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    - Best Domestic Custodian, India (10th consecutive year)
    - Best Domestic Custodian, Indonesia
    - Best Domestic Custodian, Malaysia (2nd consecutive year)
    - Best Domestic Custodian, Philippines (2nd consecutive year)
    - Best Domestic Custodian, Vietnam
    - Best Domestic Custody and Fund Administration Mandate, India – Motilal Oswal Asset Management Company
  - Leadership award
    - Custody Leadership Award Asia Pacific – Anand Rengarajan, Head of Securities Services

- Global Investor Magazine Sub-custody Survey 2019 Winner (country awards, June 2019)
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- The Asset Triple A Asset Servicing, Institutional Investor and Insurance Awards (June 2019)
  - Corporate Trust Mandate of the Year – Bayfront Infrastructure Capital
Transforming tomorrow

With many of the world’s leading economies in defensive mode and both political and economic drawbridges being raised, it’s a good moment to remind ourselves of the merits of open minds and creative thinking. These are qualities that will continue to guide corporates and financial institutions through the course of the new decade.

The latest issue of flow deliberately sets out to offer examples of such qualities; as epitomised by the subject of our cover story, Bank of China’s Yunfei Liu. An openness to learning and an ability to adapt in the international field of trade services have steered her career progression. Elsewhere, the regional focus reviews the Nordics and notes the proud history of cooperation and joint innovation between its member countries, which is also reflected in their payments and trade finance interactions.

Open minds and creative thinking are the foundations for hyperconnectivity as the industry delves into the opportunities and challenges created by mass digitisation and data-driven relationships. In an interview with SAP’s Steffen Diel, the company’s digital boardroom is presented as the latest example in a series of innovations by the group, while a feature on Swedish audio media phenomenon Spotify highlights how financial services is not the only industry being transformed by digitisation.

We hope you enjoy the wide variety of topics offered within this issue.

Stefan Hoops
Head of Corporate Bank
“Clients need the full package, not just trade finance, so there is a long way to go and there are always new things to learn.”

Yunfei Liu, Deputy General Manager for Global Trade Services, Bank of China

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“The lifetime value of being on the platform and getting engagement makes it sensible for us to keep growing”

Patrik Hallerström, Treasurer, Spotify
Regional update
Europe, Middle East and Africa

The summer has seen attention shift away from trade wars and politics, with the eurozone refocusing on monetary policy. “After a decade of unprecedented policy actions, the world economy still struggles to break free and return to normalcy,” note analysts. “In the absence of a plan B, the world’s major central banks are set to engage in simultaneous policy easing yet again, with rate cuts likely in the US, China and Europe.”

The European Central Bank (ECB), which reduced the region’s central bank deposit rate to -0.4% in 2016, made no change at its 25 July meeting, but it indicated an easing bias in its forward guidance. A further 10bps deposit in September, and again in December, is seen as the likely scenario. “Asset purchases could be restarted in the euro area before [the] year-end as well,” analysts suggest.

ECB President Mario Draghi will step down in October after an eight-year tenure and analysts have welcomed the choice of successor. “We are highly confident that Christine Lagarde will be a historically successful ECB president at a key juncture,” they comment. “She has a strong track record of consensus-building and pragmatic leadership, surrounding herself with experts and proving to be unafraid of self-criticism and course correction.”

For the CEEMEA economies, Brexit uncertainty and pending risks from the US approach to EU producers do not seem to have had an impact, with analysts noting that recent dynamics in Poland, the Czech Republic, Russia and Ukraine “have paved the way for a general improvement in the region’s fiscal balances during H2 2019”.

United Kingdom
Following a month of campaigning, Boris Johnson was confirmed as the new leader of the ruling Conservative Party and succeeded Theresa May as Prime Minister on 23 July. He has stated, note analysts, that he “intends to renegotiate the Withdrawal Agreement with the EU27, although the EU position is unlikely to change materially”. At the time of writing, UK parliamentary events in September suggest that a 31 October 2019 exit looks less likely.

After Q1 2019 GDP rose by 0.5% quarter-on-quarter, Q2 saw a -0.2% contraction, the first since the end of 2012. Analysts retain a 2019 growth projection of 1.2%, adding “that said risks from either a full-blown trade war or a no-deal Brexit are rising. Hence, we see some downside risks. We keep our 2020 and 2021 growth projections intact at 1.3% and 1.1% respectively.”

Germany
“A technical recession” is now a reality, with analysts forecasting a third quarter of GDP contraction – Q2 fell by 0.1% and Q3 looks set for -0.25%. “The downturn continues,” they say, noting the weak pulse of the German automotive industry, with global car demand not expected to pick up before the end of 2019. The chemical industry is also struggling – structural problems such as German energy and environmental policies having taken their toll. House prices and rents are still rising strongly, with no end in sight to the property boom. Unsurprisingly, corporate lending in Germany continues to expand vigorously, with outstanding
The Ukraine economy grew 4.6% yoy in Q2 2019

 volumes climbing 5.6% year-on-year (yoy). “The credit boom is the strongest since 2000 and broad-based, even though a surge in short-term loans is a warning signal,” note analysts.

Ukraine

The scale of President Volodymyr Zelensky’s victory in the April 2019 parliamentary elections was “a positive surprise” for markets in that it exceeded expectations. At its 18 July rate meeting, the National Bank of Ukraine raised economic growth forecasts from 2.5% to 3% for 2019, and from 2.9% to 3.2% in 2020, based on stronger domestic demand, more favourable terms of trade and expectations of a larger harvest of grain crops. On 15 August, the State Statistics Service of Ukraine reported that the economy grew by 4.6% yoy in Q2 2019 from 2.5% in Q1. However, following a visit of the International Monetary Fund (IMF) to Ukraine in May 2019, IMF reforms such as eliminating gas subsidies and the possible lifting of the moratorium on land sale will, indicate analysts, “test the new government’s commitment to the IMF relationship”.

Saudi Arabia

According to analysts, growth in the Kingdom will be dependent on non-oil activity this year, while in 2020 it will reflect the “strong desire to support the OPEC+ alliance and to avoid a fall in oil prices”. Nevertheless, non-oil growth should continue to rely on an expansionary fiscal policy and to receive extra support from improved liquidity conditions on the back of the “dovish tilt” by major global central banks. The fiscal deficit is expected to persist due to falling oil revenues, while net FX outflows will lead to a marginal fall in total reserves. However, given the large financial buffers, the exchange rate peg is expected to maintain an important anchor for financial and price stability. Zero growth is now projected for this year against 1.6% previously, with a downgrade from 1.9% to 1.3% predicted for 2020.

The shift in the Saudi oil production target to the 2010–2014 average of Organisation for Economic Co-operation and Development (OECD) countries’ oil inventories should (if taken seriously) “normally be bullish”, say analysts. However, they note, “OECD inventories through April were substantially weaker than forecast”. They expect crude oil prices to be capped by weaker demand growth, putting pressure on OPEC to further limit output in 2010, and “falling production costs”.

South Africa

Green shoots are appearing, but current conditions are worsening. Analysts note that “forward looking indicators have been improving at the margin, but individuals seem to be feeling worse about the economy”. However, business cycle data – “not necessarily traditional South African Reserve Bank (SARB) leading indicators” – turned “meaningfully positive” in Q2, such as growth in the money supply; raw material inventories; unit labour costs; and the terms of trade. The SARB business cycle indicators suggest that the worst part of the downturn was reached in Q3 2018, although “more data is needed to assess whether the cycle is actually improving”. For example, average wage settlements in Q2 2019 were 6.9% against 7.3% a year earlier. In the meantime, “the squeeze on corporate profits from rising unit labour costs and moderation in demand may be coming to an end”, and nominal GDP growth forecasts have been revised upwards from 5.4% in both 2019–2020 and 2020–2021 to 6.1% and 6.9% respectively.

Turkey

Turkey’s Central Bank, under newly appointed Governor (and former Deputy Governor) Murat Uysal, cut its benchmark one-week repo rate by a larger than expected 425bps, from 24% to 19.75%, on 25 July, marking the first easing in more than four years. The rate was increased last September, in response to a sharp fall in the lira; this pushed inflation above 25%, but the current rate is below 16%. Analysts comment: “Taking into account the expected decline in headline inflation – to below 11% yoy in September/October before rising again to 15% through year-end – a front-loaded and deeper easing cycle cannot be ruled out anymore, particularly given strong external tailwinds and rising easing bias across the globe.”

