

# flow

Insights from Deutsche Bank  
Global Transaction Banking

Issue 8 | H1 2019

Inside this issue:

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How is digital fuelling  
ASEAN's economic  
growth?

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Reserve-based lending  
in the North Sea

---

Automation goals for  
treasurers

---

The instant attraction of  
real-time payments

---

Baroness Scotland on  
the Commonwealth in  
the 21st century

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– SAP's Stefan Gruber on orchestrating investor  
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# flow

Where capital, goods and ideas connect

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## Changing up

We are living in a climate of uncertainty, with ongoing political tensions and a volatile market environment. What does this mean for clients? More than ever before, they need transactional support as they tap export markets and move money across borders.

For corporates and financial institutions, this not only means intuitive foreign exchange solutions, payment service provision and cross-border trade finance, but having a dashboard vision of all these transactions 24/7. In other words, global transaction banking underpins the real economy and is vital to its future shape.

In this latest issue of *flow*, we tell our clients' stories about how they are navigating constant economic, technological and regulatory change to run successful businesses of today and tomorrow. These include the navigation of choppy MiFID II waters for SAP's US investors, and the transformational rebuilding of a Ghanaian market, to name just two. And what's more, we have a baroness with the last word on financial inclusion.

Do join us on this exciting journey.

Stefan Hoops  
Head of Global Transaction Banking

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"Clear, coherent and concise investor-relations messaging is ever more important in steering through the noise that is generated through social media"

Stefan Gruber, Head of Investor Relations, SAP  
18

*flow* is published by Deutsche Bank  
Global Transaction Banking

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Design by Wardour (wardour.co.uk)

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Cover photography: Wolfram Scheible

## 6 REGIONAL UPDATES

A look at Deutsche Bank's activities against a macroeconomic background in the EMEA, Asia Pacific and Americas regions

## 12 STRONGER TOGETHER

An update on how the Association of Southeast Asian Nations is leading the way when it comes to digital transformation

## 18 INVESTOR HARMONY

SAP's Stefan Gruber explains how the company changed from a one-product software company to a fast-growing cloud business

## 26 REGCHECKER

Deutsche Bank's Market Advocacy team highlight the key regulations that will affect global transaction banking in the year ahead

## 28 RETHINKING THE RULES OF PAY

Why comprehensive changes to the e-payment industry require a collaborative approach to regulation

## 30 UNDER THE HOOD

With global car sales standing still, Dr Rebecca Harding investigates whether the automotive industry is at a fork in the road

## 34 THE BIG PICTURE: OIL OF TOMORROW

The US is set to dominate global crude oil exports now that Venezuela and Iran are out of the picture

## 36 SUNSET TO SUNRISE

The oil majors may be withdrawing from the North Sea, but reserve-based lending means that smaller independents are thriving

## 42 MARKET MAKEOVER

Transformational lending has enabled Ghana's Kumasi Market to undergo an overhaul that will revolutionise the Ashanti economy

## 48 TRADE ADVENTURE

A United Nations Model Law provides cause for optimism when it comes to digitalising trade finance

## 50 TAKING THE CONTROLS

Former treasurer David Blair explains why clear goals matter to treasurers in today's uncertain environment

## 56 INSTANT ATTRACTION

Real-time payment schemes are transforming the payments arena

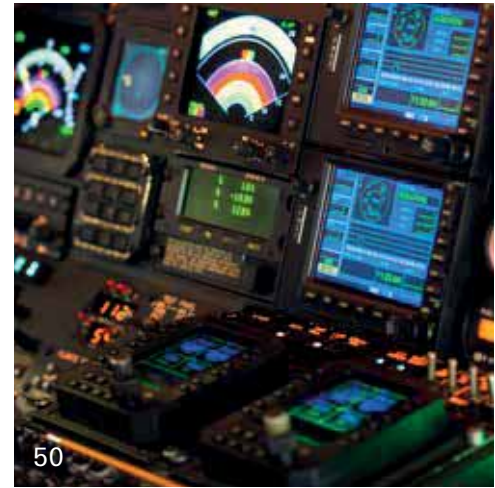
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- 60 HEDGE WITH AN EDGE**  
The rise in geopolitical risk and FX volumes means that fusing the right technology with trusted expertise is vital for treasurers
- 66 ISO 20022 TAKES OFF**  
Migration to a new payments messaging standard represents a major opportunity for banks to improve processes
- 68 POLLINATING PAYMENTS**  
How can making cross-border payments be improved?
- 74 NEW ASSETS FOR OLD**  
State Street's Swen Werner discusses how digital developments can drive interest revenue amid a low-interest-rate environment
- 78 DAS MODEL**  
Governance and data quality are crucial components when it comes to ensuring artificial intelligence can be trusted
- 84 BUILDING BRIDGES**  
Dora Liang Chai of Alipay US on bridging a cultural gap to deliver connectivity and financial inclusion via technology
- 86 FRONTLINE ECONOMICS**  
Stefan Hoops argues that a personal touch is vital when it comes to delivering great client experiences in an era of self-service
- 88 A CRACKING IDEA**  
Meet the graduate whose phone repair clinic start-up is helping the employment prospects of disadvantaged youngsters
- 90 FAMILY OF NATIONS**  
The Secretary-General of the Commonwealth explains how trade support is aiding development among poorer members

"Deutsche Bank has a history of cross-client management between the structured commodity trade finance and investment banking teams"

Yann Ropers, Head of London for Structured Commodity Trade Finance and RBL specialist, Deutsche Bank

36



50



60



48

# Regional update

## Europe, Middle East and Africa

With Germany still very much the lungs of the eurozone, analysts report that the region's growth momentum is sluggish, whatever the outcome of Brexit. As Saudi Arabia eases entry rules to attract more foreign direct investment, Ukraine's presidential election takes a turn for the comic

### Eurozone

Eurozone growth momentum is slowing. In March 2019, Deutsche Bank analysts forecast full-year growth of 0.9%, with Germany and Italy both set to lag at 0.5% and 0.3% growth respectively. For the euro area as a whole, that means growth will be right around its trend level.

Weak external demand is a key drag, compounded by concerns of cracks appearing in domestic resilience – weakening job and capital expenditure (capex) indicators. German manufacturing is in contraction.

However, the analysts note, there are signs of stabilisation in German retail sales and French consumer spending – along with the euro area aggregate Purchasing Managers' Index (PMI) rising again.

On 7 March 2019, the European Central Bank's Governing Council decided to maintain an expansionary degree of monetary accommodation in future, with target rates maintained at their current low levels to the end of 2019 rather than just for the summer (as previously pledged). It also reiterated that it intends to maintain the large holding of EMU sovereign bonds purchased between March 2015 and the end of December 2018.<sup>1</sup>

Other points to note are the significant escalation of trade conflict and extension to Europe (auto tariffs) that could hit eurozone growth hard. And Brent crude prices could rise in the near term, but note that analysts say they look likely to end the year near their current levels (US\$71/bbl as at 15 April).

### United Kingdom

In an April 2019 presentation entitled *The Long Goodbye*, the UK Deutsche Bank economics team noted that in 2016, the UK was one of the fastest-growing economies in the G7 at 1.8%. But the Brexit impact is already visible, with growth slowing to 1.4% in 2018. Construction PMI, Services PMI and Manufacturing PMI have all slipped in 2019, alongside consumer and business sentiment data such as the Lloyds Bank Business Barometer and the GfK Consumer Confidence Index. Business investment has contracted for four quarters in a row as firms' risk appetite remains low and capex plans stay weak, the like of which was last seen during the global financial crisis. However, PMIs are showing the highest level of stockbuilding on record. Having failed to arrive at a consensus in time for the original 29 March 2019 withdrawal date, the government remains wedded to Brexit (i.e. the UK leaving the European Union as soon as possible). A crash out of the EU, note analysts, would prompt a two-year recession, with output shrinking by around 4% cumulatively over the next two years. The UK has been granted an extension of Article 50 by the EU to 31 October 2019.

### Germany

The substantial slowdown of the German economy, note analysts, has been caused by the manufacturing sector. Although the output of the production sector (excluding construction) was already stagnant in H1 2018, with average quarterly rates -0.1%, it nosedived in H2 when its output shrank by 0.9% quarter-on-quarter in Q3 and by 1% in Q4. The report, *The German Economy's Achilles Heel*, points out that "there is a strong



Unit labour costs in South Africa have compressed, making the tradeable sector more competitive

Analysts say the slowdown of the German economy has been caused by the manufacturing sector



correlation between world trade and German GDP growth... the German economy is facing a high risk of falling into recession whenever global trade growth turns negative.” Its strong focus is on the automotive sector – with global car registrations dropping by 1% in 2018 after having expanded by 2% in 2017. The authors note that in previous manufacturing downswings, the manufacturing sector was pulled lower as well. While Economic Minister Altmaier’s National Industrial Strategy 2030 correctly outlines the challenges for Germany as an industrial location and for the export-orientated German industrial sector, the target manufacturing contribution increase to German gross value added (GVA), from 23% in 2018 to 25% by 2030, is “politically motivated” and “overambitious”.

As for lending, analysts reported that outstanding volumes of lending were €65bn – up 5.2% on the previous year and the highest figure for a full year since the introduction of the euro; and that lending to non-financial companies and self-employed persons in Germany grew rapidly in 2018. However, they add that “both banks and businesses are likely to take a more cautious approach to credit in the light of the significant slowdown in the economy expected for this year [2019]”.

#### Ukraine

Consumer and investment demand propelled economic growth to a seven-year high in 2018, according to the GDP detail released by the State Statistics Service of Ukraine (SSSU) in March 2019. Real GDP grew by 3.5% year-on-year in Q4 2019, to a seven-year high of 3.3%. Private consumption and investment drove growth, recording increases of 8.9% and 14.3% respectively. Household consumption was bolstered by rapid increases in wages, pensions, remittances to Ukraine and strong consumer confidence. However, the National Bank of Ukraine expects growth to moderate to 2.5% in 2019 because of the “still tight monetary stance and constrained fiscal policy due to external payment obligations”.

On 21 April 2019, comic actor and TV host Volodymyr Zelensky was elected President in a landslide win over incumbent President Petro Poroshenko, taking 73.2% of the votes in the election run-off compared with Poroshenko’s 25.3%, according to a national poll.

#### Saudi Arabia

As Saudi Arabia diversifies its economy from reliance on oil exports, it has been trying to

attract more foreign investment. Until 2015 – the point when Saudi Arabia first eased its entry rules for qualified foreign investors (QFIs) – overseas institutions could only trade listed equities through complex swap arrangements. Market access is now much easier, and between 2015 and 2018, assets under management thresholds for QFIs gradually decreased.

This enables a wider range of QFIs – including asset managers, banks, brokers and insurers – to transact in the local securities market. Constraints on actual foreign investment in local securities have also been partially lifted. Overseas institutions in aggregate can now own 49% of most listed equities, after the Capital Market Authority of Saudi Arabia increased the cap from 10%. Tadawul, the country’s stock exchange, is in the process of inclusion in two major international indices, the FTSE Russell and S&P Dow Jones emerging markets indices. This process is expected to be finalised by the end of 2019.

#### South Africa

Data revisions reflect an income recession in 2018, with corporate profit having contracted for three years – bar 2017, when it recovered by 1.9% following declines in 2015 and 2016. Consumers were worse off, with inflation averaging 4.6%, marking the first time in decades that nominal employee compensation before tax contracted in real terms. Lower inflation has led analysts to push out interest rate hike expectations, but “on the downside, it raises questions on the ability to shore up capital investment as per [President] Ramaphosa’s new public-private growth initiative”. Business cycle data is still mixed, but the recent bottoming of trend productivity may be the silver lining that needs monitoring. In addition, the convergence between manufacturing wage growth and productivity means that unit labour costs have compressed, making the tradeable sector more competitive. Typically this supports the rand, as lower relative unit labour costs are positive indicators for capital inflows.

#### Sources

Deutsche Bank Research reports: *The House View*, *Spring in sight* (12 March), *The Long Goodbye* (3 April), *The German Economy’s Achilles Heel* (1 March), *Ukraine in Pictures* (2 April) and *flow* news, ‘Saudi Arabia joins FTSE emerging markets index’ (5 April, see <https://bit.ly/2GoRt6o>); *EM Monthly* (14 March and 11 April)

<sup>1</sup> See <https://bit.ly/2VOAz5E> at [ecb.europa.eu](http://ecb.europa.eu)

Saudi Arabia has been trying to attract more foreign investment as it seeks to move away from its reliance on oil exports



# Regional update

## Asia Pacific

Expectations of a bounce-back in Chinese economic activity are having a knock-on effect throughout the region, while South Korea is held up by the IMF as an example to all with its prudential response to economic deterioration

The world's two largest economies forming an agreement on trade and investment policies could affect other Asian regional exchange markets, say Deutsche Bank analysts. An essay on the revived Bretton Woods system, co-authored by Deutsche Bank colleagues in 2003, argued that the Asian economies had, since the 1997 Asian Financial Crisis, brought the international monetary system full circle to its essential Bretton Woods era form.<sup>1</sup> These countries' export-led growth strategies were accompanied by tightly managed currencies, aided by capital controls and official capital outflows, that helped finance the deficits of the US. The region's development strategy effectively drove the dynamics of the international monetary system and exchange rate movements, as had post-war Europe and Japan. A little more than a decade later, though, this system was again breaking down as official intervention was discouraged, capital markets were opened and currencies became more genuinely floating. But analysts note the region now finds itself at a crossroads, as China negotiates an agreement with the US on trade and investment policies that is likely to include commitments on currency policy.

"If there is an understanding between the Chinese and US governments that the former will maintain a stable currency, this may significantly impact other countries' currencies," the analysts explain. They add: "If the trade negotiations lead to a commitment by the Chinese to return to a more tightly managed exchange rate – which presumably requires the pressure on the CNY [Chinese yuan] to be predominantly negative – the influence of the yuan in regional foreign exchange markets will naturally decline."

Emerging market Asia elections – in India, Indonesia, the Philippines and Thailand – are, they note, unlikely to impact their economies as "policy continuity is expected to be maintained" (although there is rather more trepidation over the uncertainty around the outcome in India – see page 9). However, the reduction in political uncertainty once the elections are out of the way "could make the region even more attractive to international investors", they add.

Other signs of stabilisation include the rebounding of the region's PMIs, pointing to a bottoming out of exports, and data for China that points to stabilisation in its land and property markets, suggesting a halt to the slowdown. Moreover, the region could enjoy strong tailwinds from a US–China trade deal in May 2019, although the EU remains a point of concern, as Brexit risks hover over the region. Assuming that such a tail risk is contained, analysts continue to expect the region to move from decline to expansion on production and trade in Q2, with stimulus policies providing additional support. However, they note, South Korea continues to stand out in its policy conservatism due to concerns over the economy's structural challenges, reserving aggressive policy responses for a crisis.

### China

After a modest slowdown in real GDP growth in 2018, the Chinese government has signalled several domestic measures, raising expectations of a bounce-back in economic activity. The March Manufacturing PMI improved to 50.5 from 49.2 in February (the highest rise in six months and the largest increase since 2012). Analysts partly attribute this to the effect of Chinese New Year in



In India, uncertainties regarding the inflation outlook and the fiscal position of the government warrant careful monitoring

South Korea's weakness is broad-based, and not limited to a sharp contraction in exports



February and await further data before predicting an upward economic cycle.

An analysis of provincial-level budget reports following the conclusion of the National People's Congress on 15 March 2019 indicates that the total government deficit is around 5.5% of GDP in 2019, "lower than the consensus view of 6%–6.5%". Revenue from land sales is, say analysts, "critically important for financing the deficit", and it is anticipated that property sector policy will be loosened and the central bank will cut the benchmark lending rate in Q2.

China is also the focus of the industrial commodities sector as the country's relative growth rebound has faded analyst expectations (which were prevalent in late 2018) from a sharp downturn in demand conditions into "tail risk territory". "We think this should provide a supportive setting for the base metals complex, in particular for those metals also set for weak supply growth this year. This should place copper and aluminium as the two base metals best placed for upside in Q2," they note.

Talks with the US, which began in December 2018 with the aim of ending the ongoing trade war, are continuing. US imports from China currently have US\$253bn of tariffs in place, with a further US\$267bn threatened. They cover a range of industrial and consumer items. Chinese imports from the US have around US\$130bn of tariffs applied, targeting chemicals, coal, medical equipment and products that can be purchased elsewhere, such as soybeans.

#### South Korea

South Korea's weakness is broad-based, and not limited to a sharp contraction in exports. Retail sales growth slowed to 1.1% year-on-year in January/February from 3.1% in Q4 2018, while facility and construction investment contracted by 22% and 10.8% respectively in January/February, compared with a 4.8% and 7.6% fall in Q4. While the latter is not surprising, given the strength of construction investment over the past few years, our concerns rose amid a negative turn in housing prices. Even the affluent Gangnam median housing prices have fallen 9% since the end of 2018. There are no signs of easing of the prudential measures, which the IMF noted as "working so well in Korea that it is used as an example for other countries". The government's hardline stance is not surprising given the

disconcerting level of Korea's household loans (86.1% of GDP) and its policy priority in reducing the income/wealth gap.

#### Malaysia

The country has to buy more expensive foreign crude oil to cover domestic needs, note analysts. This oil deficit is down to the sector's share in output being squeezed from a peak of 15.5% of Malaysian GDP in 2008 to 8.4% in 2017 (-7.1%).

#### Indonesia and the Philippines

Bank Indonesia and the Bangko Sentral ng Pilipinas (BSP) raised their policy rates by 175bps in 2018. In both cases, say analysts, "the main motivation was the depreciation of their exchange rates, although the BSP was confronting rapidly rising inflation at the same time." Their currencies had come under pressure both because their current account deficits were widening and because rising US interest rates were reducing incentives for capital flows to emerging markets – especially those with current account deficits. The main factor behind last year's rate hikes in these countries was the deterioration of their balance of payments, although analysts note that the widening current account deficits reflect the faster pace of growth and increases in investment.

#### India

The Reserve Bank of India delivered a 25bps cut on 4 April while maintaining a neutral stance. It revised the growth forecast for FY20 down to 7.2% from an earlier 7.4%, acknowledging that uncertainties regarding the inflation outlook (monsoon uncertainty, risk of higher global oil prices, etc) and the fiscal position of the government warrant careful monitoring. Analysts anticipated that the next 25bps cut will come in August. They note that "monetary easing is continuing at a time when fiscal slippage risks have risen", pointing to the fact that February's budget deficit touched 135% of the revised FY19 estimate between April 2019 and February 2019. Other key things to watch are the impact of general elections, which commenced on 11 April, and whether India gets further relief to continue buying oil from Iran beyond early May.

#### Sources

*EM Monthly* (14 March and 11 April 2019), *India Economics Weekly* (4 April 2019), *China Macro* (22 March 2019) *Commodities Quarterly* (9 April 2019), *The House View* (12 March and 11 April 2019). Tariff data is from the World Trade Organization

<sup>1</sup> See [nber.org/papers/w9971.pdf](http://nber.org/papers/w9971.pdf)



Talks to end the ongoing China–US trade war are continuing

# Regional update

## Americas

A mixed picture in the Americas, with the US economy performing above expectations, but the spectre of ongoing trade wars sustaining downside risks. An iron ore supply halt in Brazil had global repercussions, and political events seem to be determining LatAm growth prospects generally

By June 2019, the current US economic cycle, note analysts from the National Bureau of Economic Research, will become the longest of 34 US recoveries since 1854. Recessions, they add, are reasonably rare events in the US, with only 10 US recessions (and five globally) having taken place since 1950. "In fact, over the 156 quarters since 1980, the US economy has been in recession for 18 of them (11.5% of the time)."

However, in Latin America (LatAm), the deterioration of prospects for global growth weighs on the outlook of all of the region's economies. The more dovish monetary policy stance recently adopted by the Federal Reserve has led to price fluctuations in financial markets that suggest very clearly that there is a divide between LatAm's largest and smallest economies. And when looking at macroeconomic fundamentals, analysts have found that the outlook for the region's economies varies by size. On the one hand, the fate of Argentina, Brazil and Mexico seems increasingly dependent on political events, and the prevailing electoral and policy uncertainty is already weighing on growth prospects. On the other hand, smaller economies such as Chile, Colombia, and Peru seem to be on a more solid footing as far as their growth cycle goes.

### United States

The US economy continues to look healthy, and analysts expect slower but still solid growth – GDP growth of 2.5% in 2019 and 2.1% in 2020. The Institute for Supply Management Manufacturing Survey is at a level consistent with GDP growth of just below 3%. The labour market continues to strengthen and this bodes well for customer spending and domestic demand. Tax cuts

and fiscal spending act as tailwinds and are expected to remain supportive. In addition, the housing market has stabilised after softening in 2018, with analysts noting this is most likely to be an inadvertent side effect of tax reform.

However, downside risks include an escalation of the ongoing trade wars, a sharp tightening of financial conditions and a slowing down of growth in China and the euro area, which in turn would drag down US growth.

Federal Reserve Chair Jerome Powell, along with many Fed colleagues, has repeatedly highlighted slowing growth in Europe and China and disruptions from trade disputes as key downside risks to the US growth outlook. This is all the more pertinent, note analysts, given that real exports declined by 1.7% annualised in the second half of 2018. It remains to be seen what trade talks with Europe, China and Japan will deliver. According to the World Bank, the US had trade deficits with 101 countries in 2016, up from around 80 in 1990.

The expiry by 2022 of tax credits for renewable energy is driving an increase in the number of projects in the US. These incentive plans have driven renewable investments for many years and resulted in the predominant role of tax equity in the financing of renewable energy projects.

The federal tax code provides a 30% solar investment tax credit (ITC) for utilities and commercial and residential investments. The ITC is in place until the end of 2019, after which it will begin to drop until it reaches 10% in 2022. Newly built wind turbines can claim a production tax credit (PTC), which

The main risks to the Chilean economy are external, and leading indicators of investment continue to look promising



was US\$0.019/kWh for projects that began construction in 2017. The PTC drops each year and will expire in 2020.

There has also been a lot of interest in battery storage in the US, driven by legislation and a number of incentive programmes.

#### Brazil

Analysts have reduced their growth forecast for 2019 to 1.6%. Recent activity data has been poorer than expected, and growth expectations for this year have dropped from roughly 2.6% at the beginning of the year to the current 1.9% in the span of just a few months. Inflation remains contained, although the recent rebound of headline inflation suggests that while the Banco Central do Brasil does have room to manoeuvre if necessary, it should be careful in its use of its limited “monetary gunpowder”. Overall, they note, the outlook of the economy continues to hinge on the future of the social security reform. While the government finally seems to have the support of a working coalition in congress, the uncertainty now becomes the date on which the reform will finally pass (so that less politically contentious, yet still important, microeconomic reforms can be evaluated by congress) and the amount of savings the reform will entail over the next few years. Overall, they conclude, “governability is still in question as the coordination between the Executive and Legislation has only stopped worsening and not yet improved.”

Turning to commodities, the most significant commodity-specific fundamental developments in Q1 came in the iron ore market, where the collapse of the tailings dam at the Feijão mine in Brumadinho resulted in around 4% of global supply being suspended between the end of January and March 2019.

#### Mexico

Analysts note that the Mexican economy continues to show “signs of deceleration without any potential trigger that could turn the situation around”. In particular, they say, investments continue to be scarce, and despite a rebound of gross fixed capital formation during January (1.6% year-on-year), they expect investments to be the main drag on growth (just as they were during 2018 when they dropped 6.8% year-on-year). As the Banco de México

has recognised, political and policy uncertainty continue to pose significant inflationary risks via a weakening of the Mexican peso. And with headline inflation soon to return to above 4% territory – and core inflation at still elevated levels and showing signs of greater persistence than in the past – the central bank, conclude analysts, “is unlikely to feel comfortable enough to kick-start a cycle of monetary easing which could provide some much-needed relief to faltering growth”.

#### Argentina

An improvement of Argentina’s macro backdrop still requires policymakers’ credibility to grow rapidly. Exchange rate volatility and high inflation persist. The Banco Central de la República Argentina has contracted monetary conditions and announced further measures aimed at boosting the demand for local currency. Yet data still does not clearly indicate whether the cycle has reached its trough. As the federal and provincial elections get underway in Argentina, the government is likely to be tempted to adopt less austere fiscal measures to attempt to shore up its political support, as the stagnation of real wages seems to have hurt the popularity of the current Cambiemos governing coalition, which was created in 2015.

#### Chile

Analysts see the main risks to the Chilean economy as external in nature, as leading indicators of investment continue to look promising and the weakest demand-side contributor to growth so far (private consumption) should rebound over the next few months. In this context, we expect that after the central bank’s (Banco Central de Chile – BCCh) announced two-quarter hiking hiatus, the monetary policy rate (TPM) will rise to 3.25% by year-end, followed by three 25bp hikes in 2020. The risks to our scenario beyond a further deterioration in the global economy are mostly related to the BCCh announcing a significant revision of its potential output and neutral rate estimates when the next inflation report (IPoM) is published in June.

#### Sources

Deutsche Bank C-Space (March), *The House View* (11 April) *EM Monthly*, *Idiosyncratic Hurdles* (11 April), *US Economic Perspectives* (9 and 12 April), *Commodities Quarterly* (11 April), *flow research*



The US economy looks healthy, and analysts expect slower but still solid growth



Growth expectations for Brazil this year have dropped from 2.6% to 1.9%

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Aerial view of Bangkok.  
Thailand holds the ASEAN  
chairmanship for 2019





# Stronger together

Now that the Association of Southeast Asian Nations (ASEAN) has celebrated its 50th birthday, how will it meet its 2025 objectives? *flow* provides an update on this vibrant trading bloc's progress so far and looks at how it is leading the way in digital transformation

While certain parts of the globe have been demonstrating a preference for economic nationalism over multilateralism, this most certainly does not apply to the ASEAN trading bloc.

The Kuala Lumpur Declaration on ASEAN 2025: Forging Ahead Together, signed by all 10 ASEAN leaders at the 27th summit in November 2015, is alive and well and the ASEAN Economic Community (AEC) has agreed a blueprint of measures to transform industries, enrich lives and propel global progress.<sup>1</sup> The summit also saw the establishment of the AEC, a milestone in the regional economic integration agenda in ASEAN.

Having celebrated its 50th anniversary in 2017, the bloc has gone a long way towards meeting the goal of the ASEAN founders: to improve the lives of Southeast Asian people. Over the past two decades, ASEAN has lowered the proportion of people living on less than US\$1.25/day from one in two people to one in eight. Life expectancy increased to 70.9 years in 2016 from 55.6 years in 1967. Infant mortality rates fell from 57 per 100,000 live births in 1990 to 20 per 100,000 in 2015. Adult literacy rates increased to 94.9% in 2016 from 74.5% in 1980. This is solid evidence that ASEAN member state progress has reached the grass-roots level.

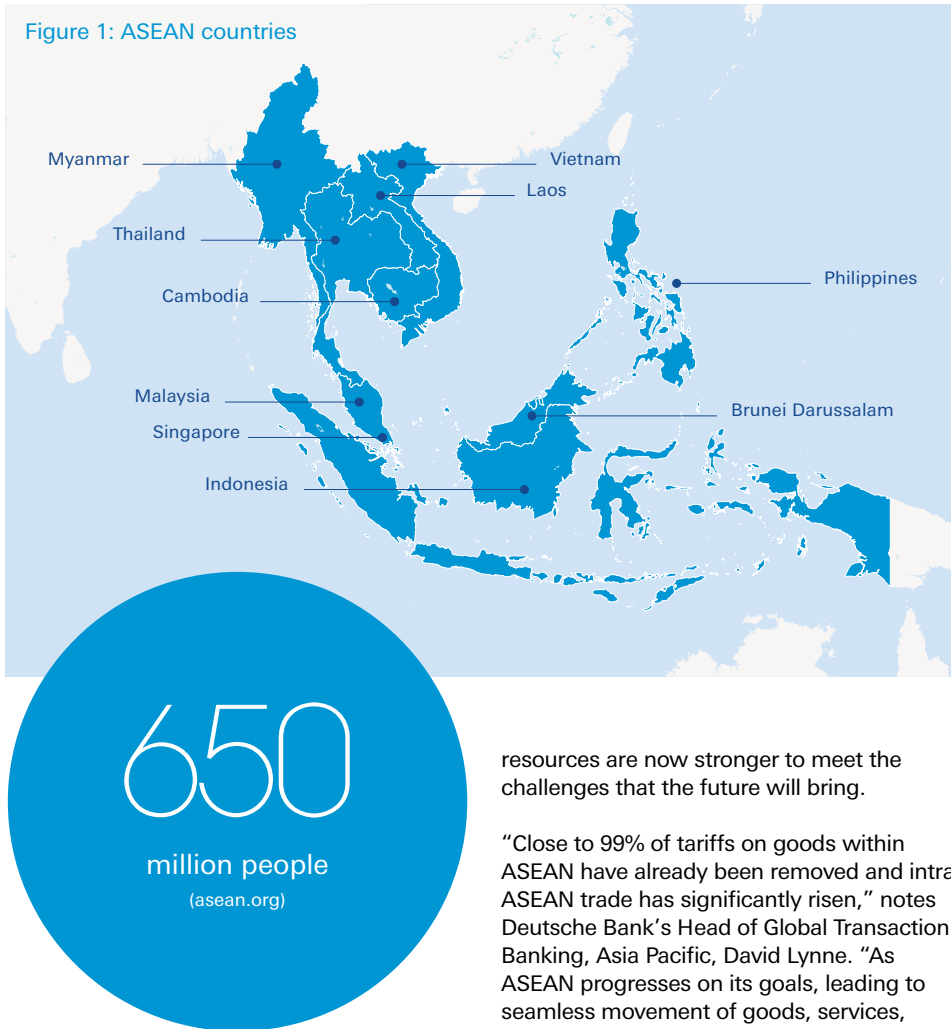
In 2017, *flow's Reimagining ASEAN* microsite<sup>2</sup> reviewed progress made on the AEC goals of creating a more holistic and globally competitive ASEAN. It noted that the bloc is home to nearly 650 million people (9% of the world's population), and its 10 countries (see Figure 1, page 14) are creating a regional powerhouse of infrastructure, trading corridors and connectivity. It has youth on its side – while population ageing is becoming a prominent feature in more advanced and maturing economies, ASEAN's large young population has helped build its US\$2.8trn (2017) economy.

