
2021E	194
2020E	192
2019E	183
2018E	178
2017E	174
2016	171
2015	168
2014	157
2013	157
2012	153

CAGR 3% (2012-2017)
CAGR 3% (2017-2021E)

Source: De La Rue estimates

Commercially available markets

%



Source: De La Rue estimates

Commercial print market by volume %



- De La Rue – 27%
- G&D – 23%
- Oberthur – 17%
- Crane – 7%
- Goznak – 7%
- Other – 19%

Source: De La Rue estimates. Excluding overspill orders

Printing

The number of countries outsourcing their banknote production has been stable in the past decade and this is expected to remain unchanged in the near future. Around 11% of the c171bn banknotes issued globally¹ in 2017 were commercially available. The commercial banknote print market is highly concentrated, with four major operators sharing two thirds of the market. De La Rue is the market leader, with 27% market share.

While the increase of cash in circulation drives growth in the commercial banknote printing market, the timing of orders can be unpredictable. The degree of uncertainty is exacerbated by overspill caused by the SPWs being unable to meet internal demand. Overspill orders typically account for 2% to 4% of the total banknote market and therefore have a noticeable effect on the commercial print and paper markets.

Polymer substrate

Of the banknotes in circulation, c3% are printed on next generation substrates such as polymer¹. As central banks seek to reduce the 'cost of cash', polymer is becoming more popular due to its durability, sustainability and greater security².

More economies are switching or considering switching paper banknotes to polymer notes. Thirty eight countries have already issued or are about to issue one or more denominations on polymer. We expect the market to double in size in the next five years¹.

Currently there are only two commercial suppliers of polymer substrate. Although second to the market, De La Rue has been growing fast and has 11% share by volume¹. Polymer also offers opportunities to access the countries printing their own banknotes but sourcing substrate from the commercial market, thus increasing the size of its addressable market.

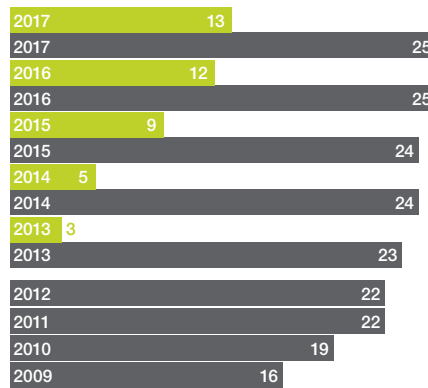
Security features market by volume %



- De La Rue – 7%
- ZSST (China) – 31%
- Crane – 17%
- G&D – 12%
- Kurz – 5%
- Fabriano – 3%
- Generic/Other – 25%

Source: De La Rue estimates

Polymer market by number of issuing authorities No.



- De La Rue
 - CCL
- Source: De La Rue estimates

Polymer market by volume %



- De La Rue – 11%
 - CCL – 89%
- Source: De La Rue estimates

Security features

While pricing in print and paper remains stable, customers are increasingly seeking to access the benefits of added-value security features such as threads and holograms and this is making the ownership of such innovations an attractive opportunity.

Almost all countries buy security features or IP licences on the commercial market. Some 90% of the c171bn banknotes issued in 2017 incorporated security threads, while only 13% included features such as holographic patches and stripes. However, we believe growth in holographic features will accelerate as the polymer banknote adoption rate increases.

Compared to print and polymer, the security features market is fragmented, with more than a dozen suppliers ranging from banknote printers to pure play security features firms. De La Rue is the third largest commercial supplier of security threads and the fourth largest of holographic features.

¹ De La Rue estimate.

² According to the Bank of England's study in 2013, polymer notes are more secure and last 2.5 times longer than cotton-based banknotes.

Our markets continued

 Identity market



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Against a background of increasing population and greater globalisation, demand for identity products and services continues to rise as governments increasingly focus on improving border security, authentication and their citizens' access to services.