Note: Past performance is not indicative of future returns. Forecasts are based on assumptions, estimates, opinions and hypothetical models or analysis which may prove to be incorrect

Sources

Discounting supply shocks to food prices, there are few, if any, concerns over inflationary pressure that would stand in the way of monetary easing. However, there are other headwinds. The US Treasury has designated China a currency manipulator, following the Chinese yuan (CNY) breaking through the threshold of seven to the United States dollar (USD) on 5 August 2019. This declaration may not only be aimed at justifying additional countervailing tariffs against China, but also sends a clear warning against any significant weakness in Asia FX against the USD, effectively posing a new constraint on the region’s monetary stimulus. If interest rate cuts lead to weaker currencies against the USD, the US will expect central banks to intervene to reverse that tendency, nullifying the effect of the rate cut. This creates upside risk to the interest rate outlook as it may make it harder for central banks in the region to cut rates, thereby shifting the burden of growth support to fiscal stimulus.

China
Trade tensions with the US are reflected in China’s Q2 economic growth rate slowing to 6.2%, the lowest figure since 1992. This is down from 6.4% in the first quarter, and is partly driven by weaker consumption. Worse still, high frequency data points to further weakness in H2.

Industrial production in July was confirmed at 4.8% yoy, which was well below expectations of 6% and the weakest reading since 2002. Retail sales meanwhile came in at +7.6% yoy (versus +8.6% expected).

There was a smaller miss for fixed asset investment, which came in 0.1% lower than expectations at 5.7% yoy, while the surveyed jobless rate rose 0.2% from June to 5.3% to match the February high. Analysts expect further policy support, although a major move (weakness in the CNY) is unlikely, as trade talks continue. Moreover, a significant depreciation of the CNY is neither in China’s interests nor is it being suggested by external balance. For example, China’s current account surplus (in 2019–2020) is likely to be larger than before (2017–2018) rather than to move into deficit.

Deutsche Bank commodities analysts met with 25 entities right along the supply chain in June 2019, including infrastructure, property and auto companies and steel, aluminium, copper and cola producers as well as policymakers. They noted that “a divergence between positive construction-led trends, largely levered to government spending on infrastructure and property developer credit access, versus sluggish consumer-led sectors, where a material stimulus (subsidy incentives) or a confidence-boosting trade deal were seen as key [to] a revival in sales”.

Vietnam
Vietnam is an integral part of the global tech supply chain, rendering it vulnerable to any shocks to its trading partners; rising trade tensions between South Korea and Japan pose meaningful risks to Vietnam’s growth. At the same time, while it has been identified as the likely favoured relocation destination for manufacturing firms from...
The ongoing China–US trade war has led to a slowdown in growth

Rising risks to the global trade order threaten Vietnam’s long-term growth

China, analysts say that “Vietnam’s capacity to satisfy increased interest is in question, especially with respect to skilled labour”. Although rising risks to the global trade order threaten Vietnam’s long-term growth agenda, analysts expect its authorities to “prioritise stability over growth, continuing with their fiscal consolidation efforts and cleaning up the banking system further”. The government looks set to promote strategic foreign investments, as well as recapitalise the banks and selectively adopt Basel II as it strengthens the country’s institutional and regulatory framework. Meanwhile, the State Bank of Vietnam is likely to guide market rates lower while keeping policy rates steady.

India

Narendra Modi’s second term as Prime Minister following May’s election victory was followed by a statement that he sees the goal of making India a US$5trn economy by 2024 as challenging, but achievable. Since Deutsche Bank analysts highlighted in 2017 how India could achieve this – along with other milestones the country should target for 2025 completion – much has changed, but their revised macro assumptions reveal the target is still very much possible. For this to happen, they add, real GDP growth of 7.1–7.3% needs to be maintained through the forecast horizon (leading to nominal GDP growth of 11.5%) and the Indian rupee/USD exchange should remain stable in the 71–72 range. This is doable, they say, “with a little bit of support from the global economy”. Other 2024–2025 milestones include: doubling of per capita income to US$4,000; public debt/GDP reduced to 60% from 68−69%; doubling gross foreign direct investment flows to nearly US$100bn; and increasing gross FX reserves to US$600bn from the current US$424bn.

The Reserve Bank of India made a large repo rate cut of 35bps, to 5.4%, on 7 August. The fourth reduction since the start of 2019, it took the key lending rate to its lowest level in nine years. India is attempting to revive economic growth, which slowed from 6.6% to 5.8% in Q1 2019 – the lowest rate since 2014, which saw the country lag China for the first time in more than a year. Future rate cuts are anticipated by analysts, but this depends on the non-bank financial sector’s recovery prospects.

Thailand

Also on 7 August, the Bank of Thailand (BOT) cut its policy rate by 25bps, to 1.5%, as expected. The BOT underlined its ongoing growth concerns amid rising trade tensions and weaker than expected public investment, opening up the possibility of further monetary easing. The BOT assessed that growth was running below its expectation and below potential. Analysts expect Thailand to report a weaker GDP growth of 2.6% in Q2, versus 2.8% in Q1. The central bank also sees Consumer Price Index inflation running below the lower level of its target, which is consistent with the Deutsche Bank forecast of 0.9% for 2019.

South Korea

The Bank of Korea (BOK) kicked off the summer with a 25bps rate cut on 17 July; this was in line with analysts’ forecasts, but earlier than the consensus expectation. In response to increasing risks to its trading activities, the BOK is now likely to deliver its second rate cut earlier, in October. In Asia Pacific, a rapid deterioration in Japan–South Korea trade relations has taken the market by surprise. Japan now requires government approval for the export of three materials that are critical to the production of semiconductors and foldable organic light-emitting diode screens. It removed South Korea from its white list of trusted trading partners, requiring more paperwork and processing time for other exports to the country.

Although the immediate economic impact on South Korea’s tech sector may be limited, given the existing stock of these three materials, such an increase in non-tariff barriers to trade underscores the vulnerability of the global supply chain to policy shocks. On a positive note, the South Korean President struck a conciliatory tone towards Japan in his Liberation Day speech of 15 August.

Note: Past performance is not indicative of future returns. Forecasts are based on assumptions, estimates, opinions and hypothetical models or analysis, which may prove to be incorrect

Sources

1 See https://bit.ly/2KLbEFc at hindustantimes.com
Regional update

Americas

With the decade-long era of US economic expansion finally showing signs of slowing, the Federal Reserve has abandoned its policy of small incremental rate tightening, and trade war escalation threatens global supply chains. Latin America’s (LatAm) prospects are clouded by slowing growth in Brazil and Mexico, coupled with an electoral upset in Argentina.

“In the wake of the [US–China] trade escalation in late July, yield curve slope metrics that have been used as early-warning indicators point towards elevated recession risks,” stated Deutsche Bank’s US Economic Report of 7 August.

The red warning light has been flashing more regularly for LatAm economies. In late July, the IMF cut its forecast for the region’s 2019 growth to 0.6% from 1.4% two months earlier, partly reflecting sharp downgrades to less than 1% for both Brazil and Mexico. However, analysts note that, although the region is not shielded from global shocks, including trade shocks, “LatAm’s growth prospects depend more on idiosyncratic drivers and risks than on global events”.

United States

Consumption growth has rebounded strongly, with high retail sales offsetting Q4 2018 weakness, but industrial production is in contraction. However, note analysts, “the positives outweigh the negatives” and 2% GDP is forecast by Q4 2019.

The first US rate cut in more than a decade was announced at the end of July, when the Federal Reserve reduced its benchmark rate by 0.25% to 2–2.25% and reversed a policy of gradual tightening that it began in December 2015. Chair Jerome Powell said that the move was in response to weak global growth and the US–China trade war, which threatened “what is clearly a favourable outlook”, with the US unemployment rate at its lowest level in 50 years. However, federal debt levels remain the highest in the world, with the Congressional Budget Office projecting US$16tn by the end of 2019 – twice its average over the past 50 years – rising to US$28.7tn by 2029 as tax revenues fall and federal spending rises.1

Escalation of the trade war gained some relief – possibly temporary – with the announcement that tariffs on roughly US$150bn of the US$250bn of imports from China scheduled to be hit with 10% tariffs from 1 September will be delayed until 15 December. Analysts said the decision was in line with a “modest further escalation of trade tensions with China, which we still expect to weigh meaningfully on business fixed investment over the back half of the year”.

Higher US oil production has, note analysts, balanced out OPEC cuts, to the point where there is a risk of OPEC members abandoning their output caps commitments in favour of increased production. They add: “Conflict between the US and Iran could heat up and lead to greater disruptions, and the US could exert increased pressure on third parties to boycott Iranian crude.”