At the time, Deutsche Bank's Head of Market Advocacy, Asia Pacific, Boon-Hiong Chan, made the point that ASEAN integration involves both the economic and financial markets, "breaking down cross-border barriers for an enlarged market with higher economies of scale". Progress had been good, he noted: "Tariff barriers are falling down, regional supply chains are flourishing, and multinational companies in ASEAN are supporting smaller domestic firms' participations in global value chains."<sup>3</sup>

Since then, robust GDP growth, investment rates, tariff reductions and financial cooperation have remained positive, but these trends only tell part of the story. Good macroeconomic policy is certainly helpful, but, most importantly, ASEAN human

Images: Alamy

Figure 1: ASEAN countries



resources are now stronger to meet the challenges that the future will bring.

“Close to 99% of tariffs on goods within ASEAN have already been removed and intra-ASEAN trade has significantly risen,” notes Deutsche Bank’s Head of Global Transaction Banking, Asia Pacific, David Lynne. “As ASEAN progresses on its goals, leading to seamless movement of goods, services,

data, investments, capital and transaction banking flows, they will in turn provide new opportunities for those who can more efficiently cover their ASEAN operations.”

#### Economic growth

ASEAN’s economic expansion has outpaced the rest of the world and the region is ranked as the world’s fifth largest – and Asia’s third largest – economy. Since 2018, ASEAN has been publishing its own economic data.<sup>4</sup> As Deutsche Bank Research noted in 2017, the major ASEAN economies have strengthened their macroeconomic fundamentals by trimming budget deficits and accumulating sufficient foreign currency reserves, which has built market confidence and reduced their vulnerabilities to external shocks.<sup>5</sup>

As the ASEAN Secretariat explains (see note 4), total GDP for ASEAN reached US\$2.77trn in 2017, more than quadrupling the 2000 value of US\$615bn. The economic data demonstrates how the trend in ASEAN GDP per capita follows the trend of total GDP: after the 1997–98 Asian financial crisis plunge, another strong decline was observed in 2009, likely as a result of the 2007–2008 global financial crisis, followed by another period of growth – albeit fluctuating – reaching US\$4,308 in 2017.

Intra-ASEAN trade makes up the largest market for ASEAN total trade, reflecting the bloc’s success with economic integration compared with, say, intra-regional African trade, which only accounts for around 10% of commerce on that continent.<sup>6</sup> The share of imports represented 23.5% and 22.3% of ASEAN total exports and imports respectively in 2017, which indicates that the Kuala Lumpur 2015 expectation of growth of intra-ASEAN trade to 30% of total trade by 2020 was accurate. At the time, Malaysia External Trade Development Corporation CEO Datuk Dzulkifli Mahmud noted that the region has “all the ingredients of a great trading hub”, having eliminated many trade barriers.

“The other largest markets for ASEAN exports in 2017 were China (14.1% of ASEAN total exports value), EU-28 (12%), USA (10.8%), and Japan (8%); while the other largest markets for ASEAN imports were China (20.3%), Japan (9.1%), EU-28 (8.3%), Republic of Korea (7.9%), and US (7.3%),” continues the ASEAN Secretariat (see note 4).

Size and profile of population, along with scope for economic growth, have all helped

Figure 2: GDP growth rate (%), ASEAN Member States, 2000–2017

ASEAN Member States	GDP growth rate (%)					Annual Average
	2000	2005	2010	2015	2017	
Brunei Darussalam	2.9	0.4	2.6	-0.4	1.3	0.8
Cambodia	8.4	13.6	6.0	7.0	6.8	7.7
Indonesia	5.4	5.7	6.2	4.9	5.1	5.3
Laos	5.8	7.3	8.1	7.3	6.9	7.1
Malaysia	8.9	5.3	7.4	5.0	5.9	5.1
Myanmar	13.7	13.6	9.6	7.0	6.8	10.0
Philippines	4.4	4.8	7.6	6.1	6.7	5.3
Singapore	8.9	7.5	15.2	3.0	3.6	5.3
Thailand	4.5	4.2	7.5	3.0	3.9	4.0
Vietnam	6.8	7.5	6.4	6.7	6.8	6.5
ASEAN	6.0	5.8	7.5	4.8	5.3	5.3

Source  
ASEAN Secretariat, ASEANstats database



We need to ensure the 4IR will really contribute to what we are doing in ASEAN, particularly in terms of economic integration

Aladdin Rillo, Deputy Secretary General, ASEAN

attract booming foreign direct investment (FDI) to the region from intra- and extra-ASEAN sources. Post-crisis, FDI levels have risen significantly, with the region recording the highest amount in 2017 at US\$27bn from intra-ASEAN FDI and US\$108bn from extra-ASEAN FDI. According to ASEAN Secretariat data (see note 4), the EU remains the largest extra-ASEAN source of FDI inflows, although its share has decreased from 42.2% in 2000 to 18.3% in 2017. The largest recipients of FDI inflows in 2017 were the wholesale and retail trade sectors (28.6%).

#### Financial cooperation

During the 2018 Singapore chairmanship, the strategic objectives of financial integration, financial inclusion and financial stability were set out. These are helpfully summarised in the infographic produced by the Monetary Authority of Singapore (see Figure 5).

Delivering on these objectives would mean that all ASEAN member states would have embraced the fourth industrial revolution (4IR). From cross-border instant e-payments using QR codes, to e-commerce, its trade

Figure 3: Value of exports and imports of goods and trade balance (US\$bn), ASEAN total, 2000–2017

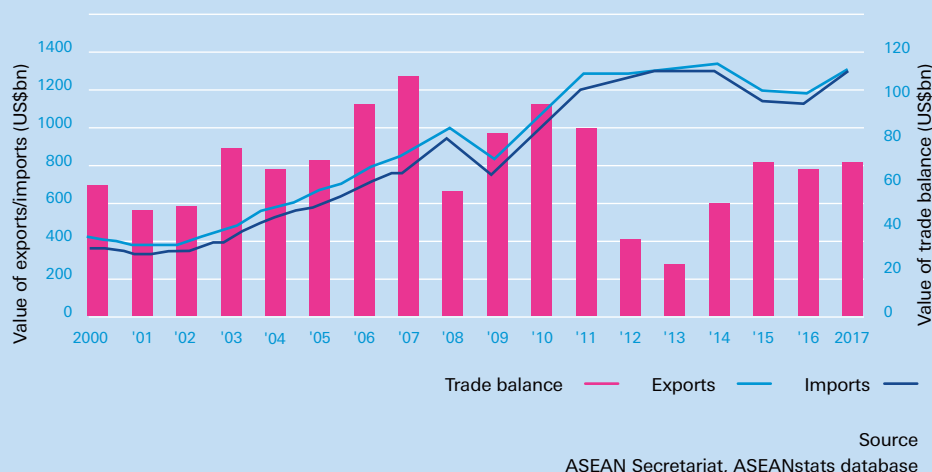
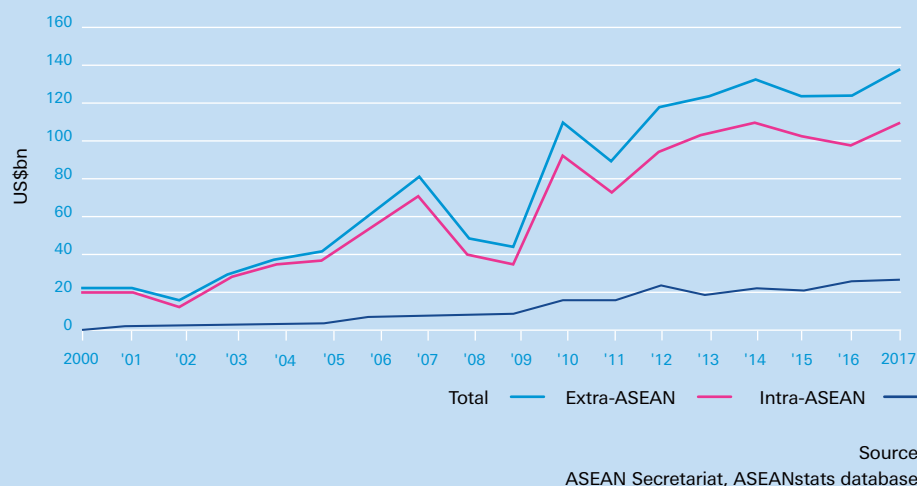


Figure 4: Inward flows of FDI, intra- and extra-ASEAN (US\$bn), 2000–2017



governance framework, data governance, cyber security, ASEAN Single Window (ASW) and ASEAN Smart Cities Network (ASCN); it's a hefty programme.

In an interview with *flow*,<sup>7</sup> ASEAN Deputy Secretary General Aladdin Rillo pointed out that 4IR affects "everyone in ASEAN, businesses and government", and that, at recent summit events, ASEAN leaders had given the highest political recognition to the need to maximise the opportunities from 4IR. An ASEAN assessment study to identify how prepared the different ASEAN countries were to embrace the 4IR, revealed a wide diversity

of readiness. "We need to have a more holistic regional strategy to ensure the 4IR will really contribute to what we are doing in ASEAN, particularly in terms of economic integration," said Rillo.

#### Digital integration framework

The ASEAN agreement on e-commerce was signed in November 2018, setting out how e-commerce can be developed and actioned in the regions. In the same year, the ASEAN digital integration framework<sup>8</sup> was adopted, identifying the priority areas for digital integration. These are: to facilitate cross-border e-commerce transactions;

## ASEAN Smart Cities Network (ASCN)

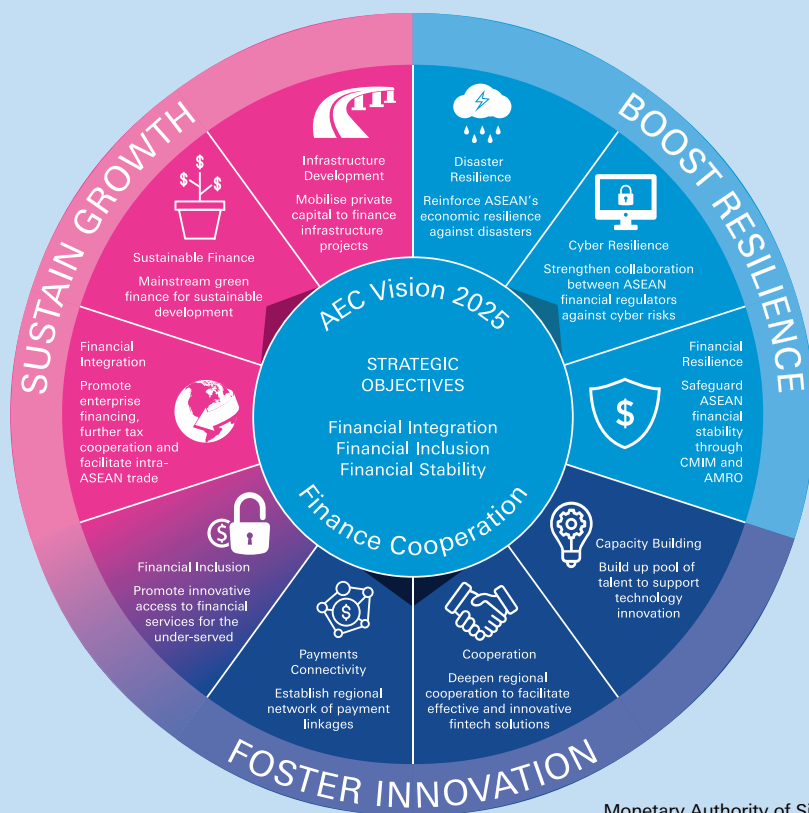
This is a collaborative platform that aims to synergise smart city development efforts using electronic sensors to collect data via the Internet of Things from citizens, devices and assets. It seeks to monitor and manage infrastructure development, utilities/energy management, community services and information systems. ASCN was launched in April 2018 under the Singapore chairmanship; 26 pilot cities, complete

with Chief Smart City Officers, were nominated by the respective ASEAN member states. Commenting at the inaugural meeting, Singapore's Foreign Minister Vivian Balakrishnan said that by 2030, 90 million more people in ASEAN are expected to be living in cities, and middleweight cities of between 200,000 and two million residents will drive 40% of the region's growth.



Source  
asean2018.sg/newsroom/ASCN

Figure 5: ASEAN Economic Community (AEC) Vision 2025, financial cooperation



Source  
Monetary Authority of Singapore

create an environment of trust and confidence in the use of e-commerce; and to deepen cooperation among ASEAN member states to further develop and intensify the use of e-commerce to drive regional economic growth.

### Payments and settlement

One key area is cross-border electronic payments. In November 2017, leading ASEAN payment system operators, observed *ASEAN Today*, "moved a step closer towards regional real-time payments connectivity". They signed a Memorandum of Understanding to enable real-time cross-border payments. "Together, Payments Network Malaysia, National ITMX Co. Ltd of Thailand, National Payment Corporation of Vietnam, Singapore's Network for Electronic Transfers and Indonesia's PT Rintis Sejahtera agreed to their respective payment infrastructures," noted the newswire.

ASEAN 2019 host member country Thailand presented its plans for a national digital trade platform at a January 2019 Bangkok conference. Scoped as a domestic and cross-border B2B platform featuring good connectivity across the Thai trade ecosystem, it would, reflects Deutsche Bank's Boon-Hiong Chan, "support the Thai exporting sector, which accounts for more than 70% of Thai GDP, and can synergise with other

projects, such as the one from the Thailand Blockchain Community on block-based letters of guarantee to reduce the current manual and paper processes”.<sup>9</sup>

This initiative, together with similar ASEAN digital trade platforms such as those of Singapore’s Networked Trade Platform and TradeTrust, alongside the ASW, are, he adds, “examples to the rest of the world on how to make the 10% trade cost reduction target agreed by ASEAN leaders two years ago possible”. In other words, explains Deutsche Bank’s David Lynne, “ASEAN is progressing with cross-border interoperability in instant payments, seeking connectivity between different national trade platforms, overhauling its capital market infrastructures, and embracing digitalisation and the 4IR”.

In 2012, the ASEAN Central Banks’ Working Committee on Payment and Settlement Systems (WCPSS) identified that there was no reference for the development and harmonisation of payment and settlement systems and stated: “ASEAN payments aim to foster integrated, safe and efficient payment and settlement systems in the region that enable businesses and individuals to make or receive cross-border electronic payments with greater convenience.” Currently, the WCPSS is progressing on a number of initiatives, including a redraft of the ASEAN Payments Policy Framework and a roadmap for an interoperable real-time retail payment system.<sup>10</sup>

#### Road ahead

While some ASEAN countries are presently more advanced than others when it comes to digital transformation, it seems inappropriate to single out what are often grouped as the



Close to 99% of tariffs on goods within ASEAN have already been removed and intra-ASEAN trade has significantly risen

David Lynne, Head of Global Transaction Banking, Asia Pacific, Deutsche Bank

top five or six. There is an ‘all for one and one for all’ mentality that pulsates out from all the positioning and policy statements. As Rillo aptly put it: “At the end of the day, the economic community is all about how the market responds.”

Rillo sees the private sector – including financial institutions – as important contributors to the bloc’s market integration efforts: “There is a significant need for the private sector to help us with critical infrastructure. In addition, we are looking to the private sector to help us develop innovative products and instruments to deepen our capital market presence”.

Deutsche Bank’s David Lynne concludes: “We remain excited by ASEAN as the third pillar of growth in Asia. The ASEAN Economic Community goals by 2025 should create a region of prosperity and opportunities for all.”

*This article is based on updated research and analysis from resources available at flow’s Reimagining ASEAN pages. This can be viewed at <https://bit.ly/2TZVW7P>. The flow team are also grateful to Syetarn Hansakul, Deutsche Bank’s Senior Economist in Singapore, for her additional insights*

## What is the ASEAN Single Window (ASW)?

The ASW is a regional initiative set up to expedite cargo clearance and promote ASEAN economic integration by enabling the electronic exchange of trade-related documents among ASEAN member states.

According to the World Bank, each day of delay in cargo clearance reduces import and export volumes by 1%; in ASEAN, it takes more than 20 days on average to import or export goods, raising costs for traders. Two years ago, ASEAN economic leaders agreed a target that by 2020, trade transaction costs in the region would decrease by 10%.

The ASW has been operational in a live environment since 1 January 2018 among Indonesia, Malaysia, Singapore, Thailand and Vietnam. The granting of preferential tariff duties under the ASEAN Trade in Goods Agreement is based on the exchange of an electronic Certificate of Origin, received through the ASW gateway. The remaining member states are still developing their National Single Windows in preparation to join the ASW system.

This streamlines trade procedures and documentation for government agencies and reduces costs.

Source  
[asw.asean.org](http://asw.asean.org)

US\$2.8trn

economy  
([asean.org](http://asean.org))

#### Sources

- <sup>1</sup> See <https://bit.ly/2Utinqr> at [asean.org](http://asean.org)
- <sup>2</sup> See <https://bit.ly/2TZVW7P> at [cib.db.com](http://cib.db.com)
- <sup>3</sup> See <https://bit.ly/2YXtuCm> at [cib.db.com](http://cib.db.com)
- <sup>4</sup> Economic statistics are from the ASEAN stats database up to 2017 at <https://bit.ly/2G0ckBK>, [aseanstats.org](http://aseanstats.org)
- <sup>5</sup> See <https://bit.ly/2D4IAHl> at [cib.db.com](http://cib.db.com)
- <sup>6</sup> See <https://bit.ly/2IIHBLT> at [eac.int](http://eac.int)
- <sup>7</sup> See <https://bit.ly/2uVW8FY> at [cib.db.com](http://cib.db.com)
- <sup>8</sup> See <https://bit.ly/2VW5NIP> at [asean.org](http://asean.org)
- <sup>9</sup> See <https://bit.ly/2UZBEa0> at [cib.db.com](http://cib.db.com)
- <sup>10</sup> See <https://bit.ly/2GcTZMY> at [aseanwcpss.org](http://aseanwcpss.org)

# Investor harmony

How did Germany's SAP successfully orchestrate change from a one-product software vendor to a fast-growing cloud business? *flow's* Janet Du Chenne talks to Stefan Gruber about the company's transformation and how investor relations adapted

**W**hen Stefan Gruber joined Lufthansa as a management trainee in the early 1990s, a secure career at the state-owned airline seemed inevitable.

However, his path was drastically altered when, in 1994, the German government announced that it would privatise the airline, taking its 51.4% stake to a minority position. With this statement it became obvious what Lufthansa needed to do next: set up an investor relations (IR) department to manage communication with its new majority owners.

As part of this new team, Gruber suddenly found himself thrust into a whole new world where he was dealing with external stakeholders and financial analysts, preparing reports and setting up analyst conferences. However, since he was also studying economics in parallel, he relished the opportunity to work with this group. "I always had a desire to learn how corporations work and how they are valued externally," Gruber reflects. "The IR function is the place to be, because you get a good perspective of the corporation and constant feedback from the financial community on how you're performing."

A few years later, after his enthusiasm and hard work in helping to set up the Lufthansa IR team had been noted within Germany's fledgling IR community, he

received an offer from software company SAP to join as its second IR officer. Given his natural curiosity and thirst for change, it was an offer he readily accepted.

## A new audience

The journey from Lufthansa's headquarters in Cologne led Gruber to a vastly different organisation and industry. This time it was not only his love of economics and the capital markets, but also of classical music, that would help him to adapt. Gruber, who also plays the piano, observes that "in a chamber music ensemble, it's important for musicians to listen to each other. In the same way, in investor relations we don't just need to communicate clearly to the financial market, it's also about listening to feedback from investors and passing that feedback on to the organisation".

Little did he know then how these passions would combine years later to help him lead an IR team through the biggest change to SAP's business: the arrival of cloud computing. For a company that introduced the first real-time enterprise standard software in 1972, cloud computing was to change its direction in profound ways.

## The early years

SAP was founded on a vision of real-time computing: software that processes data when customers need it rather than in overnight batches. It began when

Xerox exited the computer hardware manufacturing industry and asked IBM to migrate its business systems to IBM technology. Five IBM engineers were working on an enterprise-wide system based on the Scientific Data Systems software acquired by IBM, only to be told that it would not be necessary. Rather than abandoning the project, they set up SAP in 1972 (see key facts box on page 19).

Its first client was the German branch of Imperial Chemical Industries in Östringen, for which SAP developed a mainframe programme for payroll and accounting. Instead of storing the data mechanically on perforated punch cards, as IBM did, SAP stored it locally in the electronic system using a common logical database for all activities of the organisation. It called the software a real-time system, since there was no need to process the punch cards overnight.

Over the next three decades, SAP developed a range of software tools and applications to help companies manage their core business functions, including human resources, enterprise resource planning (ERP), sales, marketing and





## Key facts

- Founded in Weinheim in 1972 by five former IBM employees as Systeme, Anwendungen und Produkte in der Datenverarbeitung (System, Applications and Products in Data Processing) to develop standard application software for real-time data processing
- Completes first financial accounting system in 1973
- Moves HQ to Walldorf in 1977
- Listed on Frankfurt Stock Exchange via IPO in 1988
- Lists shares on New York Stock Exchange via American Depositary Receipts (ADR) programme in 1998
- Acquisitions: SuccessFactors (HR) in 2012, Ariba (spend management) in 2013, Concur (travel and expense management) in 2014, Qualtrics (experience management data analysis) in 2018
- 2008: releases first sustainability report, as an organisation whose technology helps companies track records and achieve long-term sustainability
- 2014: changes legal form from SAP AG to SAP SE, underscoring the company's international nature
- 2015: unveils SAP S/4HANA, the next generation of enterprise software/cloud platform, and SAP HANA Cloud Platform for the Internet of Things
- 2017: sets out goal to be carbon neutral in its operations by 2025
- 2018: launches SAP C/4HANA customer-focused application suite
- 437,000 customers in more than 180 countries
- 98,600 employees worldwide as of Q1 2019

Source

Company information on [sap.com](https://www.sap.com) and SAP Global Corporate Affairs (January 2019)

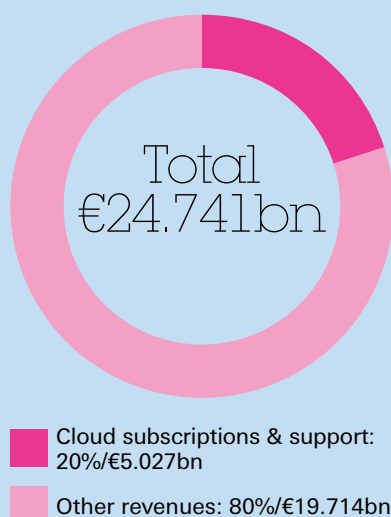
## Key figures (non-IFRS, FY 2018)

- Total revenue: €24.74bn (+11%)
- Cloud subscriptions and support: €5.03bn (+ 38%)
- Cloud and software: €20.66bn (+10%)
- Operating profit: €7.165bn
- Profit after tax (IFRS): €4.089bn
- Operating margin: 29%
- Earnings per share (IFRS, basic): €3.42
- Market cap: €112.74bn

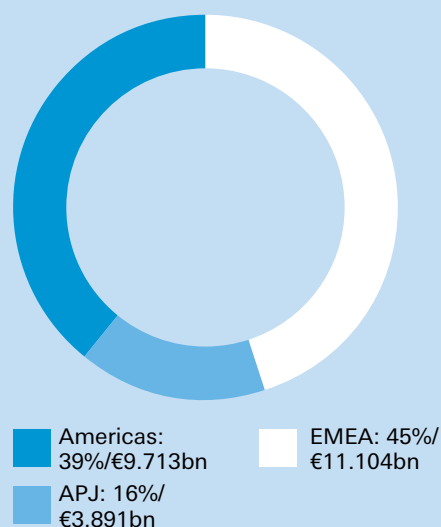
### Outlook for 2019

- Cloud subscriptions and support: €6.7bn to €7bn (33% to 39%)
- Cloud and software: €22.4bn to €22.7bn (8.5% to 10%)
- Operating profit: €7.7bn to €8.0bn (7.5% to 11.5%)

Revenue distribution (FY 2018, non-IFRS in %/€bn)



Revenue by region FY 2018 (non-IFRS share of total revenue in %/€bn)



Source  
Company information on [sap.com](https://www.sap.com) and SAP Global Corporate Affairs (January 2019)

supply chain management. The software was skilfully packaged and combined with companies' computer mainframes, enabling them to integrate their business processes in one place. By the 1990s, as a global technology provider,<sup>1</sup> SAP was one of Germany's finest exports, but was battling it out with Larry Ellison's Oracle, based in California.

Then something happened in the early 2000s that would up-end this seemingly safe position. CRM software provider Salesforce pioneered the idea of using the internet to deliver software programs to the end users.<sup>2</sup> The virtual computing application could be accessed by anyone with internet access. Small and medium-sized enterprises could purchase the software in an on-demand, cost-effective manner.

### Up, up and away

In response to this, SAP bought human capital cloud-software supplier SuccessFactors and then later Ariba, a cloud-based provider of B2B procurement software and e-commerce platform. In 2015, it unveiled its flagship SAP S/4HANA solution, a completely rearchitected version of its flagship business suite. This next-generation suite essentially leverages the strength and speed of an in-memory computing

database and makes all data software programs accessible both on the internet and on companies' own servers. The solution embeds the Internet of Things (IoT), artificial intelligence (AI) and machine learning throughout its entire software portfolio (see product box on page 23).

With the adoption of this disruptive technology, SAP's vision for delivering real-time computing became a vision for helping customers become 'intelligent enterprises' (see strategy box on page 22). Today the company provides software for 25 industries and seven lines of business that helps them harness the power of data faster and more effectively to optimise their business processes. "Over 425,000 companies rely on SAP software for their mission-critical processes," Gruber notes. "Whether it is used for human resources, enterprise resource planning, customer relationship management or other essential business functions, our software is the lifeblood of an organisation."

Being one of the fastest-growing cloud-based businesses at scale has challenged Gruber and his IR team to study these products and make investors and financial analysts understand the profound impact the cloud is having on SAP and its business model. In doing so, they have to constantly



Inside SAP's headquarters in Walldorf, Germany

adapt their investor communications to an evolving marketplace and compete with several US-based peers such as Microsoft, Oracle, Salesforce and others.

### Tuning in

As the only major European business software provider in a US-centric cloud-based enterprise software market (see Figure 1 on page 22), one of the biggest challenges for SAP's IR team has been tuning into the capital markets there.

To compete for capital in a country that made up almost one third of its revenues in 2018,<sup>3</sup> it used its listing on the New York Stock Exchange via an American depository receipt (ADR) programme currently



# 10%

Estimated annual growth  
of the cloud ERP market

(reportlinker.com)

provided by Deutsche Bank, which also serves as SAP's depository bank. With this listing, it became clear that if SAP was going to make an impact on the capital markets as a global provider of technology, it had to be close not only to customers there, but also to investors. So Gruber was briefly seconded to the US in 2000 to set up an IR programme to manage communication with US investors.

The important thing to communicate to those investors from 2012 onwards was SAP's leadership position, not only as an enterprise application software provider but also as a top cloud vendor. Particularly important for the company was business momentum in the cloud and the variable costs associated with hosting applications on the cloud.

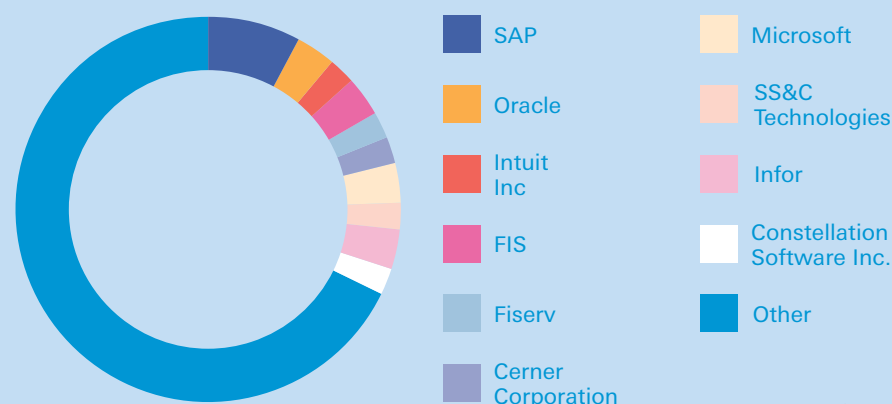
SAP's cloud business is expected to grow close to 40% in 2019. The company also expects the share of recurring revenue, defined as the total of cloud revenue and software support revenue, to be in a range of 70% to 75% of total revenue in 2020 and approaching 80% in 2023. This is not insignificant, especially when considering research consultancy ReportLinker's expectation<sup>4</sup> that the ERP market will grow from US\$18.52bn

in 2016 to US\$29.84bn by 2021, at an estimated annual growth rate of 10%.

To relay this to growth-oriented investors, the IR team needed to show how these businesses worked together to create value for customers and report the figures. "During the preparation of our quarterly earnings announcements, we work closely with our reporting and controlling functions in the finance team, as well as the communications and strategy teams," Gruber explains.

While most of SAP's institutional owners are based in Europe, communicating its growth story means interacting with sell-side analysts and key decision-makers

Figure 1: 2017 ERP applications market shares split by top 10 ERP vendors and others



Apps Run The World report on Top 10 ERP Software Vendors and Market Forecast (January 2019)

Source

on the buy side in Europe, North America and, increasingly, Asia. The company reaches out to this group through multiple channels, including investor roadshows hosted by CEO Bill McDermott and CFO Luka Mucic.

SAP has also seen a doubling of the number of environmental, social and governance (ESG) investors in its company in the past five years. To support these investors, SAP's Co-founder and Supervisory Board Chairman Hasso Plattner engages in investor meetings focussed primarily on governance topics. In addition to these meetings, the IR team runs dedicated roadshows for governance analysts in Western Europe and the US.

In 2012, SAP became one of the first software companies to integrate its ESG performance with its financial performance in its annual report. Being a software company with easy access to data created the basis for matching the financial world with the non-financial world of employee engagement, says Gruber: "It's important as a large company to be able to draw on both financial and non-financial metrics in our overall performance."

#### Composing the perfect team

Having only seven IR professionals for a company with a market cap of nearly €140bn<sup>5</sup> forced Gruber to think carefully about how he would set up his team to cover IR globally. "The art is to find the

right balance between specialists covering institutional shareholders and generalists, but I think everyone has to be a generalist and be able to answer questions from both retail shareholders and financial analysts," he says.