While physical tokens such as passports and ID cards are important, there is a growing emphasis on end-to-end solutions that combine secure tokens with systems and services which help to create and validate unique, trusted legal identities.

The global identity market, including passports, ID cards, and the associated digital solutions, is valued at around £3.9bn today and expected to grow at

c6% a year¹. Although many countries have in-house security print capabilities, many still choose to source printing or individual components from the commercial market. More than half of the identity market is available to commercial manufacturers.

With an annual growth of c8%, the passport market remains attractive. Around 165m passports are issued globally each year, 25% of which are available to commercial security printers. Customers increasingly value security features and the systems and services surrounding the physical product. While we believe demand for physical passports will remain for the long term, the market is transitioning from Machine Readable Passports to chip-based ePassports. This further drives demand for full integration of end-to-end solutions.

Globally, around 100 countries have compulsory identity card schemes. The national ID market is expected to grow at 5%. Today, over 70% of the national IDs in circulation globally are chip-based. Technological advances in recent years have enabled new types of ID schemes, combining traditional ID functionality with payment methods.

¹ De La Rue estimate.

Global passport market
£bn

2020E	3.2
2019E	3.0
2018E	2.9
2017	2.7
2016	2.6

Passport: 8% CAGR

Source: De La Rue estimates

Global identity card market
£bn

2020E	1.5
2019E	1.4
2018E	1.3
2017	1.2
2016	1.1

National ID: 5% CAGR

Source: De La Rue estimates

Commercial passport market
by volume %



- De La Rue – 32%
- Gemalto – 12%
- CBN – 12%
- IDEMIA – 9%
- G&D – 8%
- Other – 27%

Source: De La Rue estimates



Product authentication market



The global market for brand protection is forecast to grow at 16% a year, rising to \$4.2bn in 2020.

Globally, the significant increase in counterfeit goods and illicit trade means that governments are losing billions of dollars in tax revenues. Legitimate businesses and brand owners are being undermined. Consumer confidence is being eroded and their health put at risk.

Excisable fast moving consumer goods such as tobacco and alcohol are widely recognised to be among the most illegally traded products in the world. One in every 10 cigarettes lit up in the world is illicit, valued at almost \$40bn, with an equivalent tax loss to global governments¹. The need for protecting tax revenue, together with continuing changes to government policy worldwide driven by international treaties such as the WHO Framework Convention on Tobacco Control, remain the key drivers for growth in the tax stamp market.

The rise of counterfeit goods, unauthorised production and sales channel diversion also means that businesses and brand owners are losing revenue and brand equity. The rapid growth of eCommerce and easy global

Global brand protection market \$bn

2020E	4.2	
2017	2.7	CAGR 16% ↑
2010	2.1	CAGR 9% ↑

Source: The Future of Anti-Counterfeiting, Brand Protection and Security Packaging to 2020, Smithers Pira

shipping have exacerbated the problem, with 90% of online retailers having experienced up to a 10% loss of revenue due to online counterfeit sales². The total value of counterfeit and pirated goods globally is expected to be \$2.8tr in 2022, a 150% increase from 2013³. The global market for brand protection is forecast to grow at c16% a year, rising to \$4.2bn in 2020⁴.

Both the tax stamp and brand protection markets are highly fragmented, with most operators offering only partial solutions such as serialised labels and tamper-evident packaging. However, there is a growing trend towards integrated, end-to-end solutions that provide a combination of highly secure labels and unique ID together with systems that can track, trace and authenticate products throughout the supply chain. As technologies advance and costs reduce, features such as printed electronics and RFID⁵ tags in packaging and labels are gaining popularity. Online shopping is also driving authentication through a touchpoint of consumer smartphones.

¹ Euromonitor International.

² Global Online Shopping Report.

³ The Economic Impacts of Counterfeiting and Piracy, Frontier Economics.

⁴ The future of anti-counterfeiting, brand protection and security packaging to 2020, Smithers Pira.

⁵ Radio Frequency Identification.