Brazil

Social security reform (SSR) has kept President Jair Bolsonaro busy since he took office at the beginning of 2019. The Brazilian government estimates that the long-awaited SSR bill, which will raise the minimum retirement age and reduce some
Presidential uncertainty has cast a cloud over Argentina’s economic performance

GDP growth in Chile is projected to be between 2.7% and 3% this year

Low growth and inflation remain the norm, and analysts maintain their 0.7% growth forecast for 2019, while anticipating a “gradual pick-up” as a result of reduced political uncertainty, further Selic cuts and easing financial conditions.

Mexico
With 67% of US imports from Mexico being intra-company trade, a lot of which is correlated, supply chain disruptions from trade war escalation are hurting both countries – the decision by the US Department of Commerce to impose tariffs on some Mexican producers of structural steel being just one example.

A 0.1% increase in Q2 economic growth enabled Mexico to narrowly escape recession following a -0.2% contraction in Q1. President Andrés Manuel López Obrador, who took office in December 2018, maintains that 2% growth for 2019 is still achievable, but analysts reduced their forecast to 0.9%, noting that “despite the marked slowdown in activity across aggregate demand components and the downward adjustment of expectations, inflation remains uncomfortably high and core inflation has recently adopted an upward trajectory”. In late July the finance ministry announced a US$25bn stimulus package aimed at reviving activity, but while the Banco de México has indicated that it is increasingly open to easing rates, analysts don’t think this will happen until 2020 because of financial stability-related hurdles and the re-escalation of trade tensions with the US.

Argentina
The IMF’s recent verdict that “Argentina’s economic policies are yielding results” could prove premature following President Mauricio Macri’s unexpectedly heavy defeat in the first round of elections on 11 August, which cast doubt over the incumbent’s chances of re-election in October and whether his austerity-driven policies will survive. Both the stock market and the Argentine peso rate to the US dollar slumped at the news. Analysts suggest that Argentina’s ability to avoid a further debt default is slim, despite the expressed willingness of Alberto Fernández, Macri’s likely successor, and running mate former President Cristina Fernández de Kirchner to meet the country’s obligations: “The problem is not the willingness to pay; it is liquidity and sustainability.”

Analysts forecast that under a Fernández government “it is likely that capital control policies will be implemented in order to isolate FX from frictions created by free capital flows and an independent monetary policy”. Fernández is also “likely to relax monetary conditions and decrease the [central bank’s] Selic rate. This strategy may prove to be incorrect hypotheti cal models or analysis, which assume s, estimates, opinions and assumptions, estimates, opinions and hypothetical models or analysis, which may prove to be incorrect.

Chile
Slow expansion in the country’s key mining sector (Chile is the world’s biggest copper producer) has crimped the country’s recent economic activity. GDP growth, which last year rose to 4% against 1.7% in 2017, is still projected to be between 2.7% and 3% this year, against an earlier 2019 forecast of 3.8%. Consumer spending has remained robust, while analysts report that recent fiscal policies “aim to accelerate the spillover of the investment pipeline into the economy at large”. Banco Central de Chile cut its benchmark interest rate by 0.5% to 2.5% in June and analysts suggest that “the door for further cuts is now open”. The Minister of Finance, Felipe Larrain Bascuñán, has promised to adopt a more expansive fiscal policy and said the government is considering “additional measures” to stimulate the economy.

Note: Past performance is not indicative of future returns. Forecasts are based on assumptions, estimates, opinions and hypothetical models or analysis, which may prove to be incorrect.

Sources

1 See https://bit.ly/2sQVYih at cbo.gov
In the ninth century, when the Vikings sailed their longboats to Greenland, the Mediterranean and up the large Russian rivers as far as Kiev, little did they know they were laying the foundations for a future of trade and economic cooperation. Fast forward to modern times and it is clear that the regional DNA of innovation and determination is not only alive and well, but is disrupting the status quo and transforming industries.

Sweden, Norway, Denmark and Finland are commonly felt by outsiders to have a strong regional identity and a cohesive and collaborative approach to business. This is supported by political and economic regimes that draw on a once very strong Protestant tradition of thrift. Today they are broadly united in having market economies combined with powerful labour unions and a comprehensive welfare sector financed by what many outsiders view as heavy taxes. This article charts the region’s achievements in trade and digitalisation with the support of the banking sector.

Regional assets
Natural resources remain – as they have always been – the backbone of the region’s exports, and sustainably managed forests in Finland and Sweden provide wood pulp and lumber to much of the world. Norway’s huge North Sea oil assets have been carefully managed to create long-term

The Nordics have a long history of intra-bloc cooperation and innovation at the top of the European digital pecking order. flow examines how this has played out in payments and trade finance...
In a corporate banking environment client relationship, banks all work together to deliver the best outcome for that client.

Anders Ohlsson, Head of Corporate Cash Management Nordics, Deutsche Bank

The Øresund Bridge is the longest combined road and rail bridge in Europe and connects two major cities: Copenhagen and Malmö.

wealth (its sovereign wealth fund surged past the US$1trn mark in 2017), and most of its installed electricity capacity comes from renewable energy sources. Reflecting Denmark’s huge investment, wind power produced the equivalent of 43.4% of the country’s total electricity usage in 2017.¹

Careful cultivation of its comparatively barren terrain has allowed Denmark to position itself as a leading player in the global food industry – Danish Crown being the world’s largest pork exporter. Innovations in the uses of Nordic mineral resources and the introduction of the Siemens-Martin method in the 1880s led to Swedish steel being considered the finest in the world. This product provided an essential building block in establishing a reputation for robust, reliable and no-nonsense engineering and design.

More recently, high-profile Nordic developments have included the expansion of the service sector and innovation in information and communications technology and telecoms; examples of which can be found in the growth of telecoms led by multinational corporates such as Nokia and Ericsson and, of course, music streaming phenomenon Spotify.

Digitalisation

The Digital Economy and Society Index (DESI) summarises relevant indicators on Europe’s digital performance and tracks the evolution of EU member states (these exclude Norway) in digital competitiveness. The Nordic countries dominate the ratings (see Figure 1 on page 14).

Finland leads the pack, with its public sector having walked the digital walk long before anyone else. Eight years ago at Sibos Toronto 2011, delegates heard Keijo Kettunen, Payment Transactions Manager, State Treasury of Finland, explain in an e-Invoicing panel session that the country’s payment system was transitioning from paper invoices to electronic format and how the e-Invoicing system owed its success to tight collaboration between different interest groups and the wide availability of internet connectivity and electronic banking to consumers.²

Neighbouring Sweden is steadily nearing its goal to become the world’s first cashless society by 2023. A growing number of shops and restaurants proudly proclaim themselves ‘cash free’, while a 2018 study from the Swedish central bank found that only 13% of payments in the country still involve notes and coins, as debit cards.
and the national mobile payment system Swish increasingly become the norm.3

Turning to the fintech evolution, Finland’s central bank, the Bank of Finland, addressed every regulator’s conundrum in a 2018 bulletin where it stated: “Authorities and legislators must constantly juggle between diverging interests: competition, innovation and better customer experience are positive elements but cannot be promoted at the cost of financial stability or consumer protection.”

It also makes the point that if digitalisation shifts financial services provision from banks to actors “that are less regulated and supervised” this could give rise to new risks. Critically, it reflects that regulators and supervisors will need new skills as banking business models increasingly become based on algorithms and data analytics. “Someone needs to be able to say whether a data set formed by millions of lines of code in different systems is adequately secured against cyber threats.”4 This is an issue faced by all developed world economy banks, many of which – including Finland’s – are hiring data analysts, engineers and statisticians to ensure their services are future-proofed.

Payment platforms
The emergence of regional payment platforms around the world – think Australia’s New Payments Platform and Europe’s SEPA (Single Euro Payments Area) Instant Credit Transfer scheme – took a
step further forward on 25 June 2019 when the P27 Nordic Payments Platform (owned by Danske Bank, Handelsbanken, Nordea, OP Financial Group, SEB and Swedbank) announced its partnership with Mastercard. Replacing the existing payment infrastructure, the new payment system is to provide real-time and batch payments across the Nordic markets.

Dubbed ‘Project 27’, the platform sets out to establish within the Nordics the first integrated region for domestic and cross-border payments in multiple currencies through an open-access common infrastructure that should, says the P27 vision, “deliver state-of-the-art payment experiences to customers across the Nordics”.

By aligning its standards with those of SEPA and applying to payments in the eurozone, Project 27 declares it “will bring further harmonisation to the European payments landscape”.