With this in mind, he has four IR specialists who are primarily focussed on communication with institutional investors. Two of them cover Europe and Asia Pacific, while another two cover institutional IR in the US. One of the US-based colleagues, John Duncan, is based in SAP's global marketing headquarters in Manhattan and Scott Smith is based in the Bay Area of San Francisco in the company's Palo Alto innovation labs.

Given the importance of the US financial market to SAP, it's important to have feet on the ground there. "The risk is that you get too inward-looking, especially if you sit in the German headquarters," warns Gruber. "However, our daily calls with our US colleagues ensure there is a constant flow of feedback in both directions, so that we are well informed of what is going on in the US financial market. This has been a very successful set-up."

While the majority of the IR team's work is done with the executive board for external outreach and investor roadshows, James Dymond oversees communication and regular news flow with socially responsible investors (SRIs) and governance analysts and provides their feedback to Plattner. Another colleague, Johannes Buerkle, leads communication with retail and private investors including preparation of the Annual

## SAP's strategy

SAP's strategy is to be the most innovative cloud company powered by SAP HANA, focussed on helping customers innovate faster and drive successful business outcomes

#### Vision for the intelligent enterprise

Data is the new currency – businesses that harness data faster and more effectively will succeed through disruption. SAP offers perspective on the scale and power of data, with customers having vast amounts of enterprise data assets flow through

the ERP, cloud applications and business networks every day

#### Framework for the intelligent enterprise

Intelligent cloud suite of applications for every line of business. This includes SAP's next-generation ERP in the cloud, as well as solutions for manufacturing, digital supply chain, customer experience, networks, spend management, and people management.

A digital platform with the next generation of data management solutions to help

customers manage data orchestration and system integration across their entire business; an open cloud platform

Intelligent systems such as IoT, AI and machine learning, as well as analytics, help customers to optimise their core business processes and reinvent their business models

Source

SAP's Investor Relations Fact Sheet (January 2019)



SAP's  
headquarters  
in Walldorf,  
Germany

## SAP products: the lifeblood of an organisation

- SAP C/4HANA, customer data cloud: >1.6bn consent records
- SAP S/4HANA: next-generation business suite, unlocking the business value of the IoT and big data for organisations
- SAP S/4HANA Cloud: intelligent cloud ERP, delivering access to digital capabilities and innovation, including machine learning and predictive analytics
- SAP Digital Supply Chain: manages entire supply chains digitally
- SAP Leonardo: portfolio of services packaged by industry, combining machine learning, IoT, blockchain, analytics and big data on the SAP Cloud Platform using design thinking

Source  
SAP Corporate Fact Sheet, published  
by SAP Global Corporate Affairs

General Meeting. Together, Dymond and Buerkle co-lead the Integrated Report project.

### Chiming in together

The team contains generalists who work closely with the supervisory and governance functions and specialists who work with the financial reporting and controlling functions. "Like every team, it has to be diverse and the skills have to be complementary. While most of them have a financial and business background, they have different cultural backgrounds and different nationalities," explains Gruber.

"It's difficult to use the example of a big orchestra here, but if I look at a string quartet, the top ones are made up of soloists who excel at their individual instruments. But as an ensemble they only succeed when each musician plays with the polish of a soloist while closely listening to the other players. IR is a bit like that: the investor relations officer (IRO) is a soloist who needs to present the equity story on his own during a roadshow, but the IROs have to be strong team players in key projects."

### Closer encounters

According to Gruber, there are two trends that are currently impacting the IR team



Clear, coherent and concise investor-relations messaging is ever more important in steering through the noise that is sometimes generated through social media

Stefan Gruber, Head of Investor Relations, SAP

and its communication with investors and buy-side analysts: the Markets in Financial Instruments Directive II (MiFID II)<sup>6</sup> and the proliferation of social media.

First, MiFID II (the European Union legislation which seeks to create transparency for investors in financial instruments) called for a separation between research and trading. This has meant that buy-side analysts and portfolio managers, who now have to pay for research directly rather than through trading commissions, increasingly reach out directly to companies such as SAP.

In the wake of this legislation, which became effective in January 2018, Gruber's team has seen more direct interactions with these analysts and portfolio managers and the emergence of a number of technology platforms to facilitate easier communication with them. "This trend will lead to more transparency, and these platforms will help in providing access to our company," notes Gruber. "But the essence of IR is thoughtful discussions with the buy side and sell side, and this will never change."

Second, the proliferation of social media in the last 10–15 years has resulted in what Gruber sees as a race to publish



Investor Relations dream team, left to right clockwise: Natalie Berger (standing left); Johannes Buerkle; Frank Mackert; Ulrich Wolf; Stefan Gruber; and James Dymond

news stories even faster: “Clear, coherent and concise IR messaging is ever more important in steering through the noise that is sometimes generated through social media.”

To manage information flow with analysts, the IR team uses SAP’s tools to access financial performance data soon after the close of the financial quarter. By drilling down into every piece of information stored in the flagship solution S/4HANA, the IR team is provided with access to boardroom data and a core set of numbers at their fingertips.

Gruber finds that the value provided to stakeholders comes from analysing the trends that support the numbers and then deciding what would be helpful to them. “Sometimes people think investors ask for more numbers. It’s not necessarily the case. They ask for meaningful data.”

The IR team also uses AI and machine learning to make standardised processes more efficient and deliver real-time financial information to the market:

- SAP’s digital boardroom technology provides IR with a real-time view into the company’s financial data.
- SAP Disclosure Management software helps with management of the

preparation and publication of financial statements and automates standard processes involved in creating earnings releases, so that the IR team does not have to manually input the numbers.

- Qualtrics helps the team to collect, manage and act on feedback from attendees at its annual capital markets day attended by investors. The audience is polled and the embedded intelligence allows them to instantly analyse the feedback on the fly.
- SAP S/4HANA allows the IR team to report its numbers after quarterly close in a record time and publish its integrated report earlier.

Deciding what data is needed also requires close collaboration with the communications team, which is tuned into the media and brings a big-picture perspective to the SAP story. “We are in an environment where the media behaves in a soundbite world and what is published is immediately being read in the financial community, so IR and communications functions have to work closely together,” Gruber stresses.

#### Working together

Aside from its internal partners, the IR team also partnered up with Deutsche Bank as its ADR programme provider to manage information flow with US investors. The programme supports SAP’s strategy of increasing its visibility and diversifying its shareholder base in the strategically important US market. Under the programme, the shares are issued by the bank to US investors in US dollars and are held in a local custody account. Smaller investors who do not want the complexity of buying SAP shares on the Frankfurt Stock Exchange can buy SAP ADRs through a broker or through the DB Global Direct Investor Services Program, which acts as the SAP depositary bank for ADRs.

Given the size of the programme, SAP partners with Deutsche Bank and runs investor days to educate investors on the basics of SAP and to answer any questions about incorporating tax returns, for example. “When I look at Deutsche Bank, what it brings to the table is the scale, expertise and resources to handle a large ADR programme like SAP’s,” says Gruber. “I always appreciate their creative input on how we can work on investor targeting and outreach to investors in this market. That makes a big difference.”



### The Deutsche Bank view

As innovative companies such as SAP look to raise their profile in important capital markets, our Depositary Receipts team will continue the close cooperation with them to support their long-term ambitions

*Jose Sicilia  
Managing Director  
Global Head of Trust and Agency  
Services at Deutsche Bank*

#### An ever-changing tune

As SAP adapts to technological change, there is no doubt that IR will follow suit. However, this will not significantly change the team’s core beliefs. “There will always be technological change, but again, IR will always be about direct and thoughtful interaction with our followers on the buy side and the sell side,” Gruber reiterates. “This will be hard to replace with artificial intelligence.”

One of Gruber’s favourite films, about the award-winning French string quartet Quatuor Ébène and called *4*, provides a behind-the-scenes observation of the musical and human processes usually hidden from the eyes of the concert audience. In the same way, a lot of behind-the-scenes work needs to happen in IR to make an impact.

It’s exactly this type of skillful composition that sustains the attention of an audience.

### Stefan Gruber’s tips for a successful IR meeting:

- Know your audience, whether it’s a one-on-one or a small group. Ask for their thoughts and perspectives at the beginning of the meeting
- The buy side and sell side suffer from information overload, so they need clear communication and help with focussing on what is important
- Avoid industry jargon. In a marketing-driven industry, there is always a risk that you use all these technology buzzwords, so try to avoid them
- Understand your communication in a wider context. It’s not just about your company but your company in a competitive environment, and the core differentiators of your strategy

#### Sources

- <sup>1</sup> See [en.wikipedia.org/wiki/SAP\\_SE](https://en.wikipedia.org/wiki/SAP_SE)
- <sup>2</sup> See <https://bit.ly/2UjFC19> at dataversity.net
- <sup>3</sup> See SAP Corporate Fact Sheet from January 2019
- <sup>4</sup> See <https://prn.to/2FllsEy> at prnewswire.com
- <sup>5</sup> At the time of publication of the full year annual report 2018
- <sup>6</sup> See <https://bit.ly/2gVjp33> at esma.europa.eu

# Regchecker

Deutsche Bank's Market Advocacy team highlight key areas of regulation impacting global transaction banking in 2019

January 2019

## VIETNAM'S NEW CYBERSECURITY LAW

*Who is impacted?* Corporates, financial institutions (FIs) and non-FIs.

*What has happened?* New comprehensive cybersecurity law that contains data localisation effects and requirements for the removal of 'illegal' content. In force from 1 January 2019.

*Why does this matter?* Supports the growth of Vietnam's digital economy through increased consumer protection and market integrity. The law can benefit from recalibration if the authorities' openness to engage during the formulation continues.

## EU SECURITISATION REGULATION<sup>1</sup>

*Who is impacted?* Issuers, investors, special purpose vehicles, lenders and sponsors.

*What has happened?* It replaces and repeals securitisation provisions in the sector-specific legislation, including the Alternative Investment Fund Managers Directive (AIFMD), and introduces rules for issuing simple, transparent and standardised (STS) transactions. In force from 1 January 2019.

*Why does this matter?* Part of the European Commission's ongoing work to build an efficient capital markets union (CMU).

## TARGET2/TARGET2-SECURITIES (T2/T2S) CONSOLIDATION<sup>2</sup>

*Who will be impacted?* Central securities depositories (CSDs), national central banks (NCBs), custodians, payment banks and market participants.

*What will happen?* The European Central Bank (ECB) has consulted the market on the user detailed functional specifications (UDFS) for the future real-time gross settlement (RTGS) services and central liquidity management in the context of the T2/T2S consolidation (feedback deadline 5 April). Publication of UDFS on the ECB website is planned in July 2019. Eventually, the Eurosystem<sup>3</sup> would allow users to choose from different network service providers to connect to all TARGET services and the Eurosystem Collateral Management System (ECMS). The access should be provided through the Eurosystem Single Market Infrastructure Gateway. *Why does this matter?* The drivers for new and significant EU market practice and change will be laid between now and circa 2022. Advocacy and expertise contribution to this is ongoing.

February 2019

## EU CENTRAL SECURITIES DEPOSITORIES REGULATION (CSDR) ON SETTLEMENT FAILS

*Who is impacted?* CSDs, brokers, investment funds and asset managers.

*What has happened?* The European Securities and Markets Authority (ESMA) consultations on Guidelines on Settlement Fails reporting under Article 7(1) of CSDR ran from 20 December 2018 to 20 February 2019. The guidelines aim to further harmonise the implementation of CSDR. The final guidelines should become available in Q3 2019, after which they will need to be incorporated in the market players' CSDR compliance projects. Responses are published on the ESMA website.<sup>4</sup>

*Why does this matter?* Clients will have to review their current confirmation and allocation processes for securities trading to ensure they comply with the regulatory guidelines.

## SUSTAINABILITY IN SECURITIES MARKETS

*Who is impacted?* CSDs, broker-dealers, investment funds, asset managers and custodian banks.

*What has happened?* The ESMA Consultation on Integrating Sustainability Risks and Factors in the Undertakings for Collective Investment in Transferable Securities Directive and the AIFMD ended on 19 February 2019.<sup>5</sup> Among other goals, the consultation paper seeks to understand how to reorient capital flows towards sustainable investment. Following the consultation, ESMA said it would provide advice to the European Commission by 30 April 2019.

*Why does this matter?* There is potential for new services, although the potential for new net flows is not clear yet.

## T2S COLLATERAL MANAGEMENT HARMONISATION (CMH)

*Who will be impacted?* CSDs, NCBs, custodians, treasurers, payment banks and market participants.

*What has happened?* The ECB Advisory Group on Market Infrastructures for Securities and Collateral has identified CMH as a means to foster a truly 'domestic pan-European' financial market. A consultation was launched on 4 February regarding the first set of harmonisation standards (feedback deadline 8 March 2019).

*Why does this matter?* Potential far-reaching effects in the post-trade securities industry. The envisaged standards are meant to apply to all types of financial instruments used as collateral in Europe and to all parties in the chain, whether the securities are held as collateral in the ECMS or in regular custody.

March 2019

## EU CYBERSECURITY ACT

*Who is impacted?* Cross-industry market participants.

*What has happened?* The European Parliament approved the Cybersecurity Act.<sup>6</sup> This includes reinforcing The European Agency for Network and Information Security (ENISA) as an EU centre of expertise and establishing a European cybersecurity certification framework. ENISA's tasks will include the development and implementation of EU policy and laws in the field of cybersecurity.

*Why does it matter?* Among other effects, the Act requires that ICT products and services have certified cybersecurity assurance that can be relevant to the banking industry.

## MONETARY AUTHORITY OF SINGAPORE (MAS) TECHNOLOGY RISK MANAGEMENT (TRM) GUIDELINES

*Who is impacted?* FIs.

*What has happened?* MAS has updated its 2013 TRM Guidelines with greater focus on technology risk governance and oversight, including an emphasis on senior management having the skills to understand technology risks; emerging technologies like application programming interfaces; software development and management; and cyber resilience.

*Why does it matter?* Its comprehensive scope is relevant to the banking industry. It entrenches TRM as a C-suite responsibility.

May 2019

## SECOND PAYMENT SERVICES DIRECTIVE (PSD2) – EUROPEAN BANKING AUTHORITY GUIDELINES ON COMPLAINTS MANAGEMENT

*Who will be impacted?* Payment initiation service providers and account information service providers, as well as their respective clients.

*What will happen?* The scope of the application of the Joint Committee Guidelines<sup>7</sup> will be extended from 1 May 2019.

*Summary:* The scope of the already existing rules on complaints management<sup>8</sup> will be extended to be applicable for new types of firms that have entered the market as a consequence of PSD2. This will ensure that proportionate processes are established for service providers competing in the same business space.

## EUROPEAN COMMISSION NON-PERSONAL DATA FLOWS

*Who will be impacted?* Legal or natural persons processing data other than personal data in the EU.

*What will happen?* The rules laid down in the regulation<sup>9</sup> start to apply on 28 May 2019 in all EU Member States.

*Summary:* The regulation aims to set similar high standards for the processing of non-personal data as GDPR did for personal data.

## On the horizon

### TARGET2/TARGET2-SECURITIES (T2/T2S) CONSOLIDATION<sup>2</sup>

*Who will be impacted?* CSDs, NCBs, custodians, payment banks and market participants.

*What will happen?* Go-live of T2/T2S Consolidation<sup>10</sup> in November 2021.

*Why does this matter?* Significant changes to the EU cash management and securities servicing industry. The consolidation is planned to include Central Liquidity Management and new RTGS services for improved liquidity management services to treasurers and payment banks. Consistent use of ISO 20022-compliant messages is also planned across all Eurosystem's TARGET Services (T2, T2S and TIPS) and the ECMS.

### EUROSYSTEM COLLATERAL MANAGEMENT SYSTEM (ECMS)<sup>11</sup>

*Who will be impacted?* CSDs, NCBs, triparty agents, treasurers, payment banks and market participants.

*What will happen?* Merger of the national euro central banks' existing 19 different national collateral management systems (CMSs) into a single CMS covering the entire Eurosystem. It is planned to go live in November 2022.

*Why does this matter?* It adds further changes to the EU post-trade ecosystem that can require new investments.

### INTERBANK OFFERED RATE (IBOR) TRANSITION

*Who will be impacted?* FIs, non-FIs and corporates

*What is it?* An introduction of risk-free return (RFR) for the euro by the ECB, expected in October 2019. Euro Interbank Offered Rate (EURIBOR) reform is expected to be completed, or alternative RFR and Sterling Overnight Index Average (SONIA) will replace GBP London Interbank Offered Rate (LIBOR).

*What will happen?* Benchmarks of LIBOR (USD, EUR, GBP, JPY, CHF) will be replaced in the coming years by a family of so-called risk-free interest rates.<sup>12</sup> The new benchmarks will gradually be available after 2019.<sup>13</sup> Providers of "critical benchmarks" (e.g. EURIBOR and the Euro Overnight Index Average) will have two extra years, until 31 December 2021, to comply with the new benchmark requirements. The extra two years also applies to third-country benchmarks. New central bank rates are exempted from EU benchmark regulation. The transition from LIBOR to SONIA will take place, in stages, up to 2021.

*Why does it matter?* The replacement of benchmarks can have unexpected implications for market participants amid complex recalculation of products related to LIBOR and changes of legal contracts.

## Sources:

<sup>1</sup> See <https://bit.ly/2UUUlwR> at eur-lex.europa.eu

<sup>2</sup> See <https://bit.ly/2HEv9Y4> at ecb.europa.eu

<sup>3</sup> See <https://bit.ly/2Un6gXT> at ecb.europa.eu

<sup>4</sup> See <https://bit.ly/2YkA99r> at esma.europa.eu

<sup>5</sup> See endnote 4

<sup>6</sup> See <https://bit.ly/2VfN0N2> at europarl.europa.eu

<sup>7</sup> See <https://bit.ly/2uoHZ4d> at eba.europa.eu

<sup>8</sup> See <https://bit.ly/2HD0a1I> at eba.europa.eu

<sup>9</sup> See <https://bit.ly/2CzOEwK> at eur-lex.europa.eu

<sup>10</sup> See <https://bit.ly/2Uqeoah> at ecb.europa.eu

<sup>11</sup> See <https://bit.ly/2la0PUN> at bundesbank.de

<sup>12</sup> See <https://bit.ly/2YNPxeB> at ecb.europa.eu

<sup>13</sup> See <https://bit.ly/2FSuqzj> at isda.org

# Rethinking the

The intersection of technology, its applications in financial services and the resulting laws and regulations impacting the transaction banking industry is reordering the competitive basis of e-payments. Boon-Hiong Chan examines these changes and shares his perspective on how collaborative approaches to regulation will take the industry forward

In recent years, the global e-payment industry has rapidly expanded, with a multitude of choices that range from the faster or instant classic bank-intermediated remittance through to telecommunication-led 'wallets' and cryptographic-based ones that promise alternative and interesting ways of transferring value.

Beyond the benefits of speed and convenience for consumers, the e-payment choices have also created new business segments for fintechs such as a cash management, a supply chain or even a treasury management client for banks in the future. These choices have also unveiled real-time treasury<sup>1</sup> and direct sales channels to corporate clients, and the potential for more efficient post-trade securities settlement. Public sector and governance bodies have also been highly responsive to the changes, with equally fresh approaches to public policies, consumer protection and financial industry integrity.

Here we highlight three changes in the e-payment space that are driving the industry, some current implications and possible future directions.

## Three change vectors

In recent years, fintechs' successes in addressing banking frictions such as

high remittance costs and de-risking consequences have drawn the attention of regulators and raised the question of whether they should be licensed. The licensing approach is not without its challenges, since a fintech can be both a technology company and a financial services one. The 'Duck Principle'<sup>2</sup> encapsulated this conundrum well, and belies the now accepted approach of assessing activities rather than entities for regulation.

One: Licensing taxonomy by payment activities, including:<sup>3</sup>

1. Domestic money transfers;
2. Cross-border money transfers;
3. Merchant acquisitions;
4. e-money, including stored value, e-wallets and pre-paid cards;
5. Digital payment tokens, including 'dealing' and 'exchanges'; and
6. Money changing.

Licensing provides a more consistent set of rules for incumbents and new entrants performing banking activities, and for a fairer competitive basis. This has injected a new type of participant into the banking industry, as a competitor, client and/or a partner.

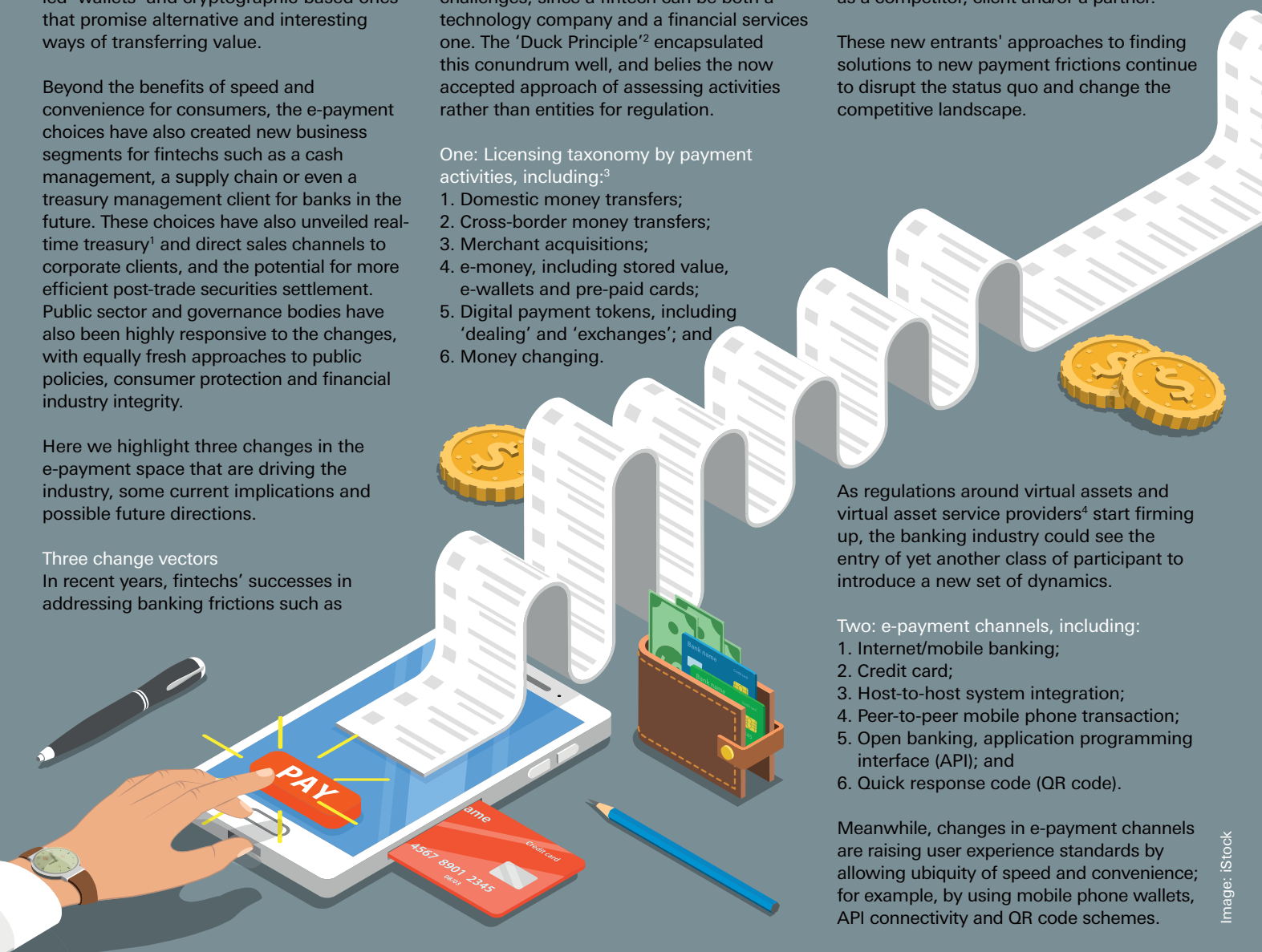
These new entrants' approaches to finding solutions to new payment frictions continue to disrupt the status quo and change the competitive landscape.

As regulations around virtual assets and virtual asset service providers<sup>4</sup> start firming up, the banking industry could see the entry of yet another class of participant to introduce a new set of dynamics.

Two: e-payment channels, including:

1. Internet/mobile banking;
2. Credit card;
3. Host-to-host system integration;
4. Peer-to-peer mobile phone transaction;
5. Open banking, application programming interface (API); and
6. Quick response code (QR code).

Meanwhile, changes in e-payment channels are raising user experience standards by allowing ubiquity of speed and convenience; for example, by using mobile phone wallets, API connectivity and QR code schemes.



# rules of pay



The characteristics of (almost) 'pay anytime' and 'connect to everywhere' technology also mean that cybersecurity and data governance are key banking safety-and-soundness considerations.

For example, the democratising feature of APIs versus the chunkier host-to-host connectivity of banks also means that APIs' two-way traffic can be of much higher frequency. It will thus need legal or service-level agreements to cover aspects like maximum number of calls per minute as a non-technical preventive measure against cyber-attacks.<sup>5</sup>

An inventory of the data would also be necessary to ensure compliance with relevant data privacy laws, data localisation and technology governance requirements. Such an inventory would include: determining the API from where the data was called; the system from which it was extracted and the applicable geographic filters.

## Three: Payment value transfer methods

1. Bank 'clearing-and-settlement' infrastructure;
2. Credit card acquiring infrastructure;
3. Non-bank fintech account balance method;
4. Non-bank 'clearing-and-settlement'

- and interoperability infrastructure;
5. Telecommunication wallet-to-wallet transfer method; and
6. Digital representation of currency that uses cryptography and the internet infrastructure as a transfer method ('digital currency').

The drivers of the third category of change include financial inclusion initiatives and concerns about de-risking of correspondent banking relationships, especially in frontier markets. In turn, they have created new value transfer methods that are distinguished by their reach and connectivity and/or by their minimalist touchpoints with the formal banking channels.

For example, digital currency uses a combination of cryptography and internet technologies to connect payment originator and beneficiary through an internet connection and pay-in/final cash-out point. The digital currency's distributed ledger brings participants closer as part of a concentric paradigm that reduces time delays and addresses time zone differences. In addition, the cryptographic-based value transfer allows a built-in quasi-transparency of transaction flows that is an effective built-in transaction-monitoring and sanctions-checking mechanism.

## New approaches

Responding to this complex mix of potential and risks, the Financial Action Task Force (FATF), the global standards setting body, has updated its 2012 Recommendations to reinterpret<sup>6</sup> certain know your customer and anti-money laundering recommendations. For example, it recognises that originator and beneficiary information is not available as an information payload on public digital currency and has proposed alternative transparency approaches.

Meanwhile, the take-up of digital cashless payments represented by e-wallets and fintech account transfer methods would invisibly shift central bank trust contained in legal tender physical currency bills – bypassing trust in Basel-strengthened commercial banks – to trust in fintech's counterparty risks and its technology and

cybersecurity standards. An increasing uptake that crosses certain materiality thresholds would have implications for the financial system's stability.

This on-the-horizon scenario has already prompted a number of central banks to study the area of fiat digital currencies<sup>7</sup> that can reintroduce central bank trust as a digital 'backstop'. However, central bank digital currency has fundamental ramifications for the banking structure and behaviours, and is a topic under much analysis.

## Boldly forward

Who would have thought that the words "I pay you" could be so exciting and involve so much innovation? Within each of the three changes impacting e-payments – the intersection of technology; its applications in financial services; and the resulting laws and regulations impacting the transaction banking industry – the competitive landscape changes that bit more again.

An adage goes that we tend to overestimate the effects of technology in the short term and underestimate them in the long term. If so, collaborative approaches for holistic views, boldness based on new knowledge and new skills and experiences are some prime ingredients that would gear us toward the future – and for better quality successes.

*Boon-Hiong Chan is Head of Business Control Unit-Market Advocacy in the Global Transaction Banking division at Deutsche Bank*

## Sources

<sup>1</sup> See <https://bit.ly/2MR8N7M> at cib.db.com

<sup>2</sup> "... As a matter of principle, if it walks like a duck and quacks like a duck, it should be regulated like a duck": see <https://bit.ly/1XvKvfq> at finextra.com

<sup>3</sup> Based on Singapore MAS Payment Services Bill

<sup>4</sup> Virtual Asset and Virtual Asset Service Providers (VASPs) are defined in The FATF Recommendations, updated October 2018

<sup>5</sup> Information provided by Deutsche Bank's Chief Information Security Office and the Global Transaction Banking API India teams

<sup>6</sup> Public Statement – Mitigating Risks from Virtual Assets, FATF, 22 February 2019

<sup>7</sup> There are many studies in this field. See <https://bit.ly/2J0puwp> at imf.org, <https://bit.ly/2WXZq7N> at boj.or.jp, <https://bit.ly/2qvLEE> at riksbank.se

# Under the hood



Worldwide car sales have stood still for the past two years, and electric vehicle technology continues to disrupt. Is the car industry at a fork in the road? Rebecca Harding investigates what is going on in the individualised transport industry

**W**hat does the automotive sector mean to you? Power? Freedom? Affluence? Drive? Prowess? Or just getting from A to B?

To an economist – and we’re not called the dismal scientists for nothing – the car sector is the bellwether for the global economy. It is the fourth-largest sector in the world in trade terms; by the end of 2018 it is estimated to have accounted for roughly 10% of world trade in goods, or approximately US\$2.2trn. Nothing represents strong growth better than strong automotive sales. How do we know that the Chinese economy is booming? Because German exports of cars to China are growing. How do we know that the UK car sector is strong? Because UK exports of cars to China are growing more quickly than German exports of cars to China.

## Bottom gear

Yet for all its iconic status, the sector seems to be in crisis. Vehicle trade values

are estimated to have fallen by nearly 2% between 2017 and 2018 and, according to the International Organization of Motor Vehicle Manufacturers (OICA), the number of cars sold worldwide has plateaued at just under 75 million since 2017.<sup>1</sup> Growth in global trade has been modest over the past five years at an annualised rate of just under 1%. The automotive industry’s reputation is in tatters because of the emissions scandal which has dented demand for diesel engines. Technology is gathering pace and threatening to disrupt the big global incumbents. The threat of a trade war is already slowing down global growth,<sup>2</sup> with the recent downward revision of China’s growth targets to 6.0%–6.5% a measure of more modest expectations. If a trade war becomes real, then automotive manufacturers are the centrepiece because of their supply chain links with key sectors like iron and steel. More than this, the US has been on the edge of declaring the EU car sector a “national security” threat. If it does, then the sector has also become a tool of politics.<sup>3</sup>



The automotive sector is unlikely to be disintermediated by emerging technologies

Does any of this sound familiar? The problems that car bosses now face have a certain resonance. Greater regulation and compliance criteria, economic turbulence as a result of the politicisation of the sector, volatile share prices alongside systemically important but tarnished national champions that are potentially too big to fail, and the disruptive impacts of new technology all combine to make 2019 a challenging year for the sector.