Digitalisation of trade
While the overall momentum towards digitalising trade finance is slower than that of real-time payments, the moves we have seen have had a distinctly Nordic flavour. Paula da Silva, Head of Transaction Services at SEB and Chairman of the board of the P27 Nordic Payments Platform, says that Nordic corporates have a strong demand for digitised transaction banking products and services, and that in terms of cash management SEB is almost fully transformed. “More than 99% of our products on payments are contactless, but when it comes to trade, you trade in physical paper, and there are so many players in the chain of one transaction,” she explains.

Digitalisation in transport and logistics is a huge area of focus as this impacts on trade – and ultimately economic growth. Here again, we have a Nordic corporate taking the lead. On 29 April 2019, Denmark’s A.P. Møller-Maersk launched its Customs Clearance online shipping management platform, which covers all types of cargo for all Maersk brands in seven European countries: Germany, France, Denmark, the Netherlands, Poland, the UK and Spain. The goal is to expand this across the world by the end of 2019. “The solution provides downstream benefits of full governance and compliance [and] eliminates the need to provide a quote as pricing is displayed online, saving three to five minutes per quote,” explains the container shipping company’s Chief Commercial Officer, Vincent Clerc.

Bankside support
In what has been a perfect storm of regulatory pressure and liquidity-washed price compression, Nordic banks such as DNB, Nordea, Danske Bank and Swedbank (to name but a few) work cooperatively and informally together to allow each bank to engage in healthy competition for repeat client business, interpret new regulations, share documentation and develop digital solutions.

One of the common denominators of this close-knit group of Nordic-based financial institutions is the share scale, track record and reach of the Nordic-based corporates they serve. Equinor (formerly Statoil), Volvo, Ericsson, Nokia, H&M, Ikea and A.P. Møller-Maersk, along with Swedish/Swiss ABB, have operations all over the world, and because of their sheer scale have various non-Nordic banking relationships to support their transactional activities.

Deutsche Bank has a long tradition of working with Nordic corporates, particularly in the capital goods, engineering, energy and telecoms industries. As reported in the H1 2019 issue of flow, reserve-based lending has helped Sweden’s Lundin Petroleum develop its giant Johan Sverdrup North Sea oil field, and also allowed Norway’s Vår Energi to extract oil from 17 producing fields on the Norwegian Continental Shelf. Deutsche Bank’s Trust & Agency Services (TAS) team acts as American Depositary Receipts (ADR) bank for Lundin Petroleum’s Sponsoring Level 1 ADR programme.

Power purchase agreement-driven transactions in Nordic wind energy make it possible for corporates to buy an offtake from their local grid to power their centres and production sites. In May 2018, German asset manager Luxcara sold an offtake from its Bjerkreim wind farm site in Norway to Facebook so that it could power data centres in Odense, Denmark and Luleå, Sweden. Deutsche Bank’s TAS team acted as financial and security agent for the bond issuance used to finance the wind energy.

Turning to telecoms, Deutsche Bank’s Structured Trade and Export Finance team arranged US$5bn of export credit agency deals, signed with US 5G telecoms provider Verizon, to support equipment purchases from Ericsson and Nokia respectively. Other telecoms deals include Saudi operator Mobily and AT&T. Denmark’s export credit agency EKF has also worked with the bank on other deals. In addition, the bank’s TAS team acts as ADR bank for Ericsson’s NASDAQ-listed ADR programme.

Allies not adversaries
“In a corporate banking environment client relationship, banks all work together to deliver the best outcome for that client, and this is particularly true in the Nordic region,” observes Deutsche Bank’s Head of Corporate Cash Management Nordics, Anders Ohlsson. With a habit of cooperation that has been going on for more than a thousand years, this is a region to be watched.

Sources
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Many rivers to cross

As China’s role on the global stage expands, Bank of China’s Yunfei Liu talks to flow about the foundations needed to build bridges in international trade, the popularity of RMB financing in Belt and Road countries, and where Western banks fit into the picture.
When Yunfei Liu finished high school in Beijing, she didn’t choose a career in international trade finance; it chose her. As one of China’s new generation of professional women entering the workforce a decade after the state set about economic reform and opening up, and fired up with a passion for learning, her path was set after she took a university entrance examination to determine what she should study.

She assesses the impact this had on her future: “It is important that you do well in this examination because if you pass it, you have a chance to change your life for you and your family.”

And change her life it did. With a degree in economics and financial policymaking, one might guess that she obtained this in Beijing, China’s political and cultural centre. Instead, she headed for her mother’s home city, Shanghai – Middle Kingdom’s hub of fashion and finance – where she studied from 1987–1991. Given that most universities in China are government-owned, students are usually placed with local entities after they graduate. But Liu had worked hard and achieved high marks, so was immediately assigned to Bank of China’s graduate programme back in the Beijing head office.

This article takes a closer look at her long career with the Bank of China and provides some context around the bank’s relationship with Deutsche Bank. Their shared cultures of loyalty and passion for making trade happen have not only resulted in longevity, but have also set the tone for future bridge-building.

Client-facing
On joining the bank in 1991, Liu explained to the human resources department that with a legal background I would be in a better position to prevent disputes by improving our own documentation.

Eagle eye for detail. Under the industry UCP 600 letter of credit (LC) rules, issuing banks have to make payment under LCs when the conforming documents (bill of lading, invoice, etc.) are presented. When they don’t align with the terms in the LC – for example, a different port on the bill of lading – the bank can decline payment. Checking documents is a painstaking business and, at that time, the LC had not declined to its current levels of around 10% of all transaction volumes, with the remaining 90% being open account. Banks had big teams making sure all was in order and Bank of China was no exception.

After three years, having done her time at the LC coalface, Liu moved up the trade
finance team ladder into the international business department. She took on a managerial role and developed trade finance policies and procedures, while also assuming operational responsibility for the management and monitoring of the bank’s branches and sub-branches.

Barrier breaker
Today, as Deputy General Manager for Global Trade Services, Liu recalls how a willingness to learn – however mundane the task might be – and adaptability in a highly international field have helped her personal growth. She’s also passionate about her role as a mother and admits that her day job leaves less time than she would like to spend with her 10-year-old son, who “is a very understanding little man,” she smiles. And, as a working mother, she is glad her employer is also very understanding. The fact her entire career has been with one employer underlines the importance Chinese society places on loyalty; a concept which is not unfamiliar to employees of German organisations, including Deutsche Bank.

One of the skills Liu took away from her time ploughing through piles of documentary credits was how to respond to discrepancies and the resulting disputes. More often than not, these would end up in court rather than arbitration and, to her frustration, the language barrier made it difficult to communicate with the various legal representatives. She decided that it was time to go back to university: “With a legal background I would be in a better position to get to the bottom of disputes myself, and even prevent disputes by improving our own documentation.”

In 1999, she enrolled with the University of International Business and Economics in Beijing on the Executive Master of Law course, while continuing her day job at the Bank of China. A few years later, the opportunity arose to apply for a UK government-sponsored scholarship to do a one-year postgraduate course in the UK, but her application was declined. With her employer’s support (they kept her job open), but funding the study herself, Liu completed a one-year postgraduate course (LLM) in International Economic Law at the University of Warwick in 2004.

The experience was pivotal. Something that struck a particular chord with her during her time in the UK was the emphasis on avoiding plagiarism (however accidental) and the rigorous approach to evidence and sources that was required for academic work. “That was brand new for us Chinese students,” she recalls. “We had to be very careful when directly or indirectly quoting from other materials or documents and include everything in references, which took even longer than the dissertation!” This discipline proved to be useful once she returned to the bank, as she was delving into the minutiae of international trade finance documentation.

Supporting China’s growth
As the oldest bank in China – it was founded in February 1912 – Bank of China has changed its function four times.
From 1912 to 1928 it was the government’s central bank, then it became a government-authorised international exchange bank in 1928, and subsequently evolved into a specialised international trade bank in 1942. By 1994 the national financial system had undergone significant reform and the bank transitioned into a state-owned commercial bank, but its focus on trade, FX and exports remains part of its DNA to this day. Present in 57 countries and regions, it sees reform and innovation as its “forward path”, and on 1 June and 3 July 2006 respectively, Bank of China Limited was listed on the Hong Kong Stock Exchange and the Shanghai Stock Exchange.

This transformation occurred at a time when the Chinese appetite for commodities was ramping up during the 1990s and 2000s to feed the country’s growth ambitions. According to the World Economic Forum, China’s demand equals or exceeds that of the rest of the world combined for cement, steel, copper and coal, while fossil fuel still accounts for more than 60% of the country’s power generation, and domestic coal consumption far outweighs imports. Around 75% of all commodity flows touch China somewhere along the way. Although GDP is no longer in double digits as China’s economy transitions from being manufacturing-led to services-led, oil import data shows no diminution in crude oil imports – Organization of the Petroleum Exporting Countries (OPEC) data charted a rise from 4,084,219 million barrels per day (mb/d) in 2009 to 9,261,414mb/d in 2018 – and the trend has continued this year.

This high-growth period, which began its momentum with China’s “open door” policy of economic reforms in December 1978, was a good time to be providing trade finance services around Chinese commodities imports and exports, and this has remained an important component of Bank of China’s business.

Unlike many other banks, the flow and structured commodity trade finance businesses are all currently in one department, but this concentration is being
analysed and potentially addressed. “As we progress and develop our commodity trade finance offering it is becoming increasingly difficult for us to handle the risks under the vanilla trade finance model,” reflects Liu. In London, Bank of China’s trade finance team is headed by colleague Ping Xiao and populated by seasoned commodity bankers who hail from Western and Japanese banks. “We did a lot of LCs in exporting commodities and agricultural products,” recalls Liu. However, she explains, there were some differences when dealing with commodities that her team had to be on top of – such as the fact that LCs to import crude oil required a letter of indemnity instead of a normal bill of lading.

Participants in structured commodity trade finance syndicates observe how Bank of China has what Liu reports are “big bilateral lines for all the large traders” and that they “very easily put down US$500m tickets for the large structured deals they like, such as state-owned oil companies and metals and softs on a take-and-hold basis”.

More assets please
Despite positive construction-led activity as a result of government stimulus policies, China’s overall economic deceleration has had a knock-on effect on domestic demand for trade finance. “It has become difficult for us to find the perfect project, industry or group of clients who can meet all the needs and requirements necessary for us to extend our credit,” says Liu. “This difficulty has left banks like us hungry for assets.”

Predictably there is no shortage of small and medium-sized enterprises (SMEs) in need of loans, but managing that risk – that can hardly be secured on future commodity flows – is very different. In March 2019, the China Banking and Insurance Regulatory Commission issued new guidelines to encourage banks to increase loans to SMEs by 30% by the end of the year. The carrot? A non-performing loan ratio tolerance of three percentage points higher than the maximum rate for their overall loan book. The Financial Times noted on 13 March that “Economists have blamed a scarcity of financing...
for small, privately owned businesses for a recent slowdown in economic growth,” and pointed out that “banks have been wary of lending to smaller companies because default rates are higher on average”.6 “Often these SMEs are just not strong enough,” observes Liu.

Currency climb
With the renminbi (RMB) – China’s offshore version of the Chinese yuan renminbi (CNY) – now the fifth most active currency for international payments by value,7 its inclusion by the International Monetary Fund as a reserve currency in November 2015 and its addition from October 2016 to the Special Drawing Rights basket of currencies, Liu is understandably optimistic about the currency’s prospects as a payment currency for commodities deals. As Washington/Beijing trade disputes show little sign of resolution in the short term, China is opening up access to RMB-denominated futures contracts. In March 2018, the Shanghai Futures Exchange started trading CNY-denominated crude oil, turning over CNY17.1trn (US$2.48trn) during the following 12 months. Plans to launch rubber and non-ferrous metals contracts were announced in May 2019.8 Liu points out this is something of a first: “China’s futures exchange opening up to foreign investors represents an important step.”

Liu is understandably enthusiastic about the financing opportunities from China’s Belt and Road Initiative (BRI).9 Many of the countries within the BRI are still developing economies and cannot access dollar liquidity. Reluctant to pay the high interest rates charged for local currency, they are turning to Chinese banks for RMB
China’s futures exchange opening up to foreign investors represents an important step

Liu holds regular team meetings “to discuss different types of issues, from policy level through to operational level”. She believes that this helps to foster an ethos of teamwork, with everyone learning from each other.

Four pillars of support
Liu outlines that Bank of China’s relationship with Western banks is based on four principles:

1. Best of breed. Banking partners have to be “peers in their markets”, she says. “It is about building a bridge across the ocean. And to make this bridge secure we need solid foundations for Chinese enterprises on this side. Similarly, the Western bank on the other side should be the foundation for the bridge to support the counterparties.”

2. Corporate relationships. While Bank of China supports Chinese clients overseas via its foreign branches, Liu says these are quite small, and, reciprocally, Western bank branches are also quite small in China, so head office cooperation makes it easier to “create links with the mainstream local enterprises offshore”.

3. Credit support. As the BRI puts down roots in regions where Bank of China has a shortage of credit support, it needs its Western bank partners to help out. This includes Latin America, Southeast Asia and Africa, where Chinese corporates see particular opportunities for infrastructure investment.

4. Structuring expertise. Liu has been inspired by Western banks when it comes to “innovative techniques and new structured finance tools”, hence the recent additions to the commodity trade finance teams.

When Deng Xiaoping embarked upon his economic reforms, in a speech to the Communist Party Plenary in 1978, he compared the process to that of “crossing a river by feeling the stones”. Yunfei Liu’s remarkable story offers the sense of someone who had not only reached the opposite bank, but was already on her way to many more waterways.
Regchecker

Deutsche Bank’s Market Advocacy team highlight key areas of regulation impacting corporate and institutional clients in 2019 and beyond

July 2019

COLLATERAL MANAGEMENT HARMONISATION (CMH)

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

What has happened? The European Central Bank (ECB) Advisory Group on Market Infrastructures for Securities and Collateral (AMI-SeCo) has agreed the final standards on tri-party collateral management, corporate actions for debt instruments, and a billing and monitoring framework. National stakeholder groups need to finalise their adaption plans by 26 September 2019. Compliance with the AMI-SeCo CMH standards is expected by November 2022.

Why does this matter? AMI-SeCo is pursuing a post-trade harmonisation agenda for Europe. The CMH standards aim to establish a single set of rules and processes for collateral management.

September 2019

TARGET2/TARGET2-SECURITIES (T2/T2S) CONSOLIDATION

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

What will happen? A consolidated T2/T2S platform will go live in November 2021. Before then, the ECB will complete an impact assessment and start a requirements documentation by 30 September 2019. In addition, the connectivity design strategy and planning will be completed on 31 December 2019.

Why does this matter? The consolidation implies significant changes to the EU cash management and securities services industries. The ECB plans to extend the Central Liquidity Management and new real-time gross settlement services for improved liquidity management services to treasurers and payment banks.

October 2019

INTERBANK OFFERED RATE TRANSITION (IBOR)

Who will be impacted? Financial institutions (FIs), non-FIs and corporates.

What is it? The ECB is expected to introduce a risk-free return for the Euro Short-term Rate (€str), which will replace the Euro Overnight Index Average (Eonia) on 2 October 2019. The ECB will provide a one-off spread between €str and Eonia. Euro Interbank Offered Rate (Euribor) reform is expected to be a complete or alternative risk-free rate and the Sterling Overnight Index Average (Sonia) will likely replace the GBP London Interbank Offered Rate (Libor).

What will happen? Benchmarks of Libor second Payment Services Directive (PSD2), SCA introduces what is effectively two-factor authentication for online payments, effective from 14 September 2019, requiring customers to provide two of three means (card/mobile phone with passcode; pin number/password; and/or fingerprint/face recognition) for verifying their identity. SCA also impacts any transaction where the business’s PSP and the end-customer’s bank are located in the EEA; where one of these is outside Europe the PSP is required to use “best efforts” to apply SCA.

Why does this matter? Reports suggest many consumers are unaware of the new rules and retailers are also unaware of the need for SCA compliance. The FCA has announced a delay to the introduction of SCA rules to the UK, with Germany and Greece among other countries that may follow. Estimates suggest the lack of industry readiness could mean the failure of 25–30% of e-commerce transactions.
(US dollar, euro, sterling, Japanese yen and the Swiss franc) will be replaced by risk-free interest rates. The new benchmarks will gradually be available after 2019. Providers of “critical benchmarks” such as Euribor and Eonia will have two more years, until 31 December 2021, to comply with the new EU Benchmarks Regulation (EU BMR) requirements. The extra two years also apply to third-country benchmarks. New central bank rates are exempt from EU BMR. The transition from Libor to Sonia will take place, in stages, up to 2021.

Why does it matter? The replacement of benchmarks could cause unexpected implications for market participants due to complex recalculation of products related to Libor and changes to legal contracts.