There is no hiding the facts (see Figure 1 on page 33). Only three of the top 10 largest automotive sector exporters (which includes car components) are estimated to have expanded their exports between 2017 and 2018. The rest, including the top exporting nations (Germany, the US, China and Japan) all declined year-on-year.

#### Supply chain relocation

The only exceptions are Canada, Spain and Mexico, which saw growth in their exports. As the world's fifth-largest exporter, Mexico is something of the new kid on the block and has grown very rapidly over the past five years. Its trade has grown by over 50% since 2013 and, alongside Canada's growth, there is more than a touch of irony in this. The USA's exports have fallen back, both year-on-year and over the period as a whole. A significant factor in this was the relocation of supply chains within the North American Free Trade Agreement (NAFTA) to take advantage of Mexico's lower costs comparative to China's. Mexico and Canada were the main beneficiaries of this process. The increased labour costs that will be incurred in Mexico as a result of the new NAFTA will, if agreed by Congress, undermine the advantages that Mexico in particular has enjoyed.

Spain is also an interesting example. It has benefitted from the redistribution of German and French supply chains and its production has increased by 45% since 2013, resulting in a near 27% growth in exports.<sup>4</sup> However, these exports are predominantly in Europe and Asia rather than the US, so the effects



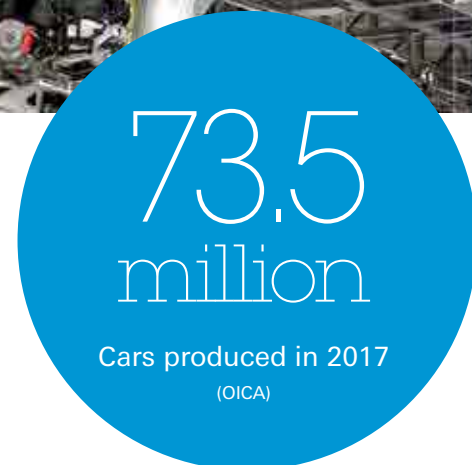
of any trade war will be less severe than, say, the effects would be for Germany.

#### No panic in Detroit

In the last quarter of 2018 and the first of 2019 we have seen how the uncertainty about the prospect of a global trade war has started to affect the global economy. China is central to this, and its car sector is another key indicator for what is going on (see Figure 2 on page 33).

The US is by far and away the biggest exporter to China, with the Middle Kingdom importing US\$13.5bn worth of cars into the country in 2018. Germany is the next biggest, at US\$11.5bn. In 2017, imports of cars from the US and Germany were roughly the same at US\$12.7bn. In other words, the fact that the US ranked so much higher in 2018 is explained by a drop in Germany's exports alongside an increase in US exports.

This can be interpreted in one of two ways. The first interpretation is that Germany exports higher-end cars such as BMWs and Mercedes which, since the global financial crisis, have become emblematic of the rising middle classes in China.



The second interpretation is that China imported more cars from the US ahead of its announcement at the end of December that it would remove tariffs, perhaps as a sweetener to the ongoing conversations.

What is more interesting about the chart is that Thailand's exports have grown so quickly, albeit from almost a standing start. This reflects the redistribution of South Korean and Japanese supply chains within Asia. Similarly, Hungary has fared well over the period, again reflecting supply chain redistributions within Europe (since Audi is one of the largest car producers in Hungary), but also reflecting the increase in



Germany exports higher-end cars such as BMWs and Mercedes, which have become emblematic of the rising middle classes in China



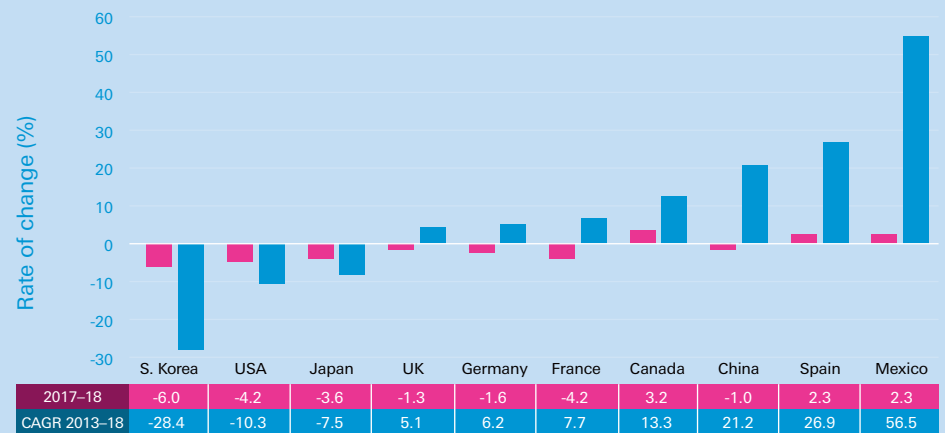
production of electric buses, which China has begun to import in large numbers.

In 1984, MIT published a book entitled *The Future of the Automobile*.<sup>5</sup> Faced with rapidly changing technology, a shift in global production and a change in societal views of the car itself, the book sought to explain where the future of the car would lie. It predicted the global supply chains, integrated technologies, lean production and increased environmental awareness that have defined the sector over the past 35 years.

#### Cruise control

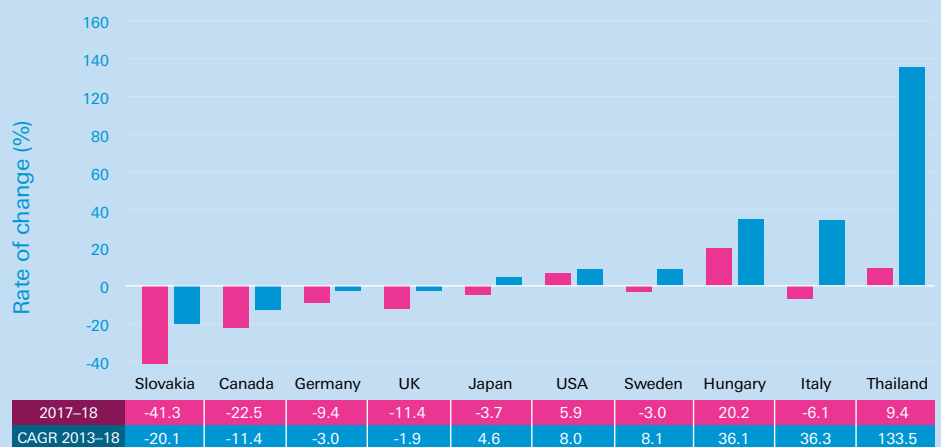
The challenges are no less significant now. Yet given the size and the structure of the sector, its globally distributed supply chains and the dependency of the world on individualised transport as well as road freight, the automotive sector is unlikely to be disintermediated by emerging technologies. Elon Musk's statement that Tesla would produce 400,000 cars by the end of 2019<sup>6</sup> is impressive, but the main disruption that the company poses to the sector is strategic. Dubbed 'the Apple of the automotive industry', its

Figure 1: Top 10 global automotive exporters 2017–2018, estimated growth and annualised growth 2013–2018 (%)



Source  
Coriolis Technologies (2019)

Figure 2: Top 10 car importers to China 2017–18, estimated growth and annualised growth 2013–2018 (%)



Source  
Coriolis Technologies (2019)

innovations in batteries, motor technology, and vehicle software have been significant differentiators.

In other words, changing regulations, the public outcry against bad environmental practice and rapidly changing technologies are, in the end, likely to make the biggest players more rather than less nimble. Being first usually isn't enough – it remains to be seen whose models will enjoy widespread adoption.

*Dr Rebecca Harding is an independent trade economist and CEO of Coriolis Technologies*

#### Sources

- <sup>1</sup> See <https://bit.ly/2vvrWoB> at oica.net
- <sup>2</sup> As explained on Trade Finance TV at [vimeo.com/312973338](https://vimeo.com/312973338)
- <sup>3</sup> See <https://bloom.bg/2X3NMcx> at bloomberg.com
- <sup>4</sup> See <https://bit.ly/2Qvaczf> at atradius.co.uk
- <sup>5</sup> Alan Altshuler, Martin Anderson, Daniel Jones, Daniel Roos and James P. Womack (1984): *The Future of the Automobile: The Report of MIT's International Automobile Program*. See [mitpress.mit.edu/books/future-automobile](https://mitpress.mit.edu/books/future-automobile)
- <sup>6</sup> See <https://bloom.bg/2lopLcM> at bloomberg.com

# Oil of tomorrow

The US, which is poised to double its gross crude exports to more than four million barrels per day (mb/d) by 2024, is by far the most dominant source of future growth, now that Venezuela and Iran are out of the picture<sup>1</sup>





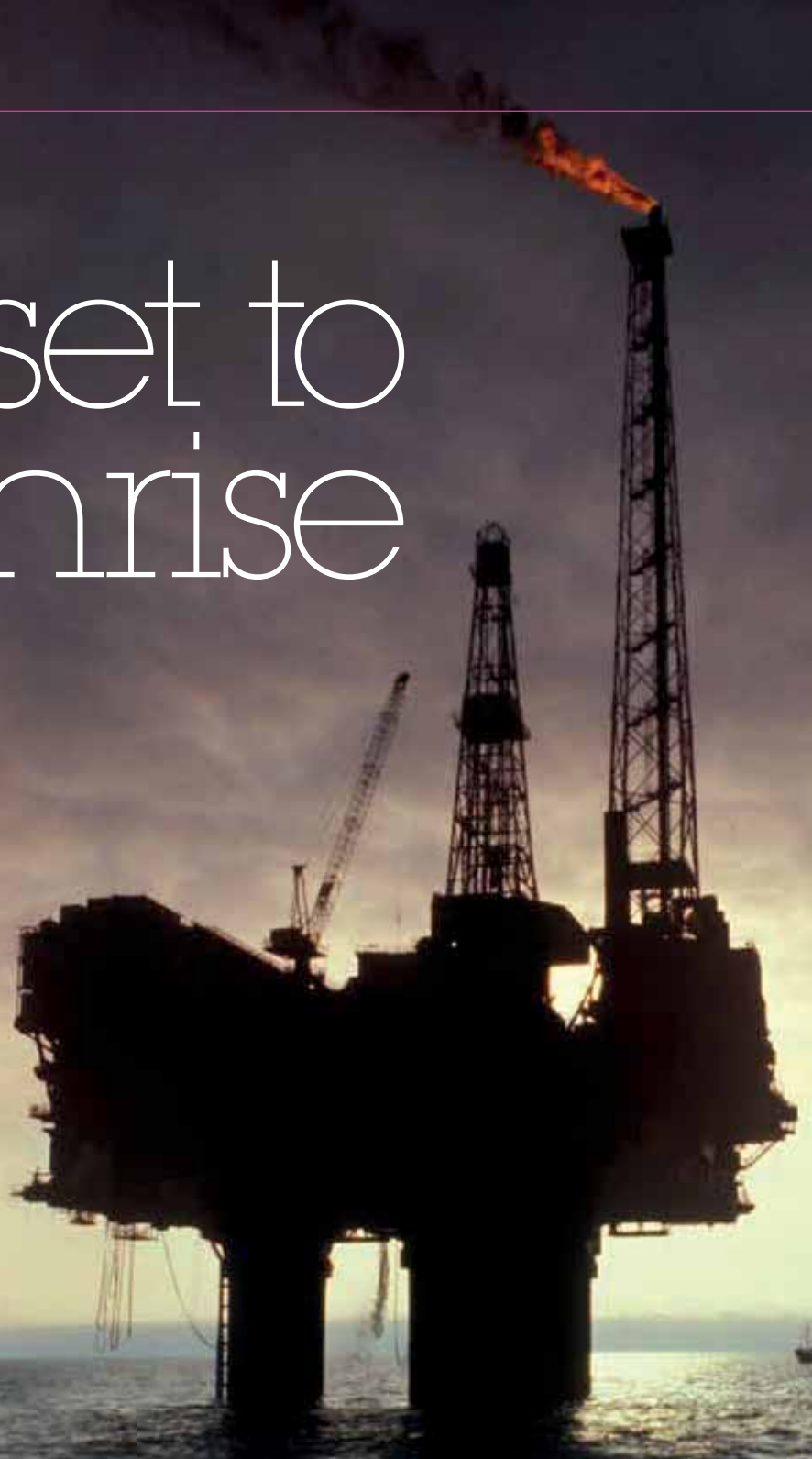
Oil pumpjacks at  
Inglewood Oil Field,  
Los Angeles County,  
California

Source

<sup>1</sup> Oil 2019, Analysis  
and forecasts to  
2024, International  
Energy Agency

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# Sunset to sunrise



Much has been said about North Sea oil having had its heyday. But just because the oil majors are withdrawing, that doesn't mean there is no extraction. Clarissa Dann looks at how reserve-based lending is supporting the smaller independent oil producers that are thriving in the region

In May 2017, after 40 years at sea, the 44-metre tall, 24,000-tonne Brent Delta oil platform was brought ashore in one piece to ABLE Seaton Port in Hartlepool, where 97% of the material is destined for recycling.<sup>1</sup>

As the North Sea hydrocarbon era turns 50, with the first oil discoveries made in 1969, there are more headlines about decommissioning (and an entire new industry of service providers dedicated to this) than exploration and production (E&P). But North Sea E&P is by no means a sunset industry.

The North Sea industry body Oil & Gas UK estimates that, while 43 billion barrels have already been extracted, there are at least 12 billion more recoverable barrels of oil equivalent (boe) still out there.

As oil majors invest elsewhere and giant European utility companies retrench from hydrocarbon extraction, there has been a growing appetite from a new breed of agile, independent oil E&P entities acquiring competitive assets, and eagerness to reach once inaccessible or undiscovered reserves.

This article takes a closer look at how the technique of reserve-based lending has, alongside private equity (PE), changed the face of oil production in the North Sea. It also takes a closer look at some recent transactions as examples.

#### Sea of plenty

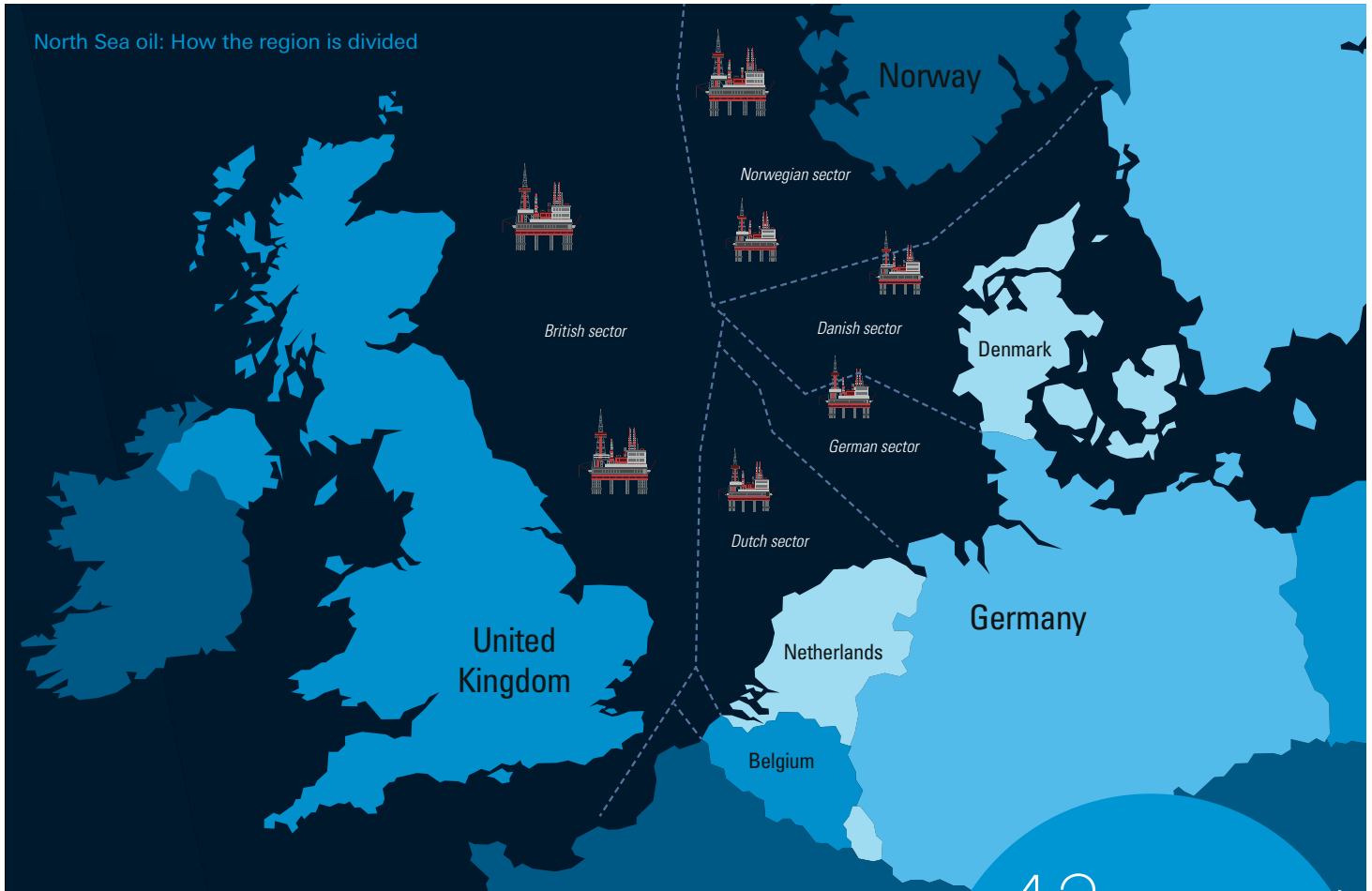
The continental shelves of the UK, Norway, Denmark, the Netherlands and Germany



Since 2016 we have seen a huge stream of M&A activity reshaping the sector

Yann Ropers, Head of London for Structured Commodity Trade Finance and RBL specialist, Deutsche Bank





make up the petroleum region of the North Sea, with the UK and Norwegian shelves dominating the group and accounting for more than 90% of the reserves.

With the North Sea Basin split down the middle between them, the UK and Norway have had a very different approach to oil sector governance since the sector took off in the 1960s. The UK completed the privatisation of British Petroleum (BP) in 1987, after which point its government had no direct equity participation in the North Sea. With a fully private upstream sector, taxation was, observed the Natural Resource Governance Institute in 2015, “the only channel of government revenues from hydrocarbons”.

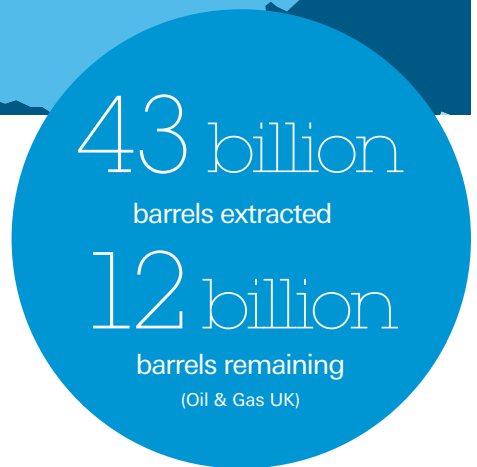
Norway took a different approach, notes the Institute, with more than 50% of production coming through Statoil (now Equinor, of which the state owns a majority) and state ownership of assets via the State’s Direct Financial Interest, held through Petoro (which is wholly owned by the state).<sup>2</sup>

Norway generated more than double the revenues the UK did from each barrel it produced and in 2017, Norway’s sovereign wealth fund – currently the largest in the world and backed by its oil reserves – hit US\$1trn in value for the first time.

Since 2008, Norway has also fostered a new cycle of investments on the ‘mature’ Continental Shelf through a tailored fiscal framework, resulting in multiple world-class commercial discoveries by independent players, and reviving Norwegian hydrocarbon production for a few more decades.

Unsurprisingly, a number of political debates have been circling about the cost/benefits of high-taxation-high-national-wealth versus low-taxation-private-sector-controlled approaches to what has been done with the North Sea revenues during the past half-century.

As the region enters a new era of smaller-scale E&P, the sustainability of the new players is a consideration for lenders and,



in particular, state-owned disposing entities. However, the outlook seems promising.

Commenting in *Petroleum Economist* on 8 December 2018, Dan Slater of oil and gas brokerage Arden made the point that “while part of the PE rationale was to invest near the bottom of the oil price cycle and profit as this has recovered”, the involvement of some firms in exploration, appraisal and development activities “implies a willingness to continue investing even when prices had climbed substantially higher”.<sup>3</sup>

### What is reserve-based lending?

Originally structured and designed for medium-sized oil and gas producers – first in the US but also in the North Sea – reserve-based lending (RBL) is a senior secured borrowing base structure where funds are lent against the future cash flow of the assets.

The oil and gas reserves of the borrower are reviewed at agreed intervals (often depending on the size of the client) and the size of the facility and the tenor is based upon the value of the oil and gas reserves, with repayment secured on the proceeds from the oil and gas sales. The agreed value is known as the borrowing base and is based on the following factors:

- Proven and probable reserves in accordance with the independent expert findings;
- A conservative approach to future pricing of oil and gas over the loan period;
- Capital expenditure and investment in the field by the borrower; and
- Assumptions made on the borrower's operating costs.

Yann Ropers, a former petroleum engineer, and now Deutsche Bank's Head of London for Structured Commodity Trade Finance and RBL specialist, says: "This is a brilliant tool for us as a lender to get close to our clients at an early stage of their development, and accompany them through the whole stage of their growth through to investment grade status, where they can then access the capital markets." The bank has a history of cross-client management between the structured commodity trade finance and investment banking teams.

### Growth in RBL lending

Ropers had been concerned that enthusiasm might wane during the oil crisis of 2014–16, but he notes that this was unfounded. "The private equity market is very interested in oil and gas and always on the lookout for keenly priced assets. Since 2016 we have seen a huge stream of mergers and acquisitions (M&A) activity reshaping the sector, and each transaction has created a new client or RBL financing opportunity."

While oil majors don't need structured commodity trade finance, as their investment grade status provides access to inexpensive unsecured capital market financing, the smaller new players, says

Figure 1: Region of high activity

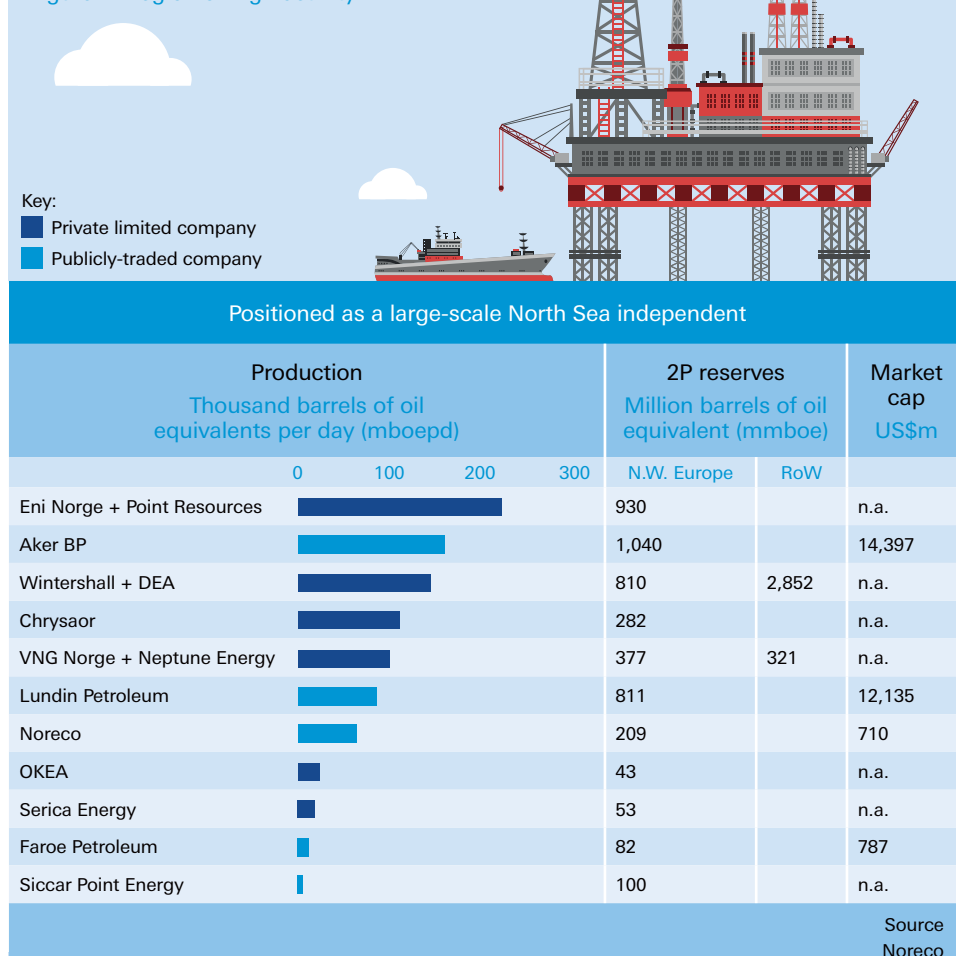


Figure 2: M&A examples in the North Sea since 2017

2017	2017	2017
Shell / Chrysaor Consideration up to US\$3.8bn Adding ~120 mboepd for Chrysaor	ExxonMobil / Point Resources ~US\$1bn acquisition Adding ~54 mboepd for Point	Maersk Oil / Total ~US\$7.5bn acquisition Adding ~160 mboepd for Total
2017	2018	2018
Hess / Aker BP ~US\$2bn acquisition Adding ~24 mboepd for Aker BP	Chevron / Total Undisclosed consideration Adding ~22 mboepd for Total	Shell / OKEA ~US\$0.3bn acquisition Adding ~20 mboepd for OKEA
2018	2018	2018
Eni Norge / Point Resources Merger of North Sea operations Combined production ~180 mboepd	DEA / Wintershall Merger of oil and gas businesses Combined production ~575 mboepd	VNG Norge / Neptune Energy Undisclosed consideration Adding ~4 mboepd

Source: Noreco



Gjøa is a semi-submersible platform in the northern North Sea

Ropers, “need RBLs to grow and maintain operations”. Deutsche Bank has supported a number of independent North Sea producers using the RBL technique as they moved through their growth phases:

#### Lundin Petroleum

Sweden’s Lundin Petroleum, which focuses on operations in Norway and has a strategy of organic growth, enjoyed what President and CEO Alex Schneider called “a standout year across all areas of our business”, with EBITDA of US\$1.9bn and a record high free cash flow of US\$663m for the full year 2018, ending 31 December.

The company’s jewel in the crown is its giant Johan Sverdrup field, now 85% complete and less than a year away from start-up. It is a highly capital-hungry asset, and the Swedish producer tapped the RBL market three times between 2014 and 2016, the largest deal being the seven-year US\$5bn RBL signed with a syndicate of 11 banks, including Deutsche Bank.<sup>4</sup>

#### Vår Energi

Now the largest independent E&P company operating on the Norwegian Continental Shelf after oil majors and Equinor, Vår Energi was formed when energy company Eni Norge and private equity investor Point Resources AS merged into the renamed Vår Energi AS.

In advance of the M&A deal closure on 10 December 2018, Vår Energi raised a six-year senior RBL facility of US\$3bn to finance the future growth of the new entity. The repayment schedule is back-ended with a four-year grace period, followed by two annual repayments of 25% and a 50% bullet at maturity. The facility also includes a US\$200m letter of credit sublimit. During 2018, production was around 180,000 barrels of oil equivalent per day (kboepd), coming from 17 producing fields and four development fields, all located in Norway. The company has said it plans to grow daily production to 250kboepd over the next five years.



Vår Energi represents a new beginning on the Norwegian Continental Shelf

Kristin Kragseth, CEO, Vår Energi



“After the last years’ restructuring of the industry, Vår Energi represents a new beginning on the Norwegian Continental Shelf. Backed by Eni S.p.A and HitecVision, we see major opportunities in Norway,” reflects Vår Energi CEO Kristin Kragseth.

#### Neptune Energy

Neptune Energy is another example of a PE-backed company that has acquired assets in the North Sea from a European utility giant or oil major. A joint venture formed by The Carlyle Group, CVC Capital Partners and China Investment Corporation, Neptune acquired the oil and gas assets of ENGIE, the French utility company, on 15 February 2018. These are located mainly in Western Europe (Norway, Germany, the Netherlands and the UK) and to a lesser extent in Indonesia.

After completing the acquisition of the ENGIE assets, Neptune now controls a diversified portfolio of oil and gas upstream assets with a very strong operational track record. The acquisition was transformational for the company, as it is now producing around 160,000bbl/d (barrels per day), and the seven-year RBL signed on 15 February 2018 was instrumental in completing it. Deutsche Bank acted as a coordinating mandated lead arranger and underwriter with 10 other banks.

#### L1 Energy

London-based L1 Energy, an investment fund created by former shareholders of TNK-BP, is part of the investment vehicle LetterOne Group. With an acquisition strategy (rather than organic development like Lundin), L1



Vår Energi's Balder (above) and Ringhorne fields in the North Sea

Energy acquired DEA AG in March 2015 from German utility company RWE AG.

In March 2015, Deutsche Bank co-led and co-underwrote a seven-year US\$2.3bn RBL facility to help finance the acquisition with a security and covenant package that includes pledges over the operating company's shares and revenues accounts. The borrowing base used to determine the size of the facility included assets in Germany, Norway and Egypt.

Having used the RBL to get to that first stage of growth, three years later, LetterOne announced its intention to merge its oil and gas businesses with BASF to create Wintershall DEA.<sup>5</sup> LetterOne stated that the new entity “will be the largest independent European E&P company” and the combined proven reserves of almost

22 billion boe estimated at the end of 2017 puts the reserves to production ratio of the combined businesses at 10 years.

#### Outlook for RBLs

With a buoyant demand in the RBL space and a track record of successful deals with growing independent E&P corporates, Ropers is confident he will be doing a lot more lending here. The oil majors might be decommissioning, but the supply and demand continues – just with different participants.