**December 2019**

**EUROPEAN DISTRIBUTION OF DEBT INSTRUMENTS (EDDI) FOLLOW-UP ACTIONS EXPECTED**

*Who will be impacted?* Syndicate banks, custodians, common depositories, paying agents, issuers and CSDs.

*What will happen?* The ECB initiative consists of a pre-issuance and a post-trade module (both optional). The focus is on debt issuers (for pre-issuance) and CSDs (for post-trade). Following a consultation period until July 2019, follow-up actions and further clarifications are expected in Q4 2019.

*Why does it matter?* The ECB is addressing the fragmentation and inefficiency in the EU debt instruments market. The exact set-up and scope of EDDI is still unclear; however, harmonised processes are envisaged and increased infrastructure costs are expected.

**FCA EXTENSION OF THE SENIOR MANAGERS AND CERTIFICATION REGIME (SM&CR)**

*Who will be impacted?* Asset managers, claims management companies, mortgage providers and certain investment firms (including stockbrokers, securities and futures firms, and financial advisers).

*What will happen?* The SM&CR, introduced for banks in March 2016 and insurers in December 2018, will extend further to around 47,000 solo-regulated firms under the Financial Services and Markets Act from 9 December 2019.

*Why does it matter?* Extension of the regime aims to remove opportunities for regulatory arbitrage caused by inconsistencies in the regulatory framework, support competition and establish a more efficient regulatory system for all financial services firms.

**On the horizon**

**SECURITIES FINANCING TRANSACTION REGULATION (SFTR) REPORTING**

*Who will be impacted?* Investment firms, credit institutions, central counterparties, CSDs, insurance undertakings, undertakings in collective investment instruments, alternative investment funds and non-financial counterparties.

*What will happen?* Phased implementation of SFTR reporting. For the largest financial institutions, reporting will start in April 2020. Key details to be reported include: 1) Parties to the securities finance transaction; 2) Repurchase rates; 3) Lending fees; and 4) Collateral: its composition, availability for reuse, substitution and haircuts.

*Why does this matter?* Under SFTR, financial and non-financial counterparties will have to report details of their securities financing transactions to trade repositories.

**CSD REGULATION SETTLEMENT DISCIPLINE REGIME (CSDR)**

*Who will be impacted?* Investment firms, custodians, CSDs, central counterparties, market participants, investors, investment funds and asset managers.

*What will happen?* CSDR will come into force on 14 September 2020. Mandatory late settlement penalties for trades failing to settle on intended settlement date (ISD), as well as mandatory buy-in for trades failing to settle after ISD+4, come into effect.

*Why does this matter?* The regulation rewrites the rules for securities settlement in Europe, with the settlement discipline applying to activity settling at a European CSD regardless of where the investor is domiciled.

**THE SECOND SHAREHOLDER RIGHTS DIRECTIVE (SRD II)**

*Who will be impacted?* Issuers, investors, CSDs, custodians, market participants and asset managers.

*What will happen?* SRD II addresses issues in the identification of shareholders and enables investors to better exercise their voting rights. A cascading request for shareholder transparency is introduced, which is triggered by the issuer and passed throughout the intermediary chain. Shareholder identification and information transmission standards will apply on 3 September 2020.

*Why does this matter?* SRD II is subject to local transposition in European markets and so divergence in implementation across member states can be expected.

**INTERNATIONAL ACCOUNTING STANDARDS BOARD (IASB) PROPOSED CHANGES TO TREATMENT OF DEFERRED TAX UNDER IAS 12**

*Who will be impacted?* Companies that do not currently recognise deferred tax for lease transactions and will in future be required to do so under the IASB’s proposed new lease reporting standard.

*What will happen?* The IASB is consulting on changes to the treatment of deferred tax under IAS 12 Income Taxes as a result of IFRS 16 lease accounting rules.

*Why does this matter?* The proposed amendments to IAS 12 Income Taxes will clarify how companies account for deferred tax on leases and decommissioning obligations. The change follows the introduction of International Financial Reporting Standards (IFRS) 16 Leases, which brought leases onto the balance sheet for the first time from 1 January 2019.

**IASB PROPOSED CHANGES TO DISCLOSURE OF ACCOUNTING POLICIES UNDER IAS 1**

*Who will be impacted?* Companies worldwide potentially, although the IASB has not yet confirmed if the amendments will be mandatory for IFRS reporters.

*What will happen?* The IASB is consulting up to 29 November on proposed changes to IAS 1 Presentation of Financial Statements, with the aim of helping companies improve accounting policy disclosures for users of financial statements.

*Why does this matter?* IAS 1 requires companies to disclose their ‘significant’ accounting policies. The IASB proposal, if adopted, would substitute the reference to ‘significant’ with a requirement to disclose ‘material’ accounting policies to clarify the threshold for disclosing information.

Sources
1  See https://bit.ly/2OxUW8s at fca.org.uk
Vision 2020 is a serviceable title that has been attached to disparate projects and initiatives from various organisations. For the Eurosystem – comprising the European Central Bank (ECB) and the national central banks of EU member states whose common currency is the euro – Vision 2020 represents the next step of evolution towards a more integrated European financial market infrastructure.

The Eurosystem’s current market infrastructure enables the exchange of securities, collateral and liquidity between financial market counterparties. Liquidity, to quote the ECB, is “the fuel to effectively facilitate the exchange”.

Vision 2020 aims to generate benefits for the system from further integration, including greater efficiency, improved security, full use of technologies and facilitating usability. Currently, fund transfers between the EU’s banks are effected through the second iteration of Trans-European Automated Real-time Gross Settlement Express Transfer, aka TARGET2 (T2). Introduced in November 2007, T2 is used by more than 1,700 banks to effect high daily volumes of euro transactions. A similar dedicated platform for securities transactions, TARGET2-Securities (T2S), was launched by the Eurosystem in July 2008.

As the ECB observes: “TARGET2 has been running smoothly for over a decade, ensuring safety and efficiency in European payments. However, payments have changed significantly in the meantime due to technological developments, regulatory requirements and changing consumer demands.”

T2S, which is managed by the EU’s central banks and central securities depositories (CSDs), has “settling without borders” as its remit. T2S processes domestic and delivery versus payment transactions in central bank money. The platform is used by the EU’s central banks, retail banks and CSDs.

The Eurosystem’s proposed response to the financial market’s transformation over the past decade is to update T2/T2S with a new real-time gross settlement (RTGS) system and liquidity management optimisation across all TARGET services. This will be achieved by consolidating their technical and functional aspects, while harmonising and integrating Europe’s cash and securities settlement services.

Launch dates
The new system is effectively a ‘big bang’ approach that changes the way banks and ancillary systems access services for transactions in central bank money. A go-live date of 22 November 2021 is set for the consolidated platform, which will comprise the new T2/T2S services and RTGS.

A second wave, scheduled for 2022, will see the launch of a new Eurosystem Collateral Management System (ECMS) – currently in development – to replace the individual collateral management systems now used
There may yet be a few speed bumps along the highway envisaged in Vision 2020

by Eurosystem national central banks. Once operational, the changes will mark major progress towards the ultimate goal of a fully integrated European financial market.

Vision 2020 involves various developments ahead of the launches. The new platform also introduces central liquidity management (CLM) to all Eurosystem services. In addition to T2/T2S, they include TARGET Instant Payment Settlement (TIPS), launched by the EU in November 2018, and common components for harmonising functions and services where possible, such as Common Reference Data Management; a Data Warehouse; the new ECMS; and the Eurosystem Single Market Infrastructure Gateway (ESMIG) that will provide access to TARGET services and the ECMS. ISO 20022-compliant messaging will be used for all communications (it was adopted by T2S back in 2015).

Introducing a CLM system will provide participating banks with an overview of their central bank liquidity and the ability to flexibly assign it to individual settlement services. The new structure will also make possible the separation of central bank transactions from individual payments.

“For the Eurosystem central banks and their monetary policy counterparties, [the new] ECMS will be a major step forward because it will create one central point, one set of procedures and one platform to manage all of the collateral,” adds Philippe Leblanc, Banque de France Operational Director for European Market Infrastructures.

Earlier this year, the ECB confirmed that the Eurosystem will permit users to choose from various network service providers (NSPs) when connecting to TARGET Services (T2/T2S and TIPS) and the ECMS via ESMIG.

Banca d’Italia was delegated the task of awarding up to three concessions for the provision of ESMIG connectivity services. Its selection will be based on the lowest price offered to users, provided the NSP satisfies a minimum set of requirements. Under the timetable, users were able to initiate negotiations with the NSPs from mid-July 2019, once the Eurosystem had named those who were awarded the concessions.