#### Sources

<sup>1</sup> See <https://bit.ly/2TzVkVy> at shell.co.uk

<sup>2</sup> See <https://bit.ly/2OQVXDT> at resourcegovernance.org

<sup>3</sup> See <https://bit.ly/2NNMKgq> at [www.petroleum-economist.com](http://www.petroleum-economist.com)

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# Market makeover

Thanks to some transformational lending, Ghana's Kumasi Market is undergoing a makeover that is set to transform the Ashanti economy and all it touches. *flow* tells the story of a project involving three governments, a Brazilian contractor and Deutsche Bank's Structured Trade & Export Finance team

On 6 November 2018, excitement was building in the Ashanti region of South Ghana as crowds started to gather around the Kejetia area of Kumasi.

What was once the former Prince of Wales Park had been transformed into a new covered market, and the UK's actual Prince of Wales was paying a visit to review the progress of a US\$259m project started in

July 2015, as a guest of Ashanti Kingdom ruler King Otumfuo Osei Tutu II.<sup>1</sup> With Phase One being complete, the royal visit marked an important milestone for Ghana in terms of its ongoing infrastructure strategy.

The Kumasi Market is the largest market in West Africa and not only serves the Kumasi region, but also acts as a magnet for traders from neighbouring countries such

as Benin and Togo. It is also a major tourist attraction and features in most guidebooks about Ghana. Before its redevelopment, it comprised more than 12,000 stores and stalls, with footfall of around half a million people a day.

Looking rather like a shanty town when viewed from above, the market had suffered from regular outbreaks of fire. ➔



Inside the new Kumasi Market roof structure towards the end of Phase One

These resulted in the destruction of stalls and loss of livelihood, not to mention strain on the emergency services, given the thousands of daily visitors. Other difficulties included food hygiene maintenance, deliveries and crime prevention, as well as demand for space. The new-look market will accommodate 45,000 stalls and stores and provide parking facilities.

The Ministry of Finance had stated that “infrastructure remains a key development

priority to sustain Ghana’s rapid urbanisation and industrial growth, as well as attainment of the post-2015 development agenda and Sustainable Development Goals”.<sup>2</sup>

The level of investment needed to close what the government terms “the infrastructure gap” has meant that private investment and public-private partnerships such as this one are seen as “indispensable to address this financing gap and to improve the quality of infrastructure services”.



Access to the old market is reopened in February 2019 ahead of the new Kumasi Market inauguration



When we both support British exports and support development in a country, it’s a great combination

Louis Taylor, CEO, UK Export Finance

This article tells the story of the success of a different sort of partnership (debt rather than equity-based) involving Deutsche Bank in four different locations (Dubai, London, New York and Brazil), Brazilian construction company Contracta Engenharia Ltda, and the governments of Ghana, Brazil and the UK via their respective export credit agencies (ECAs). Brazil’s Guarantees and Fund Managements Agency (ABGF) acts on behalf of the Brazilian government, represented by the Ministry of Finance’s Secretariat for International Affairs (SAIN). Similarly, UK Export Finance (UKEF) as part of the UK government’s Department for International Trade supports exports with loan guarantees. Together, they are transforming Ghanaian society.

#### Project overview

In February 2015, the Parliament of Ghana approved a US\$270m financing for the redevelopment of Kumasi Central Market and the Kejetia lorry terminal in Kumasi. Construction of the market infrastructure was the first phase of work, which began in July 2015 and involved relocating the vehicles to a new location. By the end of 2018, this first stage was near completion and the scene was set for the second and third phases – the actual redevelopment of the market.



Left to right: Trade Finance TV Presenter Clarissa Dann with Contracta Engenharia CEO Fabio Camara and Deutsche Bank's Head of Structured Trade and Export Finance UK, James Pumphrey

500,000

Visitors to Ghana's Kumasi Market each day

Working with Brazilian construction company Contracta Engenharia Ltda, Ghana's Ministry of Finance acted as the borrower under a financing package led by Deutsche Bank in September 2014. This included a US\$135m nine-year covered facility from SAIN, the Brazilian ECA, to finance goods and services exported from Brazil and a US\$37m eight-year commercial loan. Following the success of the 2014 financing, in 2016 Deutsche Bank arranged a five-year US\$97m commercial loan for the financing of Tranche Two of Phase One of the Kumasi Market redevelopment project. Contracta had established a foothold in Ghana with the successful completion of the Accra aircraft hangar project in 2012<sup>3</sup> and, having demonstrated competence and capability to the buyer – the Ghanaian Government's Ministry of Defence (the borrower being the Ministry of Finance) – it had built its reputation from there.

At the end of 2018, the funding for Tranche One of Phase Two of the project was signed between the Ministry of Finance of Ghana (the borrower) and Deutsche Bank, for €92m. The contractor this time was Contracta Engenharia Ltda's subsidiary in the UK, Contracta Construction UK Ltd, which was established to procure equipment and services from the UK supply chain and consequently access competitive UK government-backed funding. So UKEF

guaranteed a €80m facility on a 12-year tenor, with the remaining €12m being a commercial loan on a five-year tenor.

UKEF, formerly the UK's Export Credits Guarantee Department, celebrates its centenary in 2019, and CEO Louis Taylor explained on Trade Finance TV<sup>4</sup> that he had just returned from Ghana and the new-look market would "allow the character of the market to flourish, but with running water and refrigeration". He added that UKEF was also supporting the redevelopment of the airport – thus helping air cargo trade – and a new neonatal hospital. "When we both support British exports and support development in a country, it's a great combination and something we would love to do more of," said Taylor. The ECA has been busy; it has recently provided support of around £1.2bn for the construction of three hospitals and power infrastructure upgrades in Angola, two new power stations and 14 substation upgrades in Iraq, and 250 rural bridges in Sri Lanka.<sup>5</sup>

#### Community re-energised

Also appearing on Trade Finance TV was Fabio Camara, CEO of Contracta Engenharia, with James Pumphrey, Head of Structured Trade and Export Finance UK at Deutsche Bank (pictured above).

Sporting a tie reflecting the geometric Ashanti culture (also to be found in the architecture of the new market design), Camara said that in all his 19 years as a civil engineer, "this was one of the most challenging, but also most rewarding, projects that I've been involved in." This was not down to the technical aspects of the construction itself, but to the large array of social demands and considerations for the designs that needed to incorporate the local culture and organisation on the existing market.

Camara first visited Kumasi in 2012, specifically to look at the market and respond to the challenge from the Ghanaian government to find a solution to the less than ideal conditions on the ground at the time. He recalls that the mayor had sighed: "I hope you are not the 10th company that comes here, assesses the situation and never comes back again." This struck a chord and laid down a challenge. That day, Camara gave his personal assurance that he would return. "And so I did, a few months



Aerial view of Phase One of the new Kumasi Market exterior



This was one of the most challenging, but also most rewarding, projects that I've been involved in

Fabio Camara, CEO,  
Contracta Engenharia Ltda

Completion of the market stall  
infrastructure in Phase One of  
the new Kumasi Market

later, with a complete technical conceptual proposal of what is today the finished Phase One of the Kumasi Central Market.”

With a lot of moving parts – particularly all the social demands around the market – the technical proposal for the project was easier said than done, but “despite the difficulties”, Contracta Engenharia reached agreement with the government to start the project.

Apart from the market itself, the project comprised a reorganisation and upgrade of the surrounding roads and drainage; a sewer treatment station to treat 100% of the sewage generated by the facility; a large crèche for the children of women working in the shops; a clinic to attend to the needs of users; a police station; a fire station; a post office; proper infrastructure for the restaurants, with gas supply facilities and supplied industrial stoves for each one; and proper infrastructure for the fish and meat shop owners, with ice-making machines, freezers and refrigerated displays. The project has become akin to a not-so-small city within the central business district of Kumasi.

#### Financial support

Being sure of the financial support makes projects like these possible. Camara pays tribute to the support of Deutsche Bank and the Brazilian credit insurance from ABGF/ SAIN for Phase One. This brought benefits

to the Brazilian economy, “as we exported more than 1,300 containers of materials and services for the execution”. The construction company, says Camara, has trained more than 1,000 local employees in modern construction techniques, transferring technology and bringing high-quality employment in Ghana.

“We were following our exporting client out of Brazil – we had done a transaction with them in 2014,” reflected Pumphrey on Trade Finance TV. He explained how the project had to be phased into tranches so that it aligned with the Ghanaian government’s overall budget and priority listing – it could not be done in one go. “For the first phase, where much of the equipment came from Brazil, the Brazilian government supported the exports through SAIN, its ECA. Brazil is developing a relationship with Ghana and is keen to support South-South trade.” He explained that ECA support can trigger important benefits for the country. Phase Two, now with the support of UKEF, via Contracta Construction UK Ltd, serves as an export hub to Africa, generating employment in the UK and promoting a great amount of exports of UK materials and services. During its two-year life so far, this subsidiary has been awarded a number of projects in Ghana, generating revenues, employment and exports in the UK, while continuing with the important social benefits

in Ghana as the new infrastructure projects generate local employment, as well as the transfer of technology.

#### World-class city

As King Otumfuo celebrates the 20th anniversary of his ascension of the Golden Stool in April 2019, it appears that his determination to ensure the transformation of Kumasi into a world-class city is well under way. He was seen to be nodding in general approval (although did not make a statement) during an unannounced visit in mid-February 2019 to various Kumasi projects, including the airport redevelopment and the Kumasi Market.

Roads leading to the old market were closed at the start of the project three years ago, and on 11 February 2019 they were reopened to ensure free vehicular and pedestrian access ahead of the official inauguration of the new market.

This is just the beginning.

#### Sources

<sup>1</sup> See <https://bit.ly/2JPDZE6> at modernghana.com

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<sup>3</sup> See <https://bit.ly/2G247Xz> at contracta.com.br

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# Trade adventure



Digitalising trade finance has been a rather tough climb, with the joy of reaching the summit some way off. International Trade and Forfeiting Association Chair Sean Edwards explains how the United Nations, with the Model Law on Electronic Transferable Records, gives cause for optimism

This is a short article about a very big solution. It is also an article about hope and vision and those things that don't help bankers create budgets in the short run, but do change the world in the long run for them and their customers – if only someone would invest in that.

The powerful solutions offered by fintech have the capacity to completely change the way we do banking business. We have been told this often enough by the tech pioneers and messiahs. From the author's own experiences, finding a technological alternative to almost anything we do is rarely the problem. To the tech companies' intense frustration, we start to run into the awkward little problems created by that alternative to the virtual world, namely the real one. In banking, this demon takes many forms: legacy systems, budgetary constraints, lack of customer interest, lethargy, vested interests and, to cut the list short and get to the point of this piece, legal validity – or certainty.

## Model laws

Fortunately, we do not start our journey to resolve this problem in a complete vacuum. For many years now, the United Nations Commission on International Trade Law (UNCITRAL) has published documentation

to assist and inform the passage of legislation securing digitalisation at a global level. This effort began in 1996 with the Model Law on Electronic Commerce. Model laws on electronic signatures and electronic communications followed. Underlying these laws are a few fundamental and critical concepts:

- Non-discrimination – no digital document or instrument is to be denied effect solely because it is in electronic form.
- Technological neutrality – no one technology is to be favoured over any other.
- Functional equivalence – legislation must provide and validate digital equivalents to those aspects of paper that are integral to that medium, such as signatures.

It is important to realise that model laws, or indeed conventions, are not automatically 'global law', and for good reason. Model laws can be plug-and-play or simply a list of ingredients to pick and choose from (although the need for consistency and a level playing field for all favours the former approach). And sometimes they are not needed. National common law can be surprisingly favourable to electronic commerce (as is the case in the UK), so there may be no need to pass new laws, or only limited legislation may be

required. Passing new laws is also time-consuming, even if the effort is limited to key jurisdictions.

The favoured approach has therefore been to promote club or closed-loop arrangements, as has happened with the electronic bill of lading providers essDOCS and Bolero, which are essentially private contractual arrangements. The obvious disadvantage here is that, to be effective, everyone involved in the relevant supply chain must subscribe and agree to these conditions. Like Groucho Marx, some just don't want to belong to any club that will have them as a member. Even when they do join, ensuring effectiveness against third parties such as courts can be difficult. And it is a moot point whether or not trade finance tools such as negotiable instruments, which derive their existence from specific laws, could ever be reproduced through a contractual arrangement.

## Electronic transferable records

A comprehensive and optimum solution therefore requires that an effort be made to encourage the adoption of these laws, even as we try to make a living from interim solutions. The International Chamber of Commerce (ICC), and others, now spend more time than ever lobbying for such



legislation. And all these lobbyists and promoters (including your author) have become excited by a new kid on the block: the Model Law on Electronic Transferable Records (MLETR).

First impressions are that UNCITRAL should have employed a public relations firm to come up with a better name. But let's look beyond that, because the MLETR is seriously good stuff.

Like all UNCITRAL model e-commerce laws, the MLETR espouses the three principles set out above. These are so important that they bear repetition; it includes provisions on non-discrimination and recognition of electronic formats, electronic writing and electronic signatures. But the MLETR goes, as it has to, beyond this to deal with the particular issues facing electronic transferable records.

But first, what are these records? The MLETR approaches them with functional equivalence in mind, and the definition therefore covers all paper documents or instruments that entitle a holder to claim performance and pass on that entitlement to another person through a transfer of the document. The potential scope and



## Control produces uniqueness by preventing competing claims to ownership of the same instrument

importance to trade transformation of the MLETR is therefore readily apparent, as this definition will include both negotiable instruments, such as bills of exchange and promissory notes, and documents of title, such as bills of lading. The MLETR thus opens up the possibility of creating combinations of existing instruments and digitalising these as well. Currently, tokenisation initiatives look at this possibility but tend to focus more on settlement and payment legs; a more holistic 'cradle to grave' financing instrument could be envisaged, starting at the pre-production phase and ending with settlement.

It then requires that the electronic or digital tool used to move from paper to virtual existence is reliable enough to identify the electronic instrument as the single instrument in existence, submit it to control (more on this below) and retain integrity. Further details are given as to how to measure that standard, such as adequate security compliance with industry standards. Although the MLETR does not say so, this is a call for governmental intervention, as has already happened in Europe. Private initiatives, such as that being proposed through the Universal Trade Network, are an equally legitimate response, provided they have widespread adoption, which will be harder to achieve without legislative help at some level.

### Reliable control of ownership

Critically, it is the same 'reliable' tool that must ensure exclusive control of the electronic instrument by a single owner in order to give rise to a unique instrument that cannot be held by any other person until transfer. Control produces uniqueness by preventing competing claims to ownership of the same instrument and has the same function as physical possession in the paper environment. The method used must also enable control to be transferred to another holder in the same way as a bill or note is currently endorsed to transfer title.

The vocation of blockchain to produce that reliable method is clear. Benefitting from a high degree of security, and combining data in a form that ensures its integrity, it also permits exclusive control by an owner, with the ability to easily transmit that data.

The law is not always exciting; digitalisation may be the exception to that rule. Let's all help it fulfill its potential and reach the pinnacle.

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Clear priorities  
allow treasuries  
to set clear  
goals which,  
in turn, foster  
collaboration  
by aligning  
the treasury  
holistically

# Taking the controls



In today's uncertain environment – with trade wars, possible interest rate normalisation, digitisation and many new technology innovations, from robotics to real-time – treasurers have to conserve their energy for what really matters while keeping their focus on the most critical challenges. Consultant and former treasurer David Blair explains why clear goals matter

In turbulent times when distractions are abundant, it's worth repeating that most treasurers' broad goal is cost-effective risk reduction (CERR). Commercial enterprises are not in the business of taking financial risk, so in order to focus all their capital on core commercial risks they want to minimise financial risk. But risk reduction has cost limits, so enterprises want to balance cost and risk.

For example, most treasurers focus on liquidity risk (in the sense of not running out of cash). They could minimise liquidity risk by issuing mountains of equity and sitting on piles of cash; but shareholders would correctly object because such risk reduction is not cost-effective.

CERR also implies that treasury key performance indicators (KPIs) should be risk-adjusted – treasurers should not be encouraged to increase yield by extending tenor or duration, or lowering credit quality. Risk is often harder to measure (and understand), but risk assessment is a core treasury competence.

Treasurers need to be clear about their goals so that the treasury team understands the 'whys' of what they are doing. For example, harvesting cash from mainly cash-long subsidiaries for share buybacks might require very different cash concentration arrangements compared with optimal cash pooling between a mix of cash-long and cash-short subsidiaries. At a minimum, the tax implications will be very different.

In addition, treasurers need to have clear target cash levels, credit appetite and market price risk limits, as well as a good understanding of the enterprise's goals and constraints, in order to align treasury effectively (see Figure 1). Clear priorities allow treasuries to set clear goals which, in turn, foster collaboration by aligning the treasury holistically.

## Straight-through processing and liquidity management

To free up time for what really matters (maximising capital available for core business risks), treasurers need to rigorously apply the OHIO principle: only handle it once. Often this means doing holistic straight-through processing (STP). For example, many treasuries have STP between e-FX dealing platforms and a treasury management system (TMS) alongside manual Excel processes for forecasting and determining what hedges to do.

OHIO implies that data is handled only once – for example, at the sales or procurement frontline – and then flow untouched through enterprise research planning (ERP) or other forecasting systems to the TMS, which can automatically deduct the latest forecast from existing hedges to determine the adjusting forward deals required. The TMS can then feed required forwards into an e-FX platform for execution at best price and post the resulting forwards. Only exceptions require human intervention.

Many treasurers do not have the application programming interface (API) heaven that comes with current version ERPs and

Figure 1: Treasury's virtuous circle

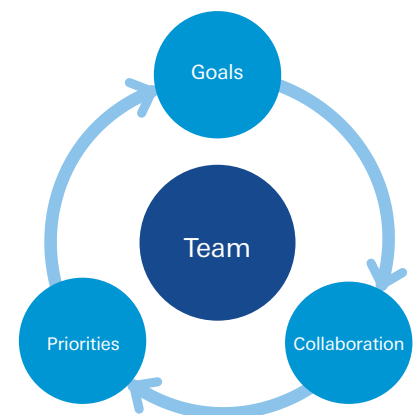


Figure 2: OHIO in action



TMSs; that is a perfect use case for robotic process automation (RPA), which can be thought of as an API workaround to automate screen-based copy/paste type processes that are time-consuming and risk-prone (see Figure 2 on page 51).

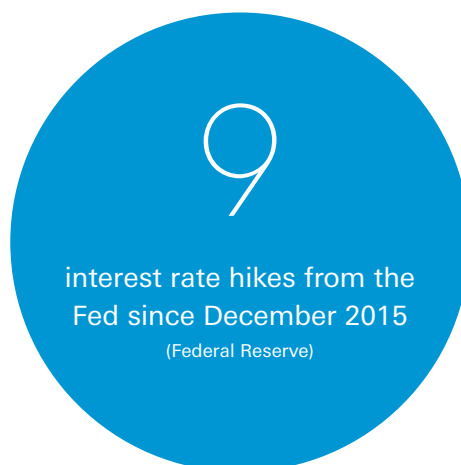
RPA helps with getting the most out of existing systems and using them effectively. Another way to save money – and the pain of selecting and implementing new solutions – is to make sure that existing TMSs and other solutions are fully utilised. It is common to rush to create a ‘quick fix’ in Excel without taking the time to explore whether existing systems can solve the problem. Such quick fixes seem great at first, but after daily runs for a couple of years they become false economies – not to mention the added risk from using Excel.

Excel is subject to many errors such as link and formula errors, macro programming errors, manual input and copy/paste errors. It does not have any access control nor business continuity through redundancy and backup; because of these operational risks, any key controls in Excel require expensive external audit verification.

Another area is balance management, in other words liquidity management. Many enterprises expend considerable effort on short-term cash-flow forecasting (‘cash positioning’) to ensure that operating accounts have adequate but not excessive funds. The importance of not leaving idle balances and avoiding bounced cheques leads to complex KPIs for cash forecast accuracy, and pain radiates from treasury throughout the finance organisation and beyond. There is no doubt that efficient balance management is critical. But there may be other ways to achieve minimal operating balances and just-in-time cash. Cash pooling arrangements such as sweeping and notional pooling achieve minimal idle balances and obviate short-term cash forecasting. The fees for such services certainly conform to CERR, especially because, as set out below, manual forecasting is subject to high operational risks.

#### Effective forecasting

Treasury is forward-looking and cannot function without forecasts. Yet many



treasuries use highly manual, risky and inefficient forecasting processes, typically based on copying/pasting large Excel spreadsheets.

Statistical analysis and machine learning applied to historic cashflows – aided by some simple forward indicators, like sales forecasts – can outperform most Excel forecasting processes. They are also less risky and cheaper to run.

There are a plethora of dedicated forecasting solutions on the market in addition to the offerings of ERP and TMS providers. Forecasting is built into most ERP and TMS software and many vendors are upgrading their forecasting solutions, from basics, such as seasonality and regression, to statistical analysis and machine learning, which they often label ‘AI’ for marketing purposes. Treasurers who are squeezed for IT budget can turn to their banks, many of whom are applying the technology they have developed in anti-money laundering (AML) and fraud prevention to their clients’ needs. Offerings include, for example, payment screening services and short-term cash flow forecasting based on historic bank movements, as well as standalone cash-flow forecasting tools using statistical analysis and machine learning.

#### Funding

The current era of easy credit and ultra-low interest rates may not end quickly. The whiff of central bank hawkishness seems to have evaporated after the Federal Reserve raised interest rates nine times since December 2015, and with US\$600bn due

to come off its balance sheet in 2019. But it would be prudent for treasurers to arrange sustainable and well-gapped funding sooner rather than later.

Cash-rich enterprises (and even net debt ones regarding their investable cash) will need to review changing money market fund rules – most importantly, the move to variable net asset value (VNAV) from constant net asset value (CNAV), as well as redemption gates – and align with potential changes/normalisation in the interest rate environment.

#### Cash management

Cash management comprises balance management and flow management; both are experiencing interrelated flux. Basel III and global re-regulation has affected balance management and created now-resolved uncertainty about notional pooling. Through the net stable funding ratio (NSFR) and the liquidity coverage ratio (LCR), regulation has been driving new kinds of pricing of deposits.

On top of this, market infrastructures have upgraded to current technology (bringing 24/7 instant payments) and, together with regulation such as PSD2 (forcing banks to implement APIs and open banking),<sup>1</sup> this is radically changing flow management.

Balance management requires clear goals; for example, is the objective cash concentration or subsidiary funding? After a decade of doubts about the regulatory viability of notional pooling, the dust has settled and it is back. Treasurers who may have opted for physical sweeping rather than notional pooling because of regulatory uncertainty may want to use this opportunity to review their choices.

For many treasuries, the advent of 24/7 instant payments may have bigger implications for balance management than for flow management. For most business-to-business transactions, same-day value settlement is sufficient (whereas instant payments will disrupt cards in retail, for example). But what happens to balance management when there are no cut-off times and no nightly closing balance?

Many treasuries are still struggling with next-day cash visibility. How will they handle real-time balance management?<sup>2</sup> This is not yet an immediate problem. Indeed,



Cross-border flows are undergoing rapid change, to the benefit of treasurers

corporate treasurers can probably wait until banks have figured this out for themselves.

As suggested above, treasuries that are spending a lot of effort on cash positioning might want to investigate pooling arrangements as an alternative way to achieve these balance management goals.

In flow management, the first priority for saving time and reducing risk has to be paper to electronic migration. Even basic automated clearing house (ACH) type payments are much more efficient and reliable than cheques. The move to 24/7 instant payment systems is probably more relevant to retail, but all businesses will benefit from lower pricing, greater transparency and better remittance information. In this context, treasuries that are still wasting effort on manual reconciliation will benefit from the new market infrastructures and increasingly capable reconciliation engines that

leverage statistical analysis and machine learning to dramatically improve auto reconciliation rates.

Cross-border flows are undergoing rapid change, to the benefit of treasurers. SWIFT gpi and Ripple promise faster settlement, with transparent pricing and better data payloads for remittance details.<sup>3</sup> SWIFT gpi will be mandatory across the SWIFT network in 2020, so all treasurers will benefit – not just the pioneers. Competition from Ripple and other payment service providers will probably bring down the cost of cross-border payments; however, for treasuries with large volumes of costs but no time-sensitive cross-border payments, cross-border ACH provides immediate benefits.

#### Risk management

Increasing volatility is already apparent in emerging currencies, and global uncertainty provides fertile ground for major currency

surprises as well. Treasurers will need to maximise available bandwidth to handle what the coming year might bring. This implies, first, maximising the operational efficiency of risk management processes by using technology to apply the OHIO principle, and second, having very clear policies to apply when complex and uncomfortable situations arise.

It is (relatively) straightforward to follow a 90% hedging policy when interest rate differentials are small, but several emerging markets (for example, Turkey, Mexico, India, Indonesia and the Philippines) have been dramatically raising interest rates to counter capital flight, creating uncomfortably wide interest rate differentials. In these circumstances, hedging can wipe out gross margins – but not hedging may be even worse. Such conundrums are better thought through in advance.

According to Reuters, emerging central banks (for example, Turkey, Mexico, India, Indonesia and the Philippines) have now recorded the longest monthly run of net interest rate hikes since 2010, with June 2018 numbers showing the biggest tilt towards monetary tightening in seven years.<sup>4</sup>

Operationally, many risk management processes expend great effort on collecting the forecasts that constitute the underlying risk, consolidating them, and manually determining appropriate hedging action. STP from e-FX platforms back to TMS and ERP is reasonably standard in modern treasuries. Treasuries should apply STP in determining the underlying and the basic hedge actions as well. Operational forecasts can either be loaded directly into the TMS or passed through corporate standard reporting tools to the TMS without manual intervention. Only exceptions – both in the underlying positions and in the market data – require human intervention.

#### Embedding compliance

Compliance is a hot industry after the global financial crisis, and the regulatory tsunami shows no sign of abating. Corporate treasurers are devoting increasing effort and resources to regulatory compliance. This runs the risk of sucking resources away from customer-focussed activities that generate more value. Of course, compliance



It would be prudent for treasurers to arrange sustainable and well-gapped funding sooner rather than later

is not optional – but neither is it healthy for compliance to top a treasury's agenda.

Although it is sometimes hard to see ways out in the early days of new regulatory hurdles, technology provides a framework to 'set and forget' compliance. Treasuries must automate regulatory reporting and limit monitoring from the start to avoid the time wasted and risks taken in trying to comply manually. Even early solutions that may be only partial can save a lot of time and increase the reliability of compliance.

Applying the 80/20 rule, many treasurers have made big gains with simple know your customer (KYC) platforms that cover most of the requirements of most of their banks; as KYC review frequencies increase, the benefits compound. And these are minimal-integration, low-effort implementations.

#### Meeting objectives

Treasury faces exciting and challenging times. Boards expect more strategic input,

markets and ecosystems are volatile, yet budgets remain tight. Treasurers need focus to sort through the noise and concentrate their efforts on what really matters for their enterprises. Automating the routine processes in treasury, together with strong exception handling, frees up time for higher-value-added work. Clarity on goals and rigorous KPIs help treasury teams to pull together to meet the enterprise's objectives.

*David Blair is Managing Director of Acarate Consulting. He was formerly Vice-President Treasury at Huawei, where he drove a treasury transformation for this fast-growing Chinese infocomm equipment supplier. Before that he was Group Treasurer of Nokia, and he has previous experience with ABB, PwC and Cargill*

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<sup>1</sup> See <https://bit.ly/2MLesfz> at cib.db.com

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<sup>4</sup> See <https://reut.rs/2CbuoBv> at reuters.com



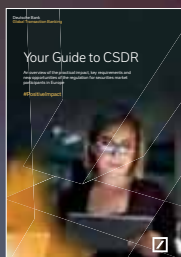
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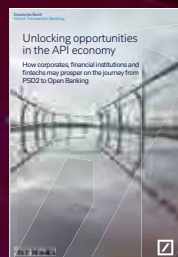
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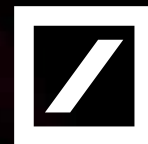
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# Instant attraction

Real-time payment schemes have already transformed the consumer payments arena. Christof Hofmann sets out progress so far and the opportunities for organisations prepared to invest in the infrastructure

**T**he treasurer of an oil refinery smiles to herself as she heads out into the Californian sunshine, after the successful receipt of a shipment of Alaskan crude oil on time again. Not so long ago, the shipment would have sat in the harbour until payment had been settled and confirmed, meaning late nights and – at worse – a fear that parts of the refinery would have to be shut down and restarted due to a lack of oil, incurring potentially significant costs. But today, the transaction was settled via an instant payment. The funds were transferred within seconds of the instruction being sent and both the treasurer and her supplier received the notification just a few seconds later – meaning the shipment could be loaded into the system without delay.

Our treasurer's scenario still lies some time in the future, as this is not quite yet today's practice. An example that is perhaps closer to the present day is urgent domestic payments made within minutes. But they are more expensive, come without credit confirmation, and do not work at weekends or outside office hours.

## Instant payments' journey so far

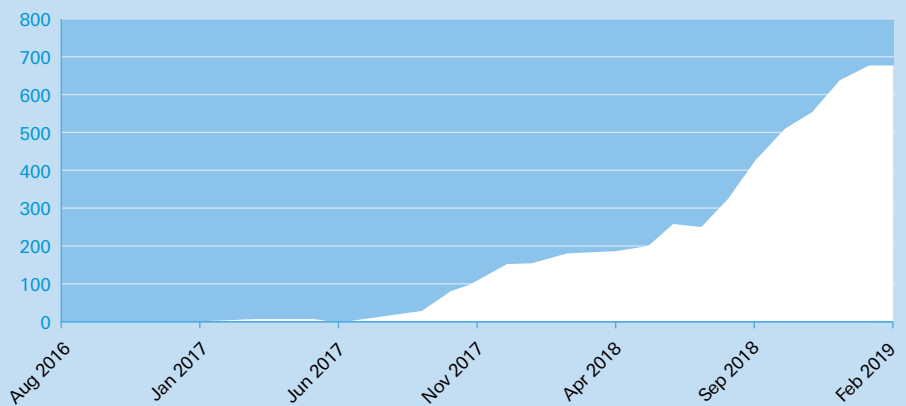
Market infrastructures around the world have developed instant payment clearing solutions of varying descriptions since the early 1970s, but few have had the 24/7 functionality that is growing in prominence today. Business-to-business use of these schemes has also often been restricted by low upper limits on transaction amounts.