By the end of March 2020, the Eurosystem will confirm the final list of ESMIG NSPs selected. SWIFT and Italy’s SIA (provider of SIAnet secure messaging) are almost certain to be chosen – both won the first two rounds of the tender, while SIA was the first NSP to gain Eurosystem certification for TIPS.”

In addition to these plans, EBA Clearing is coordinating with the Eurosystem timeframe with the aim of moving its EURO1 large-value payment system for single same-day euro transactions to ISO 20022 in 2021, giving users full business interoperability between EURO1 and T2.

SWIFT announced last December that it will also align and begin migrating all cross-border and many-to-many payments to ISO 20022 from late 2021, and provide a four-year co-existence phase.

Will banks be ready?

With this flurry of activity comes the question of the banking sector’s preparedness as November 2021 approaches. The assessment phase places the onus on banks’ operational teams to liaise with legal and business colleagues to devise ways of extracting opportunities for digital transformation from the heavy compliance burden.

The revolution in European retail banking is of course already underway following the January 2018 introduction of the revised Payment Services Directive, aka PSD2, although to date it has proved less wide-reaching than initially envisaged by the European Commission.

Also in progress is the global migration to ISO 20022, which Simon Jones, Global Head of Payments Transformation at Deutsche Bank, describes as the largest change programme to affect the payment business since the 2015 launch of the Single Euro Payments Area (SEPA). An updated edition of the bank’s Ultimate Guide to ISO 20022 Migration is being published in September 2019.

Every Deutsche Bank division that processes payments is affected, so Jones reports that cross-divisional governance, collaboration and architecture have been established to enable the group to manage the multiple migrations. “We’re using lessons learnt and a programme set-up that proved successful both for the Markets in Financial Instruments Directive, aka MiFID II, and SEPA instant payments. With the MT message format so widely used in many of Deutsche Bank’s systems and in clearing systems for more than 30 years, ISO 20022 impacts hundreds of global systems. That requires us to manage changes every month from now until 2021 in Asia Pacific, the EU and the US.”

While this represents a huge planning and resourcing challenge, he also regards it as an ideal opportunity to drive technology and business change. “We’re using ISO to accelerate the rollout of our key strategic components that will enable us to process, monitor/scan and store full ISO messages over the next two years,” says Jones. “We also see major synergies with SWIFT’s global payments innovation (gpi) for corporates (G4C) XML, where systems already need to process ISO, and our surveillance programmes, which we’re using to prepare ahead of ISO 2022.”

“It’s exciting to be part of this migration from MT to MX in high-value payment schemes and SWIFT globally. I’m confident close collaboration with clients, the clearing central banks, regulators and SWIFT will make this an extremely valuable programme for paving the way to add new features and controls to global high-value payments flows in the run-up to November 2021 and beyond.”

In the meantime, Europe’s banks were required by 14 June 2019 to have implemented facilities – principally application programming interfaces (APIs) – for enabling third-party providers to test their functionality against a simulated bank environment or ‘sandbox’. The date came three months ahead of the 14 September deadline for PSD2’s Regulatory Technical Standards and was preceded by suggestions that the APIs produced by the industry fell short of the required standard. There may yet be a few speed bumps along the highway envisaged in Vision 2020.
Work in progress at German heavy engineering manufacturers
Europe is coming under pressure from all sides at present. Its model of liberal, ‘social market’ capitalism was criticised by President Putin at the G20 Summit in Osaka earlier this year, and the US administration has set its sights on reducing America’s trade deficit with Europe and China. On top of this, export credit agencies based in Europe say that aspirations of multilateralism and integrated global supply chains are crowding out European-funded projects.

Zero-sum thinking?
The rumbling thunder of trade war has been reverberating around the global economy for 18 months now. Following the tentative truce agreed at the G20 Summit, negotiations between the US and China seem to have moved on from zero-sum thinking, but let’s not forget that globalisation has created interdependencies between countries and businesses so that mutually assured (economic) destruction is the consequence of a strategy based on ‘I export more, you export less; therefore I win, and you lose’. The result is a dangerous, but ultimately stable, equilibrium where neither side triggers an all-out trade war, because to do so would be the economic equivalent of pushing the nuclear button.

This does not mean that there will not be conflict or, indeed, that the impact of these conflicts will not be global. The US negotiating stance is common across all its trade discussions, not just those with China. Alleged intellectual property theft, cyber security breaches and the perceived national security risk of Chinese technology within US business information systems are all part of the negotiating process, as are agriculture, manufacturing, the US trade deficit and public services. Even monetary policy is part of the process, since the US will make perceived currency manipulation through interest rates or market intervention a pillar of any settlement. This will all be outside the World Trade Organization (WTO), of course.

Trade surplus tensions
This creates an existential challenge for Europe. The European model of capitalism is under attack from all sides, and the traditional ‘nuts and bolts’ engineering-based trade that it does is threatened. It does not have a different, or indeed strategically competitive, economic system with which the US feels compelled to do battle. Yet the EU itself is seen as a ‘mercantilist trading bloc’ by the US administration. What this means is that trade is being conducted by it in a way that promotes its interests and on its terms. So the tug of war between Europe and the US is about trade surpluses.

Take heavy engineering (proxied through machinery and components) as an example. Europe’s exports to the rest of the world accounted for US$1.46trn in 2018. This is around a third of the total global trade in the sector of US$4.4trn. The breakdown by country explains why Europe has pole position. Germany, Italy, the UK and the Netherlands are the four largest exporters in the sector and, combined, their exports are US$698bn, compared to China’s US$669bn (see Figure 1 on page 30).

In the current environment, size appears to be everything because it determines the strength of the negotiating stance. But it is also about depth. Europe’s strength lies not just in the fact that it contributes such a large proportion to the total in machinery and engineering, but also because it has complementary sectors that work together. Heavy engineering, for example, works with electrical engineering, iron and...
steel, precious metals (because gold and platinum are important aspects of electronic and automotive equipment for example) and automotives to produce a picture of a net surplus for the EU’s external trade everywhere except with China and Japan (see Figure 2).

German machine power
According to GTAI Germany Trade & Invest, Germany’s machinery and equipment (M&E) sector is “the world’s leading supplier of machinery with 16% share of global trade”. It also states that “German manufacturers are also the world leaders in 19 out of 31 M&E sectors in global comparison”, and notes that German M&E industry strength is driven by a combination of the country’s “proven engineering tradition, its position as a technology development leader, and a highly diversified industrial base”.

While the US and China are the predominant trade partners in the sector, Germany has nevertheless drawn the ire of the US because of the size of its trade surplus, and equally because of its contributions to NATO. Germany has a long tradition in engineering and accounts for some US$681bn of exports in the combined engineering-related supply chain, compared to the US’s US$623bn. According to the US, much of this is because of its “unfair practices”. Of the EU countries in this sector, Germany is dominant and it’s worth focusing on this aspect of the sector to see where the problem lies. After all, when Angela Merkel starts talking about a “strategic competition”, as she did at the Munich Security Conference this year, there is clearly a shift in her perception of the political landscape as well as the world of trade within it.

Within the engineering sector, Germany’s power is really in its exports of machinery and components and automotives. In order to fuel this supply chain (see Figure 3), it has a trade deficit in iron and steel, electrical equipment and precious metals (especially gold and platinum).

At present, the US iron and steel tariffs are imposed on iron and steel going into the US. However, because Germany’s supply chains are largely from within Europe, its engineering and automotive sectors are unlikely to be substantially affected by this move.

By way of example, Germany’s trade in the engineering sector has grown over the period between 2013 and 2018, particularly with Spain, Poland, the UK and the US in terms of exports, and with Poland, the US and China in terms of imports (see Figure 4).

What is clear is that imports from the US are growing more quickly than exports to the US across the sector as a whole, while exports to China have dropped back considerably, perhaps because of the economic challenges that China has faced in the wake of the US trade war and general global uncertainty. What is perhaps more interesting from this chart is that although trade with Poland has increased, trade with other countries within Europe has fallen back, suggesting that Germany may be redistributing its supply chains within Europe in favour of Eastern European nations. Poland has been a particular beneficiary of this.
The engineering sector is Europe’s largest combined export grouping, and Germany is its major player. The problem for Europe is that, although there is indeed a surplus with the US in automotives and machinery and components, the sector itself relies heavily on imports both from within Europe and, ironically, the US and China as well. There is a misconception that because the end (value-added) products, such as machines and automotives, have a trade surplus, this is a ‘bad’ thing. Actually, because the production of final goods relies on imports – of iron and steel, metals and electronics as well – such a misunderstanding of how trade works could undermine the potential of cross-border supply chains.

Cranking up

Europe’s engineering sector is projected to continue its steady growth at around 1.5% annually to 2022 and, given its size in the world, this is substantial. Europe’s strength rests in traditional manufacturing sectors: heavy engineering, automotives, pharmaceuticals and aerospace. Supply chains in these sectors are global and cross-border trade is essential. A high level of imports is a measure of strength rather than weakness so, although Germany exports more cars and machinery and components, it imports more electronics and iron and steel. This is the simple truth of comparative advantage and goes back to the basics of free trade. A country imports when it is cheaper or more effective to do that rather than produce itself. Europe is an excellent example of how this works.

This does not mean that Europe can rest on its laurels, however. Trade wars, even if they remain largely rhetorical, are not going to go away. Europe cannot act as strategically as either the US or China because it is not a nation state – it is a trading bloc. As a result, it has to empower the competitiveness of its member states and help them to enable growth on a multilateral basis, rather than the bilateral style of negotiating that we are currently seeing. The EU has a strong interest in helping the WTO to sharpen its regulatory and dispute resolution teeth. Together with Germany, its strengths are less strategic and more about the nuts and bolts of trade. At the moment, that is what really matters.

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

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Our vision is to make cross-border payments as seamless and convenient as domestic ones; reducing friction for financial institutions and their clients and making international payments instant, accessible and ubiquitous. The above infographic – which also ties in with Sibos 2019 London’s focus on digitisation – shows our bold roadmap of new SWIFT gpi services, which are enabling the next generation of cross-border payments.

Luc Meurant,
Chief Marketing Officer, SWIFT
When the world desperately needed to rebuild economies and societies at the end of the First World War, there was no global system of rules to govern trade, investment, finance or commercial relations.

In 1919, entrepreneurs from the areas of industry, finance and trade decided to set up an organisation which was to act in the name of business communities all over the world to address this. These pioneers were engaged by its first President, Étienne Clémentel, who had formerly held various ministerial seats in the French cabinet. And so it was that International Chamber of Commerce (ICC) was born. One hundred years on, it represents more than 45 million companies in more than 100 countries, and is the world’s largest business organisation. Having recognised the influential role that trade can play in fostering peace and prosperity among nations, ICC made it its objective to fill these gaps and was self-styled as the ‘merchants of peace’.

With multilateral trade under strain in the current climate of renewed nationalism, its work has never been more important. In the words of the current Secretary General John WH Denton AO, “ICC has a historic role that goes beyond carrying forth the views of the private sector. Its role is to leverage the knowledge and resources of business to advance peace, prosperity and sustainable development through inclusive economic growth.” At the 2019 ICC Banking Commission Annual Meeting in Beijing, Denton spoke about the need for ICC to remain “relevant, flexible and accountable” and adhere to a “spirit of modernity” to ensure that the multilateral trading system is “fit for purpose in the 21st century”.

This article highlights how ICC is doing just that, and what this means for participants in the global trade ecosystem.

UN and the World Trade Organization (WTO)

In 1946, ICC was granted the highest consultative status by the United Nations (UN), which opened the way for cooperation with the UN and its specialised agencies as a business representative on a wide range of issues. In December 2016, ICC was granted observer status at the UN, providing member companies with a direct voice on issues covered by UN discussions and thereby delivering a unique opportunity to help shape global policies.

In addition, ICC works very closely with the WTO in a number of areas, including promoting growth for small and medium-sized enterprises, e-commerce and multilateral trade. In 2017, ICC and the WTO launched a joint initiative aimed at facilitating participation by smaller companies in international trade.

Tackling 21st-century challenges

ICC’s objectives of enabling businesses to secure peace, prosperity and opportunity for all are reflected in the ICC Declaration, which consigns ICC to use the full extent of its resources and global network to tackle...
21st-century challenges by:
• Working to preserve and modernise the global trading system.
• Continuing to provide effective alternative dispute resolution methods to support global commerce.
• Mobilising business behind the below 1.5°C global warming target and working towards the additional goal of net-zero emissions in many countries by 2050.
• Bolstering trust in digital technologies, collaborating with governments to design new global governance models conducive to a thriving and unified digital ecosystem, and promoting a human-centric evolution of emerging technologies, such as artificial intelligence.
• Supporting private sector leaders to meet the calls of shareholders, governments and the public for a more inclusive and responsible capitalist model.

New work programme
On 27 May 2019, ICC held its first ever Knowledge Solutions Assembly, bringing together ICC members and Knowledge Solutions staff to unveil its new work programme. The ICC’s Knowledge Solutions department – comprising five Knowledge Hubs – leverages business expertise to address major issues impacting people and the planet, with a focus on five major campaigns:
• Make trade work for people and the planet;
• Make action on climate everyone’s business;
• Stop the rise in global inequality;
• Make technology work for all; and
• Lead for the long term.

Finance for Development Hub

Mandate
Founded more than 80 years ago, the ICC Banking Commission grew to become a leading global rule-making body for the banking industry, not only producing universally accepted rules and guidelines for international banking practice, but also providing insightful research and analysis. Now part of the ICC Finance for Development Hub, it has a mandate to serve as a global forum and rule-making body for banks worldwide – with particular focus on the financing of international trade – and to help policymakers and standard-setters create a regulatory framework that facilitates trade finance throughout the world. As such, it embraces three main activities:
• Rule-making: To be the authoritative rule-making body and produce accepted standards and guidelines for all forms of trade finance.
• Advocacy: To support the development of a sound financial system and serve as trusted industry leader for regulators.
• Financial inclusion and sustainability: To integrate ‘unbankable’ regions and segments into the global financial system.

Advocacy
With respect to ‘advocacy’ initiatives, the Hub aims to ensure equitable regulatory treatment of trade finance as a low-
risk asset class. In this regard, the ICC Trade Register provides an objective and transparent view of the credit risk profile and characteristics of trade and export finance. The Trade Register (which was established in 2011) includes 22 member banks and covers more than US$12trn of exposures and over 24 million trade finance transactions. The trade finance products included in the register have traditionally been letters of credit, loans for import/export and performance guarantees. This has now been expanded to include payables finance products and export finance provided by non-OECD export credit agencies.

Financial inclusion
The Hub has committed to work on promoting inclusive and sustainable growth to the benefit of all. In line with the ICC campaign to lead for the long term, the focus is on collaborating with partners around the globe, promoting membership diversity and encouraging and providing guidance on sustainable practices. This also includes supporting the UN’s Sustainable Development Goals and building a global momentum for investment in quality infrastructure across developing countries. Importantly, the Hub promotes alignment of global financial regulation and the imperative of long-term sustainability.

“We are committed to moving financial investment to a long-term and sustainable trajectory by maintaining a strong dialogue with our members and regulators, and developing innovative tools to support the development of the industry,” says Olivier Paul, Director, Finance for Development, ICC.

Rules, standards and adoption
Many of the rules, standards and guidelines developed by ICC have a trade facilitation impact. The most widely used set of ICC rules, Uniform Customs and Practice for Documentary Credits (UCP), was introduced in 1933 to alleviate the disparity between national and regional rules on letter of credit practice. Since then, there have been six revisions, and the current version is known as UCP 600. The rules are supplemented by:

- ICC Uniform Rules for Bank-to-Bank Reimbursements under Documentary Credits (URR 725);
- International Standard Banking Practice for the Examination of Documents under UCP 600 (ISBP publication no.745); and
- ICC Supplement to the Uniform Customs and Practice for Documentary Credits for Electronic Presentation (eUCP Version 2.0).

Numerous other trade rules have been released, including URDG 758 (Uniform Rules for Demand Guarantees), ISP98 (International Standby Practices), URC
ICC unveils Incoterms® 1990, the fifth revision of the original 1953 rules. It reflects contemporary practices in international trade and the use of intermodal transport. It also contains provisions for the use of electronic messages.

International Commercial Terms (Incoterms®)
The Trade and Investment Hub (which includes, among others, the ICC Commission on Commercial Law and Practice) sets global standards for international B2B transactions and provides world-business input on commercial rules developed by intergovernmental organisations. A key focus of this particular Hub is the drafting and publication of the Incoterms® rules, essential terms of trade for the sale of goods, as these set out the point at which risk transfers from seller to buyer. For example, ‘Free on Board’ means this happens when the goods have been loaded on board the vessel. A revised version, Incoterms® 2020, is due for publication in late 2019.

Dispute handling
A huge impediment to