There have been exceptions. The UK's Faster Payments Service (FPS), for instance, was launched in 2008 and now stands as a relatively mature instant payment scheme of use to both private and corporate clients. While the scheme's general service level agreement allows for execution within two hours to give the beneficiary bank time to perform certain regulatory checks, this is the exception and, in general, payments are executed within 1.5 seconds. The maximum amount for FPS transactions, meanwhile, has grown steadily since 2008, now standing at £250,000, with banks having successfully trialled transactions in tens of millions. If the Bank of England were to agree to a further raise, this amount could set the new benchmark for instant payments.

Though still relatively new, India's Unified Payments Interface (UPI) is a more recent success story. Despite the low transaction limit of INR100,000 (equivalent to around €1,250), the system has grown rapidly since going live at the end of 2016, with 674 million transactions processed in February 2019. For the same month, the monthly transaction value of UPI reached INR1,067bn (approximately €13.5bn).

The noise around instant payments has increased further in recent years with the introduction of the SEPA Instant Credit Transfer (SCT Inst) scheme in Europe, which not only caters for domestic instant payments, but also facilitates transfers right across all the SEPA countries (36 countries and territories, encompassing the 28 EU member states plus Iceland, Norway,

Figure 1: Volumes of UPI payments in millions from August 2016 to February 2019



Source  
National Payments Corporation of India

Liechtenstein, Switzerland, Monaco, San Marino, Andorra and Vatican City). At the same time, a number of Nordic banks are working to establish a similar architecture for the krona countries (Denmark, Sweden, Norway) and Finland.

While instant payments have yet to hit their stride in the same way in the US, a small number of banks are now live on the new Real-Time Payments system (RTP),<sup>1</sup> which was designed and launched by The Clearing House in late 2017 for corporate transactions.

Demand for these instant payments schemes has typically been driven by the retail and peer-to-peer sectors – but this is changing. More and more corporates are integrating them into their payments processes to benefit from increased visibility

over funds, as well as certainty and finality of payments. The advantages of instant payments can be felt right across the business, from tightening procurement processes and improving customer experiences through to fast delivery or instant refunds.

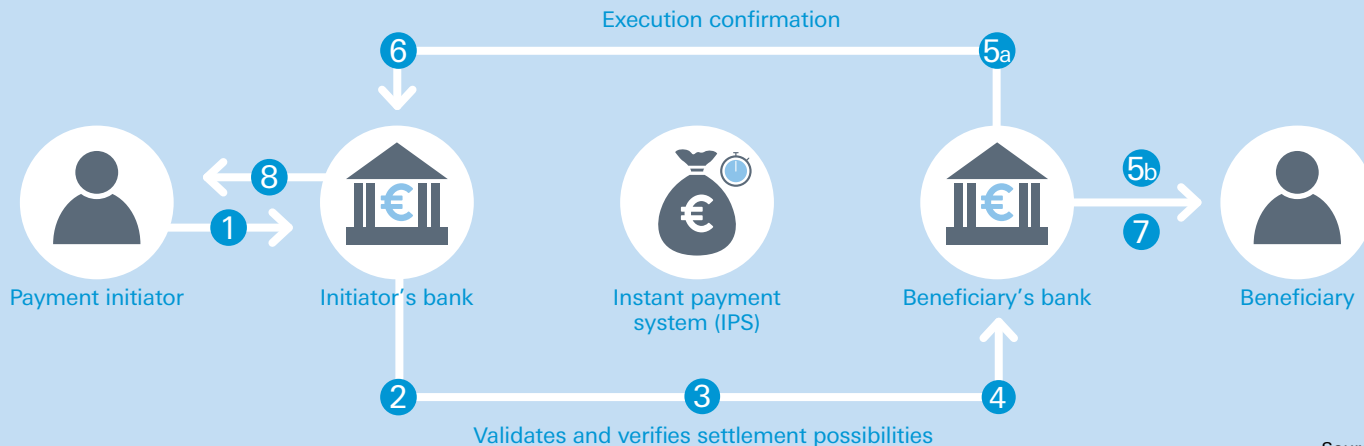
#### In an instant

Not so long ago, banks would only provide confirmation of successful payment as a premium service, while the delay between the payment instruction and receipt by the end beneficiary meant that the concept of a 'cut-off date' had to be built into payment schedules. Now, by sending payments just in time, rather than days ahead, companies can improve working capital – allowing for more precise funding, cost reductions and the maintenance of facility headroom.

We can visualise further benefits in working capital management. Global drinks companies selling to cafés, bars and restaurants are a classic example of the interchange between big suppliers and small buyers. On the one hand, global consumer brands are under pressure to grow sales while managing credit risk. On the other, independent food and drink outlets need to balance limited access to funding and credit with the need to have sufficient stock to meet rapidly changing demand. With instant payments, cafés and bars will receive funds from customers in real time. They will then be able to use those funds to purchase and pay for the additional stock in real time to meet unexpected peaks in demand. The result is a win-win for both

674  
million  
transactions processed  
in February 2019  
by India's UPI  
(npci.org.in)

Figure 2: How instant payments work



Source  
Deutsche Bank

## Within seconds

- 1 Instant payment is initiated
- 2 Initiator's bank checks limits, reserves the amount on the client's account and sends payment to the instant payment system (IPS)
- 3 IPS validates the payment and reserves the amount on the client's bank account
- 4 IPS sends the payment to the beneficiary bank
- 5a Beneficiary's bank validates the payment and confirms its acceptance to the IPS
- 5b At the same time it makes the amount available to the beneficiary
- 6 IPS forwards the notice of execution to the initiator's bank
- 7 Beneficiary's bank informs the beneficiary of the receipt of funds
- 8 The payment initiator's bank informs the ordering party that the payment has been made

the big supplier and the smaller buyers, as both benefit from sales growth and improved working capital management.<sup>2</sup>

The mere existence of instant payments can help treasuries with their collections, while the old excuse that the payment has been sent and is 'on its way' will no longer wash. Equally, instant payments can help customer service. Insurance companies, for example, often deal with clients that need reimbursement at short notice, prompted by unforeseen events. Customers used to long delays between the filing of their claims and the resulting payout will likely be easily won over by a company that can make good on claims in a fraction of the time – something instant payments make increasingly possible.

### The full package

By investing in a treasury infrastructure that can register payments and track funds in real time, corporates can combine just-in-time payments with a dynamic picture of their cash positions. Having a real-time picture of what funds are in an account,



By sending payments just in time, rather than days ahead, companies can improve working capital

and what will be going in and out when, should see corporates making better use of their liquidity buffers. With instant payments able to cover for any shortfall of liquidity in a matter of seconds, keeping accounts topped up just in case is no longer necessary – leaving corporates free to deploy capital elsewhere.

There is even potential to marry the benefits of instant payments with those of APIs – maximising the benefit of new payment models such as 'push' payments where banks can benefit from the new role of Payment Initiation Service Provider (PISP) stipulated by the second Payment Services Directive (PSD2). Under the regulation, authorised PISPs that have been given consent by a payer are entitled to gain access to that payer's account, check they have sufficient funds, and then initiate a payment directly to the payee account.

This represents a significant improvement in the payment process for companies used to receiving large numbers of online card payments, which can take several days to process and incur additional costs through card fees.

Despite the clear benefits of instant payments, a number of hurdles lie ahead. Foremost in many treasurers' minds will be the need to minimise transition costs. Yet, as we have seen, many of the benefits may

not necessitate the drastic levels of surgery that often come to mind when IT upgrades are tabled.

Banks can also take steps to help their clients accommodate the technology – adapting their own portals, for instance, to enable corporates to reconfigure their proprietary files in the required payment format, rather than having to recreate them from scratch in a new system. Furthermore, banks can work with the ERP and TMS providers to have the instant payments initiation via API integrated into their systems.

#### Transaction caps and security measures on the rise

Cautious chief financial officers will rightly raise other questions, with low transaction caps probably top of the list. When the UK launched FPS in 2008, transactions were initially capped at £10,000 (which might be fine for individuals); but a significant barrier to corporates used to dealing in far larger denominations. In 2015, however, the FPS limit was (as mentioned above) increased to £250,000.

What's more, Europe's SCT Inst, which currently only supports real-time payments of up to €15,000, has stressed that the cap is only an initial limit and the European Payments Council's governance process specifies that "the Scheme Management Board will formally analyse once a year if there is a need to adapt the maximum SCT Inst Instruction amount".<sup>3</sup> In the meantime, it can be changed for a higher maximum amount if individual banks come to a mutual agreement either bilaterally or multilaterally.<sup>4</sup>

The security of instant payments has also come under scrutiny. If a payment can be made immediately, then a fraudster can similarly use malware to hijack user sessions and move money to an unintended recipient at the same speed, without the window for banks to halt the payment.

So how can banks address the issue? Simply, heightened risk is being met with heightened caution. A central part of the instant payments process is ensuring that all the necessary checks – sanctions checks, embargo screening, fraud checks, funds availability, booking and reporting – are all completed within the timeframe of a few seconds, while all corporate transactions are recommended to be reviewed by at least two people (the 'four



The old excuse that the payment has been sent and is 'on its way' will no longer wash

eyes' principle). In short our mantra is: if in doubt, reject it. Already, we are seeing payment providers building their own 'white lists' that identify transactions that meet the criteria for rejection under the banner of heightened caution, but that have been demonstrated to be non-fraudulent.

Beyond this, the payments authorisation process is becoming increasingly rigorous. PSD2, for instance, mandates that banks enforce a two-factor authentication system, requiring two of the following to make a payment:

- Something they possess (a smart card or mobile phone, for example);
- Something they know (such as a password or PIN); and

- Something that is unique to them (such as a fingerprint).

This reduces the risk created by stolen data and passwords, making it increasingly difficult for fraudsters to falsify credentials.

#### New payment order

While security and payment caps pose challenges to the further adoption of instant payments, these are outweighed by the better payment experience – from dynamic payment updates with confirmation as standard, through to innovative, streamlined payment rails – at a fraction of previous costs. For corporates, this makes the investment worth it many times over.

*Christof Hofmann is Global Head of Payments and Collection Products, Cash Management at Deutsche Bank*

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<sup>3</sup> See <https://bit.ly/2WmXNA> at europeanpaymentscouncil.eu

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Figure 3: Instant payments: benefits and areas of caution

### Benefits

Instant payments can be a differentiator for corporates to improve the experience of their clients, particularly for corporates with direct consumer relationships

Immediate notification of payments promotes transparency:

- Reduced need for large liquidity buffers
- Clearer picture of cash positions
- Better understanding of financing needs

Immediate execution of payments enables payments to be made 'just in time', meaning businesses can:

- Eliminate cut-off times from their payment schedules
- Take advantage of short-notice opportunities

Collections can no longer be held up by buyers claiming that unpaid payments are simply being processed slowly

### Areas of caution

Low maximum amount of instant payments currently limits their use – particularly for larger businesses

Instant execution leaves no time for banks to stop and recall payments once they have been approved

Consumers who are able to pay in real time to corporates may expect the corporate to react in real time, while it is not capable of doing so

The client's payment initiation processes will have to be migrated from daily payment run and batch transmission to immediate single payment initiation as and when the decision to pay was made. For a lot of corporates this is a major change

Source  
Deutsche Bank





# Hedge with an edge

With geopolitical risk and FX volumes on the rise, *flow* explores how combining the right technology with trusted market expertise is essential for corporate treasurers

**F**X volumes are set to increase in 2019, thanks in large part to increasing geopolitical tension in global markets. In Europe, Brexit continues to drive uncertainty, while US–China trade tensions are adding a level of unpredictability to their home markets and beyond. This year will also see several emerging markets holding key elections that will add to global market uncertainty, with Argentina, India, Indonesia and South Africa among the countries heading to the polls.

Looking at the micro level, the escalation of tensions between India and Pakistan in February 2019 provides a good example of how unplanned events can have an immediate impact on FX rates, with the USD/PKR moving half a percentage point in a day as a result.<sup>1</sup>

#### Corporate treasury challenges

According to a recent Deloitte survey, finance executives' risk appetite dropped to its lowest level in more than nine years in the last quarter of 2018.<sup>2</sup> When juxtaposed with increasing levels of uncertainty – 58% of respondents rated levels of uncertainty

as high or very high, the most intense since mid-2016<sup>3</sup> – it is little wonder that “financial risk management, FX” was the second most important priority for treasurers for the third successive year in Treasury Strategies' annual survey of treasury priorities.<sup>4</sup>

Indeed, FX management has become even more of a priority for the strategic treasurer. A treasurer's biggest driver is to protect the firm's profit and loss and, against a backdrop of market volatility, gaining control and visibility over corporate FX are prerequisites for implementing successful hedging strategies (see Figure 1 on page 62).

Achieving this, however, is particularly challenging for global firms managing multiple business entities with myriad bank accounts across countries and currencies, and numerous counterparties throughout their value chains.

#### Economic fluctuations

Even when a single view of a firm's current state can be achieved, broader market developments can quickly impact supply

chains and change the game. The latest Dun & Bradstreet *Global Supply Chain Risk Report* found that supply chain FX risk increased 6.1% over the last quarter of 2018, and 5.7% over the last three quarters of the same year.<sup>5</sup>

Consider for instance the impact of the ruble's depreciation – it has dropped nearly 10% since the beginning of the year.<sup>6</sup> The exchange rate volatility and high 'cost to carry' (or cost of holding the currency) would have affected businesses that manufacture products in Europe for sale in Russia. This is a broader supply chain issue that cannot be solved by simply tapping into the FX market. While trading the currency may partly hedge the risk, it would not negate the cost to carry of buying rubles and selling



Figure 1: Key treasury needs for cross-currency transactions



euros. This is just one specific example. For firms with supply chains that span multiple markets, this complexity would be multiplied many times over, creating structural risk for the business.

#### Market fragmentation, regulation and dispersed liquidity

In addition to the potential ripple effects of currency volatility on global supply chains, treasurers also have to manage amid decentralised and fragmented FX markets. This means there are myriad regulations to navigate – from local regulation and taxation, to more sweeping reforms, such as the introduction of Markets in Financial Instruments Directive II (MiFID II) in European Markets in January 2018, Capital Requirements Directive IV (CRD IV), International Financial Reporting Standards (IFRS 9) and the recommendation that corporates adopt the FX Global Code of

Conduct (a set of principles of good practice for FX market participants). It also means there are a variety of trading windows, funding sources, execution platforms and settlement times. Add to all this the evolution of the FX landscape to one with scores of electronic trading platforms and dispersed liquidity sources.

#### Reporting and reconciliation

Amid all this, corporate treasurers are still hampered by manual processes, making FX reporting and reconciliation a headache. This lack of automation results in longer lead times, concerns about data security and inaccuracy of forecasts.

#### Cost pressures

Finally, corporates are constantly under cost pressure, needing greater transparency on FX fees, rates and spreads, as well as access to data to make strategic decisions



## Technology is the enabler, but front-to-back focus drives step changes in efficiency

Johnny Grimes, Global Head of GTB FX, Deutsche Bank

that contribute to revenue growth. There is also a need to rationalise the number of currency accounts maintained, while optimising operational efficiency.

Johnny Grimes, Global Head of GTB FX at Deutsche Bank, notes: "Given all these factors, treasurers are actively seeking to achieve central visibility of the consolidated exposure across their firms' value chains. A holistic view of currency risks would enable them to take strategic steps to offset the risks against each other, or to review business models with internal partners in order to control overall exposure durations, reduce costs, and improve forecasting and cash-flow hedging."

### Local bank account inefficiencies

Consider the case of Honeywell, a Fortune 100 software-industrial company

Figure 2: Future of FX – what changes will technology bring?

In the next two years	Agree?
Greater automation of front- and back-office practices	43%
Large amount of FX service to become unbundled	43%
Revenue to shift from spread-based to fee-based models	34%
No longer need to speak to salesperson for FX transactions	29%
In the next five years	Agree?
Distributed ledger technology and blockchain platforms to provide instant settlement	77%
Cryptocurrencies accepted fully as a tradable asset class	59%
Central banks to issue own digital currencies	59%


Source  
Global Financial Markets Association, 2018

that recorded US\$41.8bn in sales in 2018 and does business in more than 970 sites.<sup>7</sup> Its Brussels-headquartered EMEA Treasury manages 48 currencies on behalf of the firm's affiliates, netting all exposures. While it is a euro-functional entity, the firm had exposures emanating from local bank accounts associated with different business units that were causing FX-management concerns.

First, some local business entities had multiple currency accounts; for example, dollar, sterling and euro bank accounts to facilitate customer payments. While this set-up responded to the entity's customers' needs, it created inefficiencies for treasury.

"The extra accounts created extra risks and security issues associated with monitoring the different accounts, additional costs of retaining these accounts, and an additional dependency from controllership and accounting to monitor the accounts and to sign off the books monthly," says Rónán Clifford, Treasury Director at Honeywell's EMEA Corporate Treasury.

Another complication was that, due to reasons of legacy or customer service, some entities held more than one bank account in a non-functional currency. When a business entity is paid in dollars, sterling, or any of the 45 other currencies the company has exposures to in EMEA, the



payments flow into non-functional currency accounts. "Having all these small pockets of non-functional currencies in several different locations meant that we would miss opportunities in terms of centralising and investing, and we had to carry the associated costs," Clifford explains.

To manage this process, the company had someone based in its service centre in India to look at the balances on a regular basis, and to make manual FX transactions between accounts. For example, manual transfers had to be made from sterling and dollar accounts in order to have the cash reside in euros.

#### Technology for greater treasury control

Given the inherent complexity and relative opacity of cross-currency transactions, forward-thinking corporates like Honeywell are looking to technology solutions to enhance visibility and control over FX flows. By digitising and automating workflows, treasurers will not only achieve operational efficiency, but will also be able to access and build better, timelier data that in turn will enhance trend analysis and the



Account structure inefficiencies were being addressed via a manual process; the challenge was to find an automated solution

Rónán Clifford,  
Treasury Director, EMEA Treasury, Honeywell

understanding of the drivers of exposures, as well as enable more accurate forecasting.

Following a 2018 Global Financial Markets Association (GFMA) survey on technology-driven shifts (see Figure 2), James Kemp, the Managing Director of GFMA's FX division, stated: "We are now seeing a strategic application of technology spend to drive their businesses forward, enhance the end-user experience and reduce costs, using what could be transformational technologies."<sup>8</sup>

This coincides with a change in focus from banks which, following a decade of addressing regulatory and structural changes, are now shifting their sights to innovating and investing in technology in 2019, for the sake of differentiation and efficiency.

The results of the GFMA survey suggest that automation is already front of mind across the industry. Grimes reflects: "The innovation we are seeing is the extension of technology solutions increasingly deeper into our front-to-back workflows. You can no longer look at a process in isolation and try to automate it. You need to be willing to take a step back and look at an outcome you are trying to achieve, and strive to make as many steps in that workflow as efficient as possible."

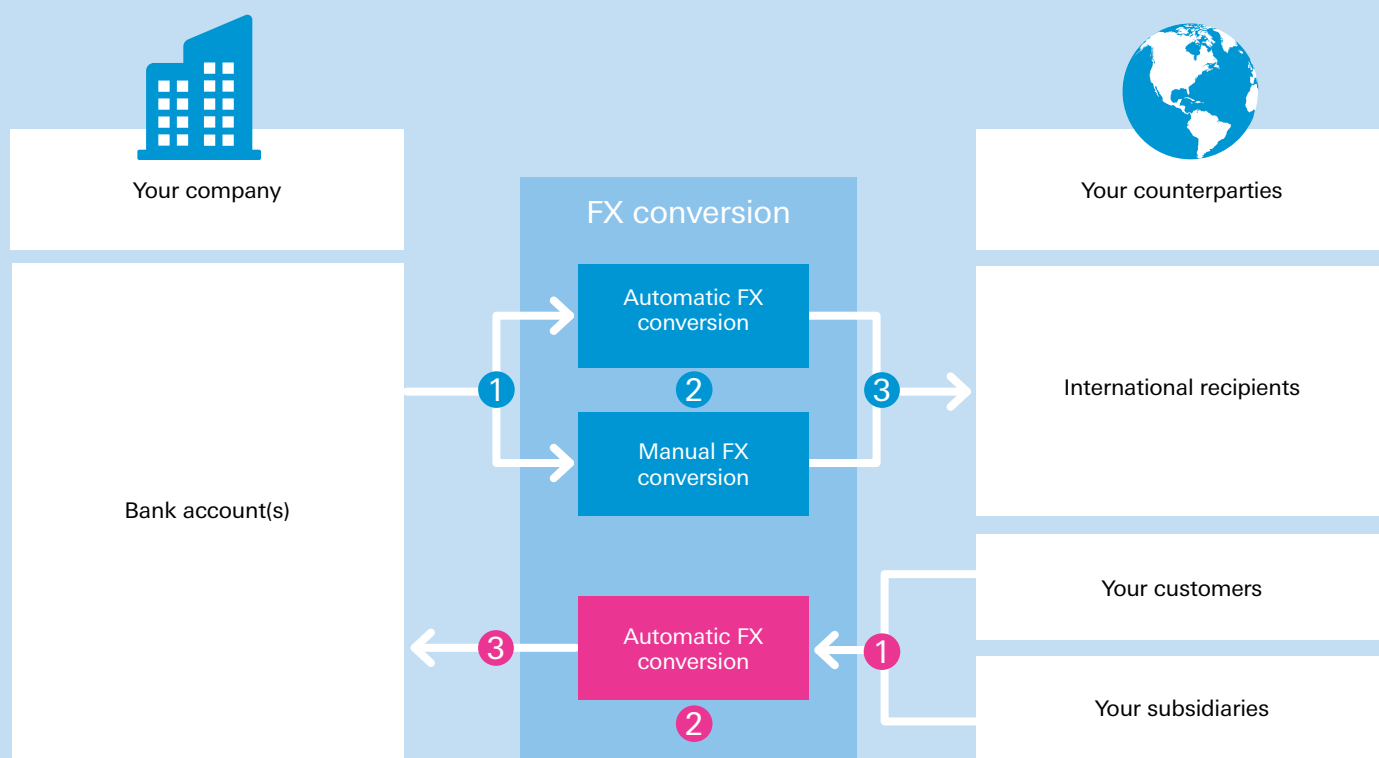
He concludes: "Technology is the enabler, but front-to-back focus drives step changes in efficiency."

#### Automating cross-currency flows

In Honeywell's case, the firm recognised that there were opportunities to improve its processes holistically. Clifford says: "Account structure inefficiencies were being addressed via a manual process; the challenge was to find an automated solution." So it implemented Deutsche Bank's FX4Cash, an automated solution that addresses its challenge of non-functional currency flows (see Figure 3 on page 65).<sup>9</sup>

The company agreed pre-negotiated FX prices with the bank, which are deployed automatically when it receives cash. For example, if a Honeywell entity receives pounds sterling into a euro-functional account, there is a pre-agreed margin that the bank will apply to the rate, and the funds are automatically converted into euros and deposited into the euro-functional account. Clifford comments: "We're able to receive funds in foreign currency into the functional currency account, yet also have straight-

Figure 3: Automating cross-currency flows



Source  
Deutsche Bank

through processing in terms of reconciliation, which is very important to us."

To eliminate the manual process at its Indian service centre, Honeywell also implemented Deutsche Bank Maestro – a robot that automates the process using a set of rules established between the company and the bank.

"We worked with the bank on a robust set of rules so that we would have clear visibility of how and when these exposures would sweep into the functional currency account," Clifford says. "A bank can do an FX trade for you, but you need to have some form of control over pricing. This gave us clear visibility of pricing, which was important to us in terms of transparency, but we no longer had to worry about the exposure as it was automatically done for us."

#### Underpinning technology with expertise

While much progress is being made with the help of automation, technology alone is not enough to mitigate all the potential risks associated with cross-currency flows. There will always be global risks in one area or another, but the intent is to mitigate that risk as much as possible. CFOs and treasurers are not looking to bet on a market, but to diffuse the volatility-related price risk over time.

"Locally, banks need to provide advice, as appropriate, to corporates based on the outcome they are looking to achieve during challenging market circumstances," says Grimes. "On a more macro level, banks can speak to clients and share the experience they have from weathering challenges in multiple markets, as they build their own FX strategies for managing exposure to potentially volatile currencies."

Ultimately, treasurers want to have a successful FX management strategy that keeps exposures within acceptable parameters. To achieve this, a combination of technological innovation, in-depth expertise of FX markets, and local market knowledge is required to provide greater control, transparency and efficiency over cross-currency transactions.

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# ISO 20022 takes off

Many of the world's most important payment market infrastructures are transforming to meet the needs of automation, integration and real-time services. All of this is underpinned by the migration to a new payments messaging standard – ISO 20022. For banks and corporates, this is more than just another IT project; it signals a major opportunity to improve payments processes and reassess business models. Paula Roels looks at the implications

“Even the best-designed standards only take off if they meet real and immediate needs in the market,” said Stephen Lindsay, Head of SWIFT Standards, back in 2015.<sup>1</sup> For ISO 20022, a global standard for payments messaging first created in 2004, take-off has taken 15 years. Now the moment has arrived.

Globalisation and the increasing need for interoperability of payment flows put the need for a global standard on the runway some time ago. Yves Mersch, Member of the Executive Board of the European Central Bank, described the building of financial market infrastructure on individual or national solutions as “anachronistic” in a speech given in Brussels in February 2018.<sup>2</sup>

Yet it is digitalisation – and with it the need for automation and faster, or even real-time, payments – that has signalled take-off. Different messaging standards are a hindrance to data automation capabilities, with payments often having to be converted at payment gateways – not always leaving all information intact.

In other cases, information has to be truncated when processed by banks that

are not capable of handling data-rich formats, and enriched once more after processing. Not only does this mean inefficiency and potentially lost transaction data, but it is also a big impediment to fulfilling anti-money laundering compliance and fraud regulatory reporting – at a time when it is more arduous and more closely scrutinised than ever.

Enter ISO 20022, which allows for the introduction of new data components, meaning that far richer information can be transmitted.

Make no mistake, the decision by major central banks and SWIFT to migrate to ISO 20022 is a game-changer in payments processing. It promises greater interoperability between various settlement networks, leading to simplified global business communication, richer information flows, higher levels of straight-through processing (STP) and more efficient compliance-driven processes.

This is not simply another IT project. Rather, it signifies an opportunity for banks and corporates to improve operational efficiency and reassess existing business models. It appears that most are

onboard, with SWIFT's Lindsay noting an overwhelming response to migrate to ISO20022.

## Market infrastructures flock to new standard

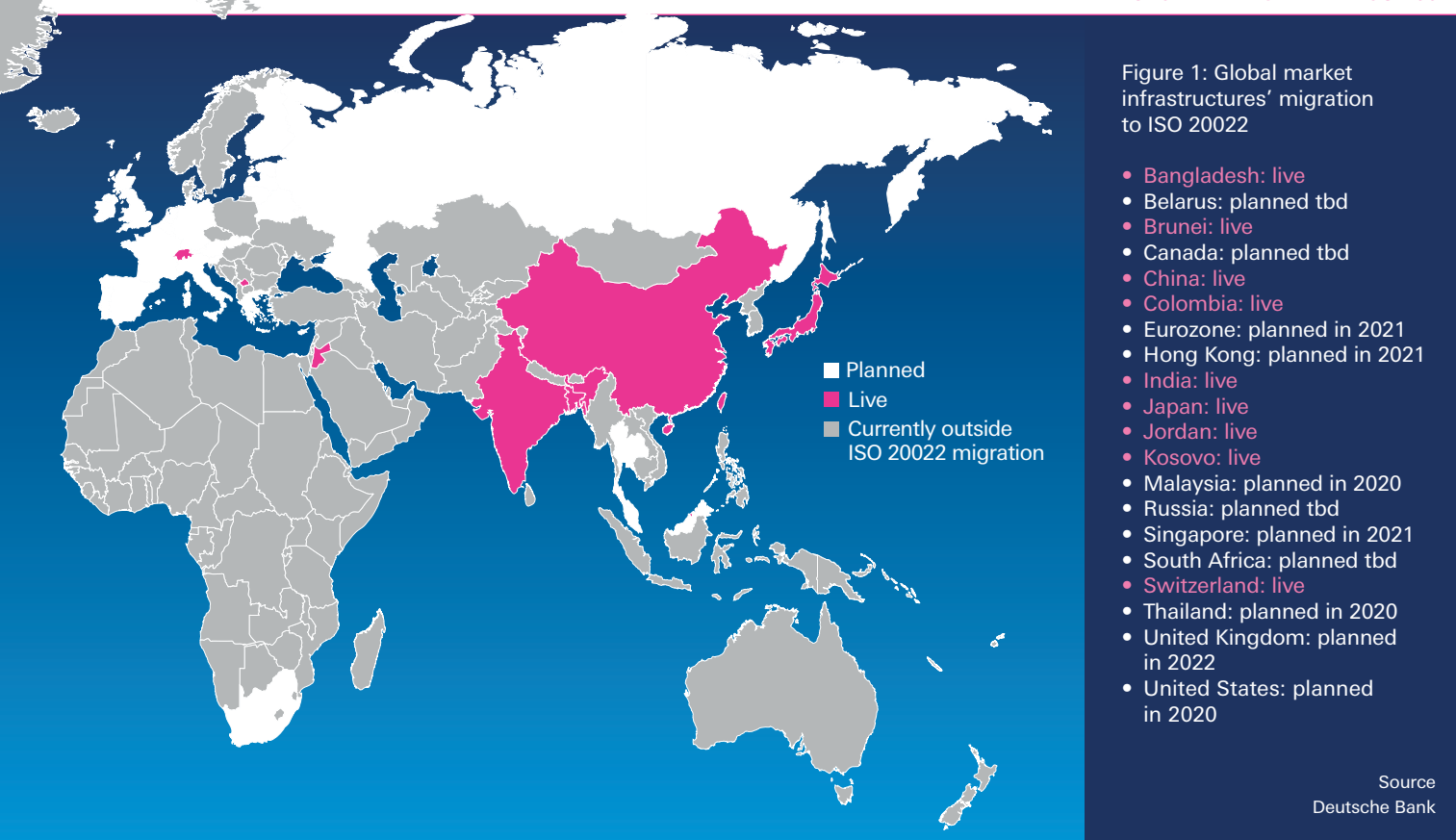
ISO 20022 has already been introduced for High Value Payments Systems (HVPS) in Japan, Switzerland and China, and is the standard for instant payments in Australia, the US, Canada and Singapore.

But all eyes are now on the world's major currency areas: over the next few years the US Federal Reserve and The Clearing House, the Eurosystem and EBA Clearing and the Bank of England's real-time gross settlement service will all modernise their HVPS with ISO migration (see Figure 1).

## Bigger than just a banking issue

This promises a future where banks and their clients can effect payments far more efficiently and economically.

It is understandable that messaging standards may not get many corporate treasurers' hearts beating overly quickly. But looking at this as just another messaging standard would be a mistake. So allow me to try to at least raise the



tempo slightly. Imagine receiving a payment message with rich information – including data on invoice number, account number, and customer number – that can be easily and automatically recognised by your enterprise resourcing processing system for more effective STP, auto-matching and auto-reconciliation. Excited?

This end-to-end transmission of ISO 2022 messages will, in turn, increase transparency and support financial institutions by providing secure payments processing and conforming to compliance regulations. It should also be used as a basis for reassessing existing business models or, at the very least, redesigning substandard business processes.

The introduction of ISO 2022 in certain currency areas to date highlights the potential financial benefits. PwC suggests, for instance, in a report authorised by the European Commission, that the Single Euro Payments Area (SEPA) has resulted in €21.9bn of cost savings per annum.<sup>3</sup> Even accounting for the fact that SEPA migration encompassed more than just the migration to ISO 2022, the savings associated with standardised messaging have probably been considerable.

#### Think long term, not shortcuts

Now for the reality check: such benefits cannot be accessed without some hard work. For an idea of the scale of the migration, think back to the transition to SEPA or the introduction of the euro. A mid-sized bank could expect a four-digit outlay in terms of project working days; for larger banks, it will probably be even more.

The impact extends beyond just core payments systems, touching everything from booking systems to embargo and know your customer systems, through to electronic banking, liquidity management and archiving. And it is not just cash management – securities, trade finance, global markets and treasury departments will also need to be able to process the contained information and apply it elsewhere.

Inactivity is not an option, given the risk of losing access to key payment market infrastructures. So what are the options?

Given the effort required, it is understandable that some banks may look for shorter migration journeys. On the face of it, maintaining existing systems and converting existing formats into ISO 2022 or vice versa – either at the inlet or outlet

of the payments processing system, or at the interface – makes sense. But not only do you risk losing information this way, you almost certainly miss a fantastic opportunity to improve efficiency and better service clients.

As such, a strategic restructuring of internal bank information flows must be the way forward. Acting as a 'first mover' may potentially result in a competitive advantage – bringing forward the benefits of harmonised standards, amortising the investments on the bank side and securing end-to-end efficiency of the payments ecosystem. Yet it will require a clear strategy, making it crucial that senior management spearhead change from the outset.

Now is the time to fasten your seat belts and get ready for take-off.

*Paula Roels is Head of SWIFT & Market Infrastructures, Cash Management, Deutsche Bank*

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# Pollinating payments

Amid a delicate ecosystem of de-risking and reducing correspondent banking lines, how can the process of making cross-border payments be improved?

Ruth Wandhöfer and Barbara Casu have researched market participant pain points and suggest seven scenarios for the future

**T**he ability to transfer money across borders in a safe and secure way is an indispensable requirement for the global economy. Until now, the main method of executing money transfers globally has been via correspondent banking arrangements.

In this article, which is based on the SWIFT Institute paper published in October 2018,<sup>1</sup> we develop the building blocks for a future blueprint for cross-border payments, with a particular focus on the wholesale aspects of these flows, as they constitute a systemically important area of business. Cross-border payments, notes McKinsey (2016), “represent 20% of total transaction volumes in the payments industry, yet they generate 50%

of its transaction-related revenues” (i.e. transaction-related fees, float income and FX fees), which amounted to more than US\$350bn in global revenues in 2014.

## [How the industry sees correspondent banking today](#)

In order to identify pain points in correspondent banking, we decided to ask the community directly. A total of 95 entities from 37 countries (more than 50% of which were in Europe) responded to our online questionnaire, which was sent during September and October 2017.

Respondents felt the strongest about the lack of visibility of transaction-related costs,



followed by the lack of information throughout the life cycle of the payment and lack of data and/or incomplete transaction reference data, which create problems in reconciling transactions. Interestingly, the direct costs associated with messaging fees charged by the network were considered the least important.

#### Different models for cross-border payments

We then held a number of industry focus group sessions with a selection of respondents where the aim was to propose a potential approach to remove the identified pain points. In those discussions, the first of which took place in January 2018, we developed a set of seven design scenarios for the future of cross-border payments. Our main objective was to propose a blueprint to take correspondent banking into the digital age. This could translate into a new model altogether (i.e. correspondent banking arrangements being replaced by something else) or represent changes to the way the system works today, for example in relation to the messaging system/type/content, or the introduction of utilities. Key requirements were:

- Settlement (including synchronisation);
- Liquidity efficiency;
- Availability (technical access and uptime);

- Ubiquity (relevant connectivity between systems and players);
- Transparency;
- Predictability; and
- Interoperability of systems.

#### Scenario 1: SWIFT gpi

The SWIFT Global Payments Innovation (gpi) solution provides a cloud-based service, accessible via application programming interfaces (APIs) or MT199 messages, which enables financial institutions (FIs) to track their payment transactions in real time by deploying the Unique End-to-End Transaction Reference (UETR) for every gpi transaction. The transparency along the chain around payment fees and the final payment amount that will reach the beneficiary supports users in better managing their accounts payables. Participants already see significant reductions in their payment enquiry costs.<sup>2</sup>



Cross-border payments would significantly benefit from harmonised conduct rules

Ruth Wandhöfer

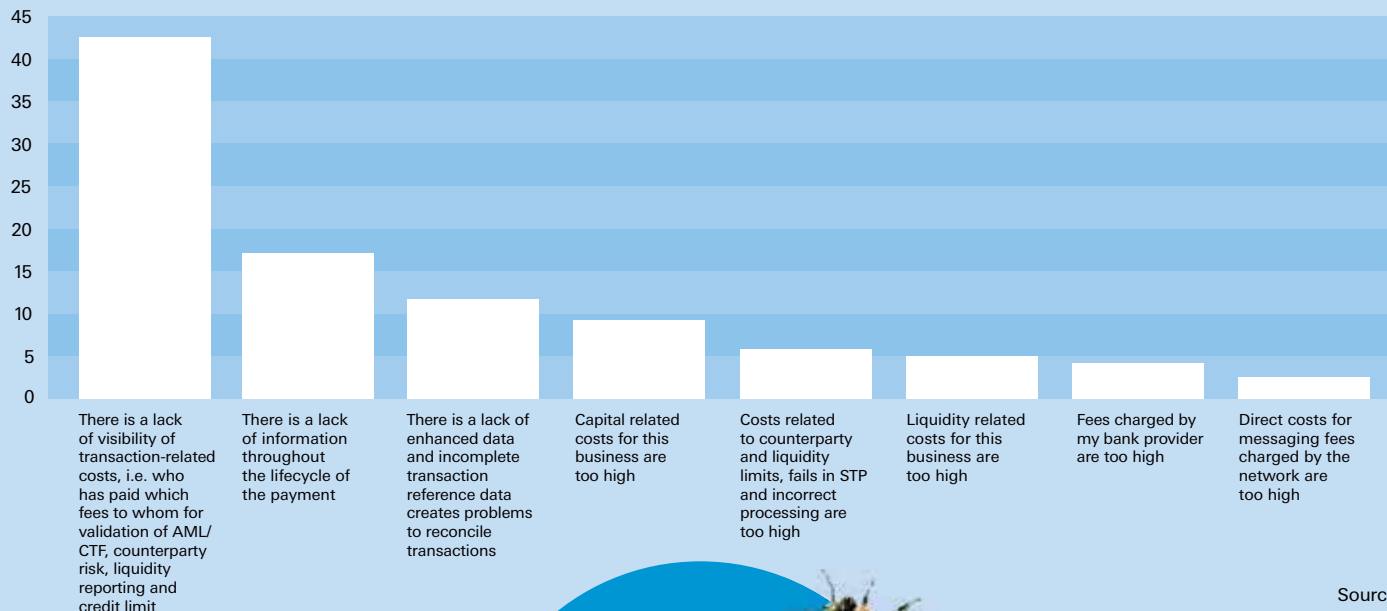
Even though gpi is only a messaging solution and does not deliver settlement, it does support transparency and risk management in commercial credit settlement. SWIFT gpi does not require structural changes to the current correspondent banking Nostro/Vostro account-based model and does not require banks to rethink and replace their front-to-back office infrastructures. Our recommendation is for participating FIs in correspondent banking to embrace and implement SWIFT gpi, to their own and their clients' benefit.

#### Scenario 2: SWIFT gpi next generation

This looked further at reducing systemic risk in the critical area of inter-bank high-value payments. The aim of reducing settlement and counterparty risks in correspondent banking is being tackled from a gpi perspective with the rollout of the gpi

Figure 1: Summary of survey results

Ratio of respondents who agree with the statement to those who disagree



Source  
SWIFT Institute

Financial Institutions Transfer (gFIT) service. The underlying rulebook will require FIs to confirm to the tracker once the beneficiary's agent's Nostro account has been credited, or flag any processing issues inside the FI, such that FI intraday liquidity management can become more accurate and reconciliations of payments can improve.

By 2022/2023, SWIFT is planning to migrate to the ISO 20022 standard, including gpi, which will allow parties to send more data in the payment message.

A planned 'pre-validation service' will further support preventing straight-through processing (STP) and data gap-related issues (e.g. missing clearing codes), as well as problems with closed or wrong beneficiary accounts down the payment chain. And finally, the case resolution service currently under exploration would support FIs in the context of missing information in payments.

### Scenario 3: Regional RTGS

In this model, we see national real-time gross settlement (RTGS) systems directly connecting with each other. An example of this is in rollout mode across six countries in the Middle East under the Cooperation Council for the Arab States of the Gulf (GCC).

A central RTGS system links all participating RTGS systems and thus provides a full



cross-border solution. The domestic RTGS systems in the region have accounts in each other's books, enabling transactions via the system to settle immediately with finality in central bank money. This will provide financial stability. However, the GCC model is very specific to this region and it is unlikely that this can be easily replicated at a global scale, given the legal, regulatory and political issues, as well as standards- and operational-related challenges of alignment.

### Scenario 4: Clearing bank

This is a scenario that captures the situation where a clearing bank – narrow bank – connects individual banks and corporates to an automated clearing house (ACH) and allows them to exchange funds in real time, leveraging the bank's

messaging network. This scenario is already live in the UK<sup>3</sup> with an ambition to expand globally.

Settlement is achieved in near real-time in commercial bank credit and all positions are pre-funded, such that counterparty credit risk is managed.

The success of this model depends on the extent of network adoption. This is likely to be a challenge, as would be costs arising from know your customer (KYC) and anti-money laundering (AML) risk management, in particular at a cross-border level. The liquidity and settlement dimension will also be challenging as higher-value transactions start to be processed.

### Scenario 5: ACH interconnectivity

Rather than having one and the same clearing bank, a more complex but also more network-effect-friendly system would be the interconnection of national ACHs. The difference between this model and the clearing bank model is reflected in the need to have an overall interoperability scheme rulebook, complemented by harmonised messaging standards.

Overall, the clearing bank and ACH interconnectivity models have limited application in the context of managing settlement risk in the high-value cross-

border inter-bank space. ACH transactions are not immediate and irrevocable in all instances, and systems usually have transaction amount limits.

#### Scenario 6: Market utility

Expanding the regional RTGS system hub creation (with the GCC model as an example), one could also consider the creation of a global market utility that facilitates settlement in central bank money by connecting country RTGS systems on the one hand and commercial banks on the other. This could ultimately deliver a payments and settlement utility for global trade and trading. However, its implementation would face a number of non-trivial challenges, ranging from network adoption to agreement on a common scheme rulebook and compliance with multiple regulatory regimes. The entity would have to be a regulated financial market infrastructure (FMI). Many open questions remain with this model. For example, in what currency would settlement take place? How would liquidity across the system be managed? Would the FMI be responsible for sanctions/AML/CTF? In which currency would FIs have to fund their accounts with the FMI?

#### Scenario 7: RTGS interconnectivity leveraging DLT/synchronisation

A variant of the global settlement utility model could be the deployment of the method of synchronisation, leveraging emerging (e.g. distributed ledger technology (DLT)) or existing technologies. Such a model is currently being discussed in central bank circles.

In the future, we could even imagine central banks issuing fiat currency on the DL (Central Bank Digital Fiat Currency (CBDFC)), where interledger protocols could provide central bank-settled cross-border payments via atomic settlement. Cross-border legal and regulatory questions would need to be tackled, as well as the extent to which such a solution could truly reduce inter-bank settlement and counterparty risk.

#### Policy recommendations

For the purpose of ensuring a harmonised process of identification of payers and payees in a transaction, it is recommended to use the global Legal Entity Identifier (LEI) – a standard identifier for legal entities – in the payment message. Technology, in this instance DLT, could be used to broadcast the LEIs of participating institutions to the market.



Our main objective was to propose a blueprint to take correspondent banking into the digital age

Barbara Casu

The development of a second standard identifier for individuals could also be considered and ISO might be an appropriate entity to look into such standardisation work. The development of national KYC registries should be encouraged further. Note that various types of local and regional registry solutions have already started to emerge, such as the SWIFT KYC Registry, and the KYC utility being explored by the Nordic banks. One could even consider putting registries on a DL, and the legitimacy of use of such registries could be supported by the Basel Committee in collaboration with the Financial Action Task Force (FATF). An essential item to address in all of this is legal liability for KYC in the context of outsourcing.

The process of AML/CTF-related information sharing between FIs across borders also needs improvement. Local data privacy legislation and unclear messages from various national regulators make this difficult today.

And finally, cross-border payments would significantly benefit from harmonised conduct rules, in particular regarding transparency around fees, deductions and FX rates applied, as well as the prohibition to take float on incoming customer payments.



#### Harnessing innovation

Our research highlights that innovation is available today that can significantly improve the way cross-border payments are being executed. gpi is the answer, here and now. We also demonstrate that network governance is a key requirement that cannot be delivered by technology alone. SWIFT is well positioned to continue providing both network and governance, but technology change cannot be overlooked. This is why we recommend that SWIFT continues its work on exploring DLT as a potential model for the next generation of messaging. The role of APIs will be equally key in this context. It is therefore encouraging to note that SWIFT has just announced a proof of concept with enterprise blockchain software firm R3 in relation to creating a connectivity between DLT and gpi.

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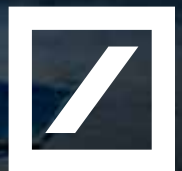
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# New assets for old

The opportunity for global custodians to earn revenues from interest rates on funds held on deposit has been suppressed by a low-interest-rate environment. *flow* talks to State Street's Swen Werner about how digital developments can fill this hole and drive a new direction of innovation

**F**ounded in 1792, US-based State Street is the world's largest custodian bank<sup>1</sup> with a mission to settle and safe-keep investors' assets and help them to enter new markets. It is responsible for more than 10%<sup>2</sup> of the world's assets, with a reach of more than 100 markets, giving it a close-up view of the world's investments and the clients it serves and leaving it well-placed to support them in an important area: the future of money.

With the growth of the digital economy, the penetration of new technologies from fintechs into every aspect of financial services has now brought this evolution to the disruption of money itself. The opportunities to create digital forms of money are substantial and timely, as an increasing number of millennials<sup>3</sup> are favouring cryptocurrencies. These allow them to invest more quickly, giving them more control and escaping the cost, complexity and regulatory rigidity of traditional money.

As Managing Director of Digital Products and Innovation at State Street, this has Swen Werner deep in thought, mulling key questions such as what an asset is, how it could be fully digitised and what new services his organisation could provide. His exploration is timely, given that the low interest rate environment has amplified the competitive pressure to service traditional assets.<sup>4</sup> Also, with asset managers under increasing fee pressure, custodians may herald the entry of institutional capital into the industry, acting as the missing link investors and asset managers have been

seeking for entrance into the crypto market. A key driver for State Street is innovation, and how digital developments will impact its traditional role.

## More than just new technology

In particular, Werner is examining how processes and operating models would change as a result of these digital developments. He explains that instead of using technology to squeeze out improvements in the way custodians operate, "the industry must look at how it fundamentally improves businesses by thinking in terms of the future of money and markets, which is what the emergence of digital assets is about".

So when fintechs proposed new ways of organising alternative assets such as art, gems or property to make them more tradable and more fungible, or interchangeable, the financial industry took note. It considered how it could apply those models and ideas to traditional asset classes such as equities and fixed income in a process called tokenisation (i.e. by turning those assets into digital securities by creating a digital unit of ownership known as a securities token, which can be quickly and easily traded online with real-time price transparency). "While not necessarily the purview of the global custodian, these new assets can potentially open up new opportunities in markets that might presently be underserved by them," Werner notes.

## Rethinking assets and roles

His enthusiasm is underpinned by the promise of progressive change to the



71%

of millennials would  
invest in cryptocurrency  
if it was offered by a  
financial institution

(eToro)

post-trade processes and the roles of custodians and other intermediaries, including the potential to eliminate the need for a central register or clearing house to certify ownership and clear transactions. In the future, networks of institutional actors may have access to the distributed ledger technology (DLT) network via a shared registry where the securities are traded, cleared and settled in the network almost instantly.

As a network participant, State Street is examining its core activities – custody, fund accounting and asset servicing – in this environment and looking at how cash and liquidity needed for securities settlement could be changed over time using some of these technologies. According to Werner, the application of DLT to these models is conditional on three requirements.

First, it needs the regulatory template to harness and create trust in digital money. Second, it needs the right ecosystem and market adoption. “The very nature of these technologies is such that a single

organisation cannot bring it to fruition,” Werner explains. “It requires a collaboration or counterparties in the securities processing value chain to make it work and to deliver the benefits.” Third, for true delivery versus payment (DvP) of securities for cash and low risk settlement in a DLT environment to occur, the industry needs to solve one big puzzle: how to bring cash onto the ledger.

#### Come together

To facilitate DvP, a consortium of banks,<sup>5</sup> including State Street and Deutsche Bank, is testing how a counterparty risk-free cash asset could be created in a tokenised form. This would enable a formal transfer of ownership and an accurate cash equivalent for the transfer, in an effort to mimic what a real-time end-to-end transaction between members would look like. It would involve short-cutting the process of having electronic cash sitting in a central bank account, and centrally cleared, which moves through the normal pipes of the banking system, bringing it on ledger to

facilitate peer-to-peer settlement. Non-bank investors would be given a cash token that would not expose them to more risk than they are currently exposed to in a traditional deposit model.

Werner expands on why such concepts are groundbreaking: “You almost start from the beginning by asking, how do I bring cash on ledger? This prompts a rethink of what money is and how we should operate,” he notes. “That’s why the work of the project – called Utility Settlement Coin (USC) – is so important. It brings together different business models at different parts of the securities value chain, which are starting to think those models through and which are spending time on how to make it work.”

For custodians such as State Street, the bringing of cash on ledger could mean an opportunity to offer differentiated products and services.

#### Letting go of old habits

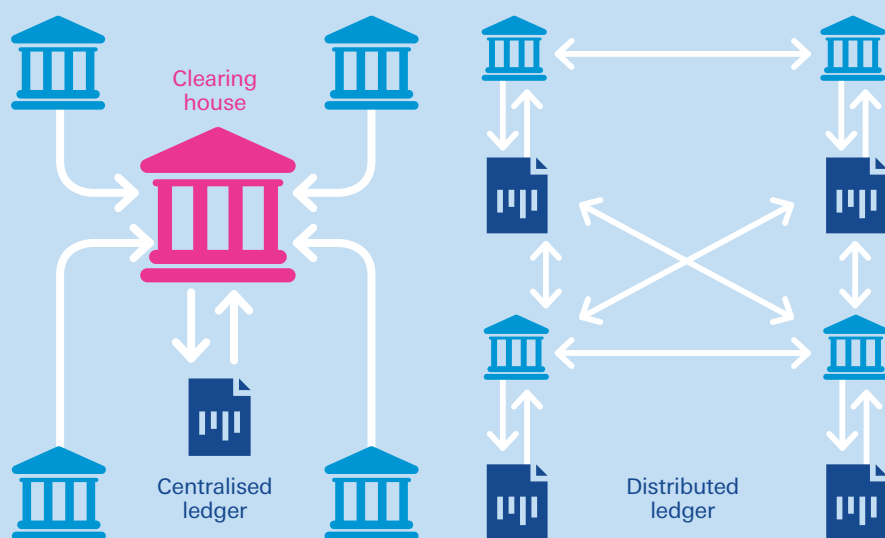
Rethinking business models and market structures to realise those benefits requires a rethink of the process of securities transactions. Currently, a securities issuer pays its agent to issue securities, while an investor pays intermediaries to get access to those securities. These costs pay for the infrastructure that brings together the issuer and the investor. However, says Werner, “although we have organised our industry around certain market roles and certain activities performed by the banks, it does not have to stay like this forever. Habits can change”.

A tokenised DLT environment addresses that by collapsing the distance between issuer and investor through peer-to-peer settlement with direct interaction between the two (see Figure 1). According to Werner, it also presents an opportunity to readdress the classic charging model for securities trades, enabling other providers to generate services and revenues based on the decisions that somebody else has made. For example, a tokenised DLT platform could grant others access to provide collateral management services. Werner uses the analogy of social media to describe how other providers could enter the DLT platform and sell services to users based on who they are and what they do. “It’s not just about adopting technology to change operational process, it’s about changing the business model to pick up the benefits from that.”

Figure 1: Embedding distributed ledger technology

In contrast to today’s networks, distributed ledgers eliminate the need for central authorities to certify ownership and clear transactions. They can be open, verifying anonymous actors in

the network, or they can be closed and require actors in the network to be already identified. The best known existing use for the distributed ledger is the cryptocurrency Bitcoin



Source

Santander InnoVentures, Oliver Wyman & Anthemis Partners



We have a lot to learn from the experience we've gained through T2S and how we get ready for the next big change in the form of distributed ledger technology (DLT)

Swen Werner, Managing Director of Digital Products and Innovation, State Street

#### Current realities

Thankfully, the industry is no stranger to changing operational processes and partnering to deliver benefits to clients. For example, the TARGET2-Securities (T2S) platform for the harmonised settlement of cross-border securities in Europe prompted financial institutions to rethink whether they need direct connections to each market. At the same time, Deutsche Bank, as custody provider, rethought its business and operating models, unbundling settlement from asset services to give clients greater choice. In re-evaluating its options for connecting to Europe post-T2S, State Street chose Deutsche Bank's Settlement Hub in Frankfurt to provide a full service custody solution in core T2S markets, supplementing State Street's direct connection and providing centralised cash and settlement services.

The thinking behind this collaboration was that institutions still required custody services at the local market level for

corporate actions, tax and regulatory compliance, which require on-the-ground expertise to balance the harmonised environment with the local expertise still required. "It's a complex service to deliver and a complex service to consume," Werner explains, "because within a market you have different risk responsibilities in terms of making sure the service is performed according to standards our investor clients expect." State Street is collaborating with others in the industry to help address some of these barriers to a unified capital market for investors. These include differences in national rules relating to the standardisation of corporate actions, beneficial ownership in custody and the domestic withholding of tax regulations.

#### Future foundations

It is these principles and collaborative approaches that State Street is already applying to its exploration of DLT. As it did with T2S, it is leveraging the cash and liquidity expertise of industry partners such as Deutsche Bank to try to enable the settlement of tokenised assets. By working together, it is able to prepare for the future of asset services and new digital assets with a mindset that is open to thinking about what can be done in the value chain to save costs and create new services.

By coincidence, T2S has certain elements that almost brought up ideas for unbundling, allowing providers to separate their securities settlement service from their cash liquidity. These ideas are also relevant for blockchain, which separates core from non-core functions. "If I now move forward to blockchain, digital cash and digital securities makes it even more compelling to rethink what it is that I am good at, and how I would bundle my service provisions differently," Werner maintains.

"What was very interesting as part of the exploration to allow for cash tokenisation was the interaction with Deutsche Bank's cash and securities experts. That made it possible to think of fresh ideas, beyond the day-to-day, about what could be impacted by these DLT and blockchain technologies.

"For the first time ever, we can rethink operating models and business models to create digital services. That's where a lot of our innovation focus is on and where, as an industry, we need to embark on this journey together."



## The Deutsche Bank view

With the industry at an inflection point, one of the biggest waves of change to post-trade is not just technology and data. As many of our clients face fundamental cost pressures and regulatory change, it's about recognising the fact that everybody can work together to deal with this inflection point. And as we look forward to the next few years, whether it's regulation, new entrants or just that the fundamental bedrock of the asset management industry is changing, we need to remember that this is an industry driven by partnerships

Fiona Gallagher, Head of Securities Services, Deutsche Bank

Werner concludes that the industry has a lot to learn from the experience it has gained through T2S and how it prepares for the next big change from DLT. While T2S is about the European currency settlement and certain markets, DLT, in theory, could be any currency and any market, but 24/7, 365 days per year. "So if you take many of the business challenges worked on in T2S and you put them in overdrive, that's how I would view the challenges in the future of markets driven by DLT."

For an organisation with a 227-year history, such forward-thinking approaches to safeguarding and servicing assets seem as relevant today as they will be in the future, whatever form those assets may take.

#### Sources

<sup>1</sup> See *State Street 10-K* (annual report) at <https://bit.ly/2V63ea1>, sec.gov. State Street holds assets under custody and administration on behalf of institutional investors of US\$31.62trn

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The use of  
AI must  
be secure,  
transparent  
and ethical





# Dots model

Artificial Intelligence, or AI, brings the promise of valuable business intelligence from faster data analytics, but only if it can be trusted – making governance and data quality crucial components. David Gleason and Polina Evstifeeva review where controls and responsibility have got to so far, and where regulation and standards can help

While the concept of AI may conjure images of a futuristic world with self-aware and powerful machines outperforming humans across a wide range of disciplines, the reality is that AI is already here, whether it be advising on when to take a turn in the road or recommending the best new Netflix series to suit your taste. Yet, while its use today may be more mundane than those futuristic visions, its impact may be just as astounding – McKinsey predicts that AI will deliver additional economic output of around US\$13trn by 2030 – a 1.2% yearly boost to global GDP.<sup>1</sup>

Across many industries, widespread adoption of AI has the potential to enhance operations and evolve

business models. Turning to global transaction banking, AI can drive:

- Greater payments processing efficiency;
- More accurate prediction of issues within the physical and financial supply chain of trade transactions;
- Increasingly efficient risk management (from assessing credit risk to identifying employees' misbehaviour); and
- More efficient anti-money laundering (AML) and know your customer (KYC) processes.

This should mean a better experience. McKinsey estimates a boost for “front runners” adopting AI of around 6% in additional annual net cash flow growth over the next 10 years. While we may delegate certain



operational processes to AI in banking, we cannot delegate responsibility for it being used in a trustworthy way. This means that the use of AI must be secure, transparent and ethical. How AI works – in terms of how it treats data, and how the risks of unintentional introduction of bias and data breaches are mitigated, for instance – is as important as what it produces in terms of usable information.

Some of these elements are already governed by broader regulations, such as those pertaining to data privacy. Yet assessing the specific risks associated with AI, its control principles and the question of ethics are hot topics for regulators globally. Crucially, AI, as with most technologies, is not limited by borders. It is important therefore that initiatives seeking to monitor and improve its uses and outputs – whether led by industry or regulators – adopt a similarly global approach.

#### Unintentional bias

The power of AI lies in its ability to imitate, and then enhance, human decision-making. The danger of this is that humans hold often unknown prejudices – something that can be amplified by the use of AI. Such prejudice can be introduced at each stage of AI development (see Figure 1), from model development to data preparation to model training.

US\$13trn

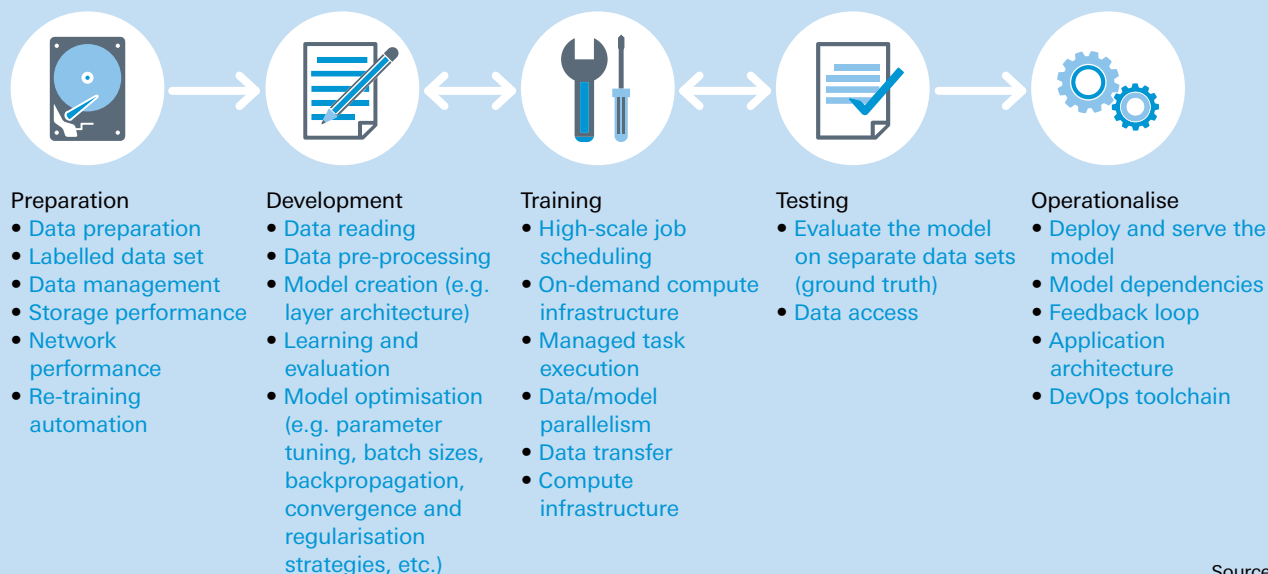
Predicted additional global economic output AI will deliver by 2030

(McKinsey)

An AI model can also be made biased by errors in data entry. A data training set not only needs to be broad enough to be complete and representative, but must also not provide data that will lead the model to make incorrect assumptions. Otherwise it brings the risk of 'overfitting', in which the model unintentionally recreates biases and discrimination from past data to the extent that it negatively impacts performance.

One example: let's imagine taking a data set comprising 30,000 loans, with 20,000 of those performing as expected and 10,000 defaulting. If, when selecting our data set, we pick an unrepresentative

Figure 1: Designing and training an AI model



Source  
Microsoft

That said, it is right and proper that the users of AI systems are ultimately



If we blindly follow the results of AI,  
we are abdicating our obligations  
to exercise (human) care and due  
diligence over our business processes



Without trust – both from the data owners and the AI users – adoption of AI by financial institutions will be slow

responsible for their use and output, irrelevant of the fact that they may outsource some of the development. A good analogy here is the aviation industry. An airline operator will have a long and complex extended supply chain, with different manufacturers responsible for the engine, fuselage, landing gear and wings. But at the end of the day, each airline is responsible for monitoring, inspecting and testing its airplanes. After all, only the airline knows that the plane recently flew in bad conditions, struck an object, or is showing unusual performance indicators. AI in banking is no different: it is only banks that know for what purpose the model is being used, the conditions it is under, and how it is performing. It is therefore reasonable that they assume full responsibility.

#### Existing regulation pertaining to AI

AI lives and dies by the quality and volume of data fed into the system during training. Quite simply, larger and more diverse data sets mean better results. This in itself is not a problem. But what is concerning is that this requirement for huge amounts of data may increase the appetite for its collection which may, in some cases, be completed in a way that customers or businesses may not understand or anticipate. Press reports have covered a steady stream of smartphone applications that harvest data in unexpected ways (geolocation data, screen captures, camera and sensor data, etc.), driven in many cases by this insatiable demand for data.<sup>3</sup>

Of course, AI already falls under current data protection regulations (with GDPR being one example). But regulators across various jurisdictions have recently taken a particular interest in identifying potential risks and impacts specifically brought about by the increased use of AI across a vast array of industries, including financial services. This includes consideration of the ethical use of AI, as well as the design, governance and supervisory implications from its use.

#### Ethical and robust

In particular, the European Commission's High-Level Expert Group on AI (EC HLEG)<sup>4</sup> has been mandated to come up with Ethics Guidelines for Trustworthy AI<sup>5</sup> (published in April 2019) and AI policy and investment recommendations (expected in May 2019). The regulators in Singapore are heading in

Illustrations: Rob Patterson

the same direction,<sup>6</sup> setting out frameworks and guidelines for creating a conducive environment that supports and expands the adoption of AI and data analytics.

While the EC HLEG guidelines are voluntary, we can expect them to inform suggestions on policy and regulation to the EC as part of the HLEG's broader policy work. Moreover, with the guidelines being sector-agnostic, a tailored approach will be required depending on the context in which AI is applied.

The EC HLEG on AI suggests that the trustworthy use of AI should be underpinned by three components:

- Lawful;
- Ethical; and
- Robust.

The EC HLEG notes that each element "is necessary but not sufficient" to achieve trustworthy AI, and that, ideally, all three components should work in harmony. While the guidelines do not explicitly deal with the lawful component, they do offer guidance on fostering and securing ethical and robust AI. But how do we define ethical purpose? A good starting point is the work conducted by the European Group on Ethics in Science and New Technologies (EGE),<sup>7</sup> which proposed a set of nine basic principles for ethical frameworks for AI, based on the fundamental values laid down in the EU Treaties and in the EU Charter of Fundamental Rights. More recently, the AI4People project has surveyed the aforementioned EGE principles, as well as 36 other ethical principles put forward to date, and subsumed them under five overarching principles:

- Beneficence – 'do good';
- Autonomy – 'respect for self-determination and choice of individuals';
- Justice – 'fair and equitable treatment for all';
- Non-maleficence – 'do no harm'; and
- Explicability – 'intelligibility and accountability'.

Figure 2: Technical and non-technical methods to achieve trustworthy AI

#### Technical methods

- Architectures for Trustworthy AI
- Ethics and Rule of Law by design (X-by-design)
- Explanation methods
- Testing and validating
- Quality of Service Indicators

#### Non-technical methods

- Regulation
- Codes of conduct
- Standardisation
- Certification
- Accountability via governance frameworks
- Education and awareness to foster an ethical mindset
- Stakeholder participation and social dialogue
- Diversity and inclusive design teams

Source

European Commission High-Level Expert Group on AI

When translated into concrete requirements to achieve trustworthy AI, the EC HLEG suggests that the development, deployment and use of AI systems should meet seven key needs: human agency and oversight; technical robustness and safety; privacy and data governance; transparency; diversity, non-discrimination and fairness; environmental and societal wellbeing; and accountability. The EC HLEG provides a number of technical and non-technical methods by which these ethical principles can be hard-wired into processes, and by which trustworthy AI can be achieved at all levels of the development process – from the design stage through to deployment (see Figure 2).

Of course, such lists will never be exhaustive, and will need to be adapted to the specific use case in which the system is being used. It should therefore be a continuous process of assessing the processes, identifying requirements, evaluating solutions and ensuring improved outcomes throughout the entire lifecycle of the AI system.

#### Trust and thrive

Without trust – both from the data owners and the AI users – adoption of AI by financial institutions will be slow. Ensuring ethical, secure and robust use of AI is therefore imperative to allowing the technology to thrive. The work by the EC HLEG provides clarity on the regulator's understanding of trustworthy AI in this respect, and can be seen as a positive step in the right direction. Its industry-agnostic approach promises a level playing field for the technology's advancement across all industries – so important in a world where industries are

becoming increasingly interconnected. Yet, at present, there are different jurisdictional regulatory approaches (or, in some cases, absences of approaches) to the development and use of AI. This is suboptimal, and raises the risk of different practices emerging region by region, with a key area of concern being regulatory arbitrage (companies moving AI operations to jurisdictions with lower standards).

Technology solutions are global in design and deployment. In turn, a common, internationally-recognised framework for the production, use and governance of AI is needed to mitigate some of the risks highlighted within this article.

With the availability of large pools of digital data, AI is gaining traction across numerous industries, with many use cases being developed. Financial institutions deal in lakes, not pools, so they have the chance to be at the forefront of this movement.

*David Gleason is Chief Data Officer and Polina Evstifeeva is Head of Regulatory Strategy in GTB Digital, Global Transaction Banking at Deutsche Bank*

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<sup>2</sup> See <https://bit.ly/2TCXPqY> at oracle.com

<sup>3</sup> See Forbes commenting on Facebook at <https://bit.ly/2Hk3s6V>, forbes.com

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<sup>5</sup> See <https://bit.ly/2IjQYf6> at ec.europa.eu

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<sup>7</sup> See <https://bit.ly/2TKeJml> at ec.europa.eu



Larger and more  
diverse data sets  
mean better results

A scenic photograph of the Golden Gate Bridge in San Francisco at sunset. The bridge's iconic orange-red towers and suspension cables are silhouetted against a vibrant sky of pinks, oranges, and purples. The water below reflects the warm colors of the sky. The bridge spans a wide bay, with hills visible in the background.

# Building bridges

Dora Liang Chai of Alipay US provides an example of cross-cultural connectivity in delivering financial inclusion through technology

## Tell us how it all started...

I grew up in Hangzhou, in Zhejiang Province, and went to Hangzhou Foreign Language School, famous in Southern China for alumni that include diplomats and academics. Learning foreign languages is a core part of the curriculum and this made us far more aware of the world outside our immediate environment. It included an intensive six-year course in English. I saw my destiny as somehow providing a bridge between Mainland China and the international markets.

This was why I decided to do a degree in international journalism, and went on to PricewaterhouseCoopers to train as an internal auditor. By 2006, I was working for a range of Chinese internet companies at a time when Chinese stocks were doing well on the NASDAQ, so I got to see internet technology from a financial perspective. I joined Alibaba in 2009 as an internal auditor, as the role was based at the headquarters in Hangzhou and I wanted to spend more time with my family.

## What made you move from internal controls to corporate affairs?

After 10 months of analysing fixed assets and internal control documents, I volunteered to be a Special Assistant to the Head of Public Relations for Alifirst. This was a one-week customer event initiated by [Alibaba founder] Jack Ma where our customers and partners



**Profile:** Dora Liang Chai  
**Current role:** Business Development Manager, Alipay US  
**Former roles:** Head of Overseas PR, Alipay; Senior Auditor, PricewaterhouseCoopers  
**Studied at:** Haas School of Business, University of California, Berkeley (MBA), Beijing Foreign Studies University (BA, International Journalism)  
**Recent highlights:** Selected for the Money20/20 Rise Up programme 2018;<sup>2</sup> launched Alipay's first partnership in Canada, and in 15,000 taxis in North America

came to Hangzhou from all over the world to witness our progress, celebrate our success and exchange ideas. I dealt with reporters from all regions, and my journalist training helped me see the company from an external perspective. I worked with senior management and remained in corporate affairs for a further 2.5 years, getting involved in a lot of regional partnership launches in Hong Kong and Taiwan.

## And then you gave it all up to go to business school?

This was actually a very difficult decision, but I wanted to further my own personal development and was accepted by the Haas School of Business at the University of California, Berkeley on a full-time MBA programme. I knew the group was planning to go public and it would have been very exciting to have been part of the PR team during one of the largest IPOs.<sup>1</sup> But I made the right decision – I wanted to work in technology and Berkeley is perfect preparation for Silicon Valley. During the two-year course I stayed in touch with Alibaba because I had trained as a simultaneous interpreter. While the IPO was going on, I provided translation support for the Alibaba senior management team.

## Did you notice a difference in attitudes to Alibaba after the IPO?

Yes. Before we went public, when I told my business school classmates that I worked for

## Key facts: Alipay

**Established:** 2004. Alibaba established Alipay to address the issue of trust between online buyers and sellers. Buyers were unwilling to make payments before receiving and inspecting their purchases, and sellers were unwilling to ship the products until they were assured that payment was forthcoming. The lack of trust posed a major challenge for the development of e-commerce in China. Alipay introduced its escrow service as a solution to this problem

**Company structure:** Alipay was spun off from Alibaba Group in 2011

and Ant Financial was established in October 2014 as Alipay's parent company. Ant Financial is an independently-managed and operated business and a related company of Alibaba Group

**Business model:** Ant Financial has developed online platforms to provide a wide range of products and services that cover payments; loans; third-party insurance and wealth management focussing on the financial needs of small businesses and individuals; and technologies and services meeting financial institutions' digital needs

**Holding company:** Ant Financial, founded in 2014 (a related company of Alibaba). The company website says: "The ant is a symbol of a small but tenacious force in the natural world. Ants may be small, but they have limitless strength when they work together. The ant also symbolises our trust in and reliance on small and microenterprises." It handles more than half of China's US\$15.5trn payments market

**Registered users (along with global partners):** One billion

Alibaba, they didn't really get what it was or what we were, guessing at something along the lines of Amazon with PayPal and a bit of eBay. By the second year of the course, I was recognised as the Alibaba person. It was at an all-hands meeting with US staff celebrating the successful New York Stock Exchange (NYSE) IPO that our Chairman and then CEO, Eric Jing of Ant Financial, invited me to return to the company in a US-based role.

### Back to bridge-building, then?

Absolutely. I landed a business development role at Alipay to connect the company with external partners and merchants, and started in May 2015, once I had finished my MBA. Having studied in the US I had a better understanding of how the Western business world operates. It is hard for Chinese companies to globalise, as they have to deal with a lot of cultural differences. I saw myself as helping US companies to access China and Chinese companies to explore international opportunities.

### What is your impression of how the payments market – and Alipay – has changed since you returned?

When I first joined Alipay, we were just doing online payments. But in China everyone pays with phones now – to the point where, if I couldn't pay with my

digital wallet when I go home, I don't know what I would do! Now we provide offline payments, money market funds and the means to earn interest from balances, however small. I am really impressed with the company's speed of innovation and product development, widening offerings into adjacent product lines and leveraging the payment infrastructure. Before, we did online payments so that Chinese consumers could buy from overseas merchants. Now we are working on getting Alipay enabled by stores such as Michael Kors and Coach, as well as the shopping malls.

### You talk about being a bridge between East and West. How do you navigate the business culture differences?

A lot of this is about being tactical in each situation. One difference is the way business meetings are handled. In China, people hold meetings to improvise and explore ideas in more of a free-flow structure. We diverge and then converge. In Western culture the structure is usually clear in advance, with bullet-pointed agendas and action points arising. At Alipay I have status review meetings with our merchants and acquirers (partners who help Alipay source merchants) to touch base on the pipeline. Some pipelines are mature and healthy, others are new and need to build.

### You mentioned financial inclusion and a level playing field. How does Alipay deliver this?

Our CEO has said he wants to make sure that a 70-year-old grandma can get the same level of service as a premium bank customer. We are dedicated to bringing small and beautiful changes to the world. So we offer a utility payment service. Before, if you wanted to pay your gas, water or electricity bill, for example, you had to get a slip of paper, go to a bank and queue up. So our users can connect their digital wallets with different sources – we provide convenience so that everyone can access payment services. We are not about disruption but financial inclusion – and helping people to invest as well.

### Does this translate into the B2B arena?

Yes, through our responsible technology we are here to provide consumers and small businesses with safe and convenient inclusive financial services. We do this via our MYbank offering.

#### Sources

<sup>1</sup> Alibaba's IPO on the NYSE in September 2014 resulted in market capitalisation of US\$230bn

<sup>2</sup> See <https://bit.ly/2E830aQ> at [us.money2020.com](https://www.usmoney2020.com). For more about the Rise Up program, see the *flow* article 'Balancing the board' at <https://bit.ly/2tWouja>, [cib.db.com](https://www.cib.db.com)

# Frontline economics

In an environment where banking products are becoming increasingly commoditised, providers seek to differentiate their offerings with outstanding client experience. But in a world of self-service and chatbots, how does the personal touch play out? Stefan Hoops shares his perspective

When Jan Carlzon joined Scandinavian Airlines as CEO in 1981, he changed the focus from technical operational excellence to client focus, because he believed that the only true assets are satisfied clients, all of whom expect to be treated as individuals.

In his best-selling management book, *Moments of Truth*, he explains how the first 15-second encounter between a passenger and the frontline people, from ticket agent to flight attendant, sets the tone of the entire company in the mind of the client. "We used to fly aircraft, and we did it very successfully. Now we have to learn the difficult lesson how to fly people," he reflected at the time.

More than three decades later, the same principles apply – client satisfaction determines the share of market wallet and profitability.

## Consistency of client journey

In a transaction-based business, profits are driven by good client experiences, a point made time and again in research and taught in professional marketing education. Banking is a mature market, and we are not alone in shrinking our client perimeter. The adage from *Principles of Marketing* that in such a market "it might cost five times as much to attract a new client as to keep a current client happy,"<sup>1</sup> is more pertinent than ever. Clients like consistency of experience, something the authors of McKinsey's 2014 *Customer satisfaction survey: Who's up and who's down*,<sup>2</sup> reinforce when they state that companies with a "close and personal connection with customers relative to their

competitors do better". They add: "This may explain why credit unions rate comparatively highly in the banking industry and why small banks outperform large banks."

Further, there is a direct correlation between client experience and profit growth. Forrester research published in June 2016 demonstrates how customer experience (CX) leaders grow revenue faster than CX laggards. This conclusion comes from analysis of the US-based Forrester Customer Experience Index, which was built from 2010 to 2015 using data from Securities and Exchange Commission filings: "When we compared the total growth rate of all CX leaders to that of all CX laggards, we saw that the leaders collectively had a 14 percentage point advantage."<sup>3</sup>

And just to drive the message home, Medallia's Peter Kriss, writing in the *Harvard Business Review*, reveals that customers who had the best past experiences spend 140% more compared to those who had the poorest past experience.<sup>4</sup>

## Personal connection

At this point I thought I would share our approach to client experience at Deutsche Bank. Of course, we are not the only financial institution that operates a service-based structure, but I feel it is important to explain why it works – for both this bank and our clients – and concurs with management research.

Everyone in this organisation is either directly or indirectly linked to service,

Figure 1: Customer experience drives sales



with 40% of staff in our business lines working in a service-related position. They are vital sources of intelligence about our clients and they are there to make it easier for clients to do business with us. Our personal touch in service provision is often cited by clients as a key differentiating factor when choosing a banking provider.

#### Myriad moments of truth

In our Cash Management business alone, we complete around 4,500 client implementations a year and cover approximately 900,000 logged service tickets, which adds up to around 1.5 million client interactions. In addition, the 150 service reviews per quarter conducted with our top-tier clients provide intelligence on processing patterns, and on how client enterprise resource planning and treasury management systems are behaving. It is that very first moment of truth when becoming a client for the first time during the product/account onboarding process that is so crucial. The same applies where the client has an issue or a business event and needs our services. A good experience will be shared with peers, but a bad one will take a long time to be forgotten.

We observe the same facts in Trade Finance. Dealing with documents from clients and third parties right along the transaction journey, from origination to payment, opens up many 'moments of truth' for client interaction. The touchpoints arise from the significant level of manual processing still in the system, despite the digitalisation progress so far. With €59bn of documentary credits, collections and guarantees on our books, this is a huge opportunity to interact positively.

Fast turnaround is also key to the client service journey. Feedback from our trade finance surveys feature responsiveness in the top five aspects of service most valued by clients, along with product/solution availability and accurate transaction execution. To emphasise timely service delivery, Deutsche Bank's Trade Finance service staff operate according to the aspirational motto *Heute gebracht – heute gemacht*, which translates as the ambition to deliver defined products and services on the same day.

Given all of this, we see our service professionals as gatekeepers to a wealth of information. Aggregated and benchmarked, this information in turn can deliver business value back to our clients. For example, we can point out how often one makes a certain type of payment in Brazil, or suggest to another an optimum guarantee structure.

#### Humans and machines

In a world of artificial intelligence where Facebook knows what you want to buy before you do, we keep a close eye on the balance between the convenience of smart systems and automation, and where interaction and a personal touch is needed.

Around 90% of the issues our clients call us about could be resolved on a self-service basis using a real-time dashboard. But where is the scope for a warm and personal relationship if the current raft of touchpoints disappear? Do we run the risk of disintermediation if even service itself is commoditised? Should we worry about clients being too self-sufficient?

Of course not, is the answer. But personal interaction and a well-thought-out customer journey are key. A client can be pointed to a self-service route, perhaps with telephone assistance while learning a procedure – such as setting up a new account – for the first time. Or they can take another direction where a consultant is at the wheel to get them to where they need to be. In our Transaction Banking business we operate a hybrid approach, not unlike that seen in the retail space with 'click-to-chat' options (the sense of a person at the other end is key) that can then progress to a call or possibly a site visit, depending on the problem.

This is finding its way into the corporates space and presents huge opportunities – something we discovered in our Securities Services business when we launched our chatbot 'Debbie' to provide client trade status information quickly, securely and accurately in June 2018.<sup>5</sup> Similar opportunities were presented by innovations such as eVault, a secure digital repository for the exchange of documents, in our Trust & Agency Services business. This advancement to our document custody platform<sup>6</sup> is already helping Deutsche Bank to speed up the lending process, enhance

efficiency and deliver a much-improved, superior service to clients.

#### From the flight deck

Our service reviews tell us that we are good at getting clients into the air all the time, but need to get better at teaching them to direct their own flight paths. With smart processes, intuitive self-service and bots at hand to deal with 90% of routine enquiries, we hope to not only turn our clients into service ambassadors, but help them future-proof their businesses too.

*Stefan Hoops is Head of Global Transaction Banking at Deutsche Bank*

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<sup>4</sup> See <https://bit.ly/1xShNeD> at hbr.org

<sup>5</sup> See <https://bit.ly/2IUWoNP> at cib.db.com

<sup>6</sup> See <https://bit.ly/2IUicVe> at cib.db.com



Everyone in this organisation is either directly or indirectly linked to service

# A cracking idea

If you are one of the people putting up with a cracked phone, help is at hand. Neil Jensen reports on how economics graduate Josh Babarinde came up with the idea of a phone repair clinic to develop the skills of young people with poor employment prospects, as part of Deutsche Bank's *Made for Good* programme

If there's a product that encapsulates the throwaway society, it is undoubtedly the smartphone. Visit a recycling or waste centre and you'll find mountains of them, a veritable elephants' graveyard of discarded technology with nowhere to go. The plain truth is, we are all sitting on technological products that are not designed to last forever, either due to innovative advances or business model savviness making them obsolete, or because they are just too difficult, or too expensive, to repair.

According to GSMA (the global trade body for mobile network operators), there are over five billion unique mobile subscribers around the world and by 2025, mobile internet penetration will reach 61% of the global population and 86% of unique subscribers.<sup>1</sup> That also doesn't account for the orphaned phones lying in drawers and cupboards. It is a frightening prospect that the old saying, "you're never more than six feet from a rat" could easily apply to mobile telephones.

## Screen test

Phones are fragile creatures; just consider the material the screens are made of and the effect that dropping one can have on its most important components. And, given that smashing that screen can often mean a phoneless period for the owner of the device, it would seem only natural that there's a space in the market for someone to

repair phone screens in a quick and stress-free manner.

That's where Cracked It comes in. Founded by Josh Babarinde, a graduate of the London School of Economics (LSE), Cracked It aims to make the process of repairing phone screens a seamless operation that removes the need to send devices away for weeks on end. What's more, Josh's creation also serves a big social purpose, creating jobs for young people who have had a difficult path in life.

First of all, why phones? "I'm no techie," says Josh, "but I came to the conclusion that the mobile phone is one of the most vital personal

possessions in the world today. And they get damaged all the time – every two seconds, a phone is broken somewhere in the world. This is a device that the user, on average, swipes 2,617 times a day. Many people, rightly or wrongly, just cannot live without them."

According to Mous, a phone accessory company, a third of people with a smartphone in the UK are walking about with a broken or damaged device. At the same time, 76% of people with a broken phone don't get it fixed or give up the quest during the process.

## Force for good

Josh wanted to create a company that had a big social conscience, doing something that there was a compelling need for. His background was far removed from technology or fixing phones, however. After graduating, Josh worked as a parliamentary assistant in London. "I grew frustrated by the detachment that government has from the real issues, so I started to volunteer as a youth worker, coaching young offenders and people who had been left behind in society," he recalls. "All too often, youngsters who feel they have been excluded just go for the low-hanging fruit – perhaps the only hanging fruit they have – and turn to crime. I wanted to change that."

The Cracked It mission is to "use smartphone repair to create opportunities for at-risk youth to break down their dismissive attitudes to

33%

of UK operational phones are broken or damaged

([www.uk.mous.com](http://www.uk.mous.com))

employment and enable them to realise that income, belonging and self-worth are gained through legitimate work”.

Josh had his goal, but had yet to find the idea to deliver the initiative. “I considered a few options, but eventually I stumbled across phone repair. I wanted a business that had some legs – one that allowed young people to acquire some skills and also earn money. It needed to be time-efficient as well. For example, coding was one idea, but it takes 180 hours for people to become proficient.” The whole point is that the young person uses those skills to help them transition into employment – rather than crime.

Deutsche Bank got to hear of Josh’s idea through the London-based Corporate Social Responsibility (CSR) team. Nicole Lovett, Head of CSR UK, explains: “Josh came to us as a winner of the Social Enterprise category at the Centre for Social Justice 2018 Awards, which the bank sponsored as part of its CSR *Made for Good* social enterprise programme. We wanted to do more with them than just giving a £10,000 cash prize, so we met and discussed ways we could support him. We liked his energy, commitment and his genuine desire to help people who may not have had the best start.” The repair service was launched at the bank’s Winchester House, London office on 25 October 2018 and has been very popular, with over 140 employees making use of the services to date. Nicole continues: “In addition, we connected Josh to employees across the bank who could help him with the support he needs to run the business.”

Cracked It has trained around 160 young people over a three-year period and normally has a team of 12 at any one time. “We aim to train them to fix a phone in a period that takes between 15 and 60 minutes,” he says, “and, on average, a repair costs £50.” Customers also receive a three-month warranty on their fixed phone.

Although based in Dalston, just two-and-a-half miles from Winchester House, Cracked It usually goes to live workplaces to set up improvised clinics to repair phones. “Employees leave their phones with our team for 90 minutes. Deutsche Bank’s response has been fantastic. People are genuinely enthused and the bank seems very good at engaging with staff to get them involved,” says Josh. “We’ve been bowled over.”

The *Evening Standard* newspaper seems to agree, calling the service, “London’s best



## We want to contribute to the reduction of reoffenders by giving them something to believe in

Josh Babarinde, CEO, Cracked It

iPhone fixers”. Other backers include PwC, EY, The Prince’s Trust and the law firm Allen & Overy.<sup>2</sup>

Deutsche Bank isn’t just giving Cracked It the chance to find clients from its London office, but is also providing mentors and HR advice to enable Josh to take the company to the next stage.

Nicole adds that the reaction from staff has been outstanding. “Within nine minutes of our email advertising the first clinic, all appointments were booked, and we have had excellent testimonials from people who have had their phones repaired.”

It hasn’t all been plain sailing for Josh and his colleagues; many potential investors didn’t take his idea too seriously. That changed with Deutsche Bank’s CSR team providing a platform (and repair service space) to help convert the seemingly altruistic cause into a serious venture. “Some thought I was just a little crazy, but Deutsche Bank’s involvement provided some inspiration,” insists Josh. “The bank saw the merit in the ideals we were trying to promote.”

### Crime prevention

At the moment, London is going through something of a crime wave among young

people. The statistics make for worrying reading; 85% of offenders are under the age of 30 and this same demographic group is four times more likely to be the victim of violent crime. However, Cracked It’s transitional employment programme has been doing its bit by helping some of them into full-time roles. Twenty-one-year-old Jake was referred to Cracked It by a prison mentoring programme. After serving a six-month sentence for assault, he joined Cracked It for up to two days a week in various roles. Jake has not reoffended since engaging with Cracked It.

“We want to contribute to the reduction of reoffenders by giving them something to believe in,” says Josh. “It has been so satisfying to be able to use something from your own head and heart to benefit lots of different types of people and devote your working life to something that empowers vulnerable young people. It has all been so exhilarating and intellectually stimulating.”

*Neil Jensen is a freelance financial journalist and a former Co-Editor of flow*

### Sources

<sup>1</sup> GSMA, The Mobile Economy 2018. See <https://bit.ly/2K6AFo6> at gsma.com

<sup>2</sup> See [crackedit.org](http://crackedit.org) for further details of partner workplaces



Cracked It employees with Josh Babarinde (centre)



**T**he Commonwealth is a diverse family of nations, including five G20 members and some of the world's smallest and poorest countries. Fourteen of our members belong to the category of Least Developed Countries (LDCs). Today, these countries face a set of unparalleled global challenges with the potential to seriously undermine their development aspirations.

The rules-based global trading system, which has helped lift millions of people out of poverty, is at risk from rising protectionism and unilateralism. The recent widespread flooding in Malawi and Mozambique is a stark reminder that LDCs are extremely vulnerable to climate change, yet have the least adaptive capacity. And, as the world moves towards greater digitisation and a data-driven Fourth Industrial Revolution, it is imperative to close the global digital divide.

#### LDC export goals

The 47 LDCs are home to 12% of the world's population, yet they account for less than 2% of world GDP and about 1% of global trade in goods. This presents a challenge to the global community with regard to the attainment of the United Nations Sustainable Development Goals (SDGs). As it has been for decades, the Commonwealth Secretariat continues to be at the forefront of advocacy on behalf of our least developed member countries for more inclusive and responsive international support measures, especially on trade.

The 2030 Agenda for Sustainable Development and the Istanbul Programme of Action for LDCs share the target of doubling the LDCs' share of global trade by 2020. We are way off course to reach this target – it requires LDCs' exports to increase by nearly 20% from current levels.

The structural transformation of LDC economies is a key challenge. Their exports tend to be concentrated in a narrow range of products; for some, minerals and commodities, for others, consumer goods. Poor economic infrastructure raises transport and logistics costs, which further impairs productive and trade capacities and competitiveness. The private sector is often underdeveloped and, where exporting does become feasible, smaller firms often lack access to vital trade financing facilities.

#### Supporting SDG achievement

If the LDCs are to achieve the SDGs, they need a global trading environment that supports and enhances their participation in world trade. A range of international support measures exist. For example, LDCs benefit from the non-reciprocal trade preference schemes of Canada, the EU (Everything but Arms status), Japan and the US, while China and India also offer duty-free treatment for a range of products. However, many LDCs struggle to take advantage of these opportunities because of the stringent standards (especially covering food safety and animal and plant health) and other

regulations required to access these markets. While the World Trade Organization (WTO) has agreed to provide preferential treatment to LDC services and suppliers, this is not yet being effectively implemented.

The Commonwealth is supporting our LDC member countries in several ways:

1. We are helping them expand and diversify their trade. In 2018, our Heads of Government adopted the Commonwealth Connectivity Agenda for Trade and Investment. They set the goal of expanding investment and boosting intra-Commonwealth trade to US\$2trn by 2030.
2. The Commonwealth Secretariat and the WTO Enhanced Integrated Framework (EIF) are working together to deliver more effective and targeted Aid for Trade to build LDCs' productive and trading capacity, with priority given to women's economic empowerment.
3. The Commonwealth has called for rules-based global trade to be strengthened and protectionism to be resisted. According to one estimate, the loss of exports LDCs incurred as a result of protectionist measures between 2009 and 2013 was US\$264bn. Removing remaining trade restrictions against LDCs would greatly improve their economic prospects.
4. Sixteen LDCs are expected to graduate out of this category by 2024, including our members Bangladesh, Solomon Islands and Vanuatu. When LDCs graduate, they lose access to many support measures. The Commonwealth Secretariat, in collaboration with the WTO, EIF and the UN Conference on Trade and Development, is working to ensure that the transition process is smooth and does not exacerbate economic vulnerabilities.

To achieve the SDGs, innovative development approaches are needed that deliver peace, prosperity and sustainability. As home to a third of the world's population, with many of the fastest-growing economies and half of the top 20 emerging cities globally, Commonwealth connection provides a blueprint for cooperation and pioneering action linking nations in every continent to tackle 21st-century challenges. From climate change and smart cities to harnessing the blue, green and digital economies, we offer both templates and practical experience for charting new pathways towards truly inclusive and sustainable development.

*The Rt Hon Patricia Scotland QC is Secretary-General of the Commonwealth*



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Metinvest US\$2.36bn PXF/Bonds (European Commodity Finance Deal of the Year)

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Hangzhou Zhengcai Holding Group US\$160m prepayment (APAC Commodities Finance Deal of the Year)

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Petróleos del Perú (Petroperú) US\$1.3bn export credit agency financing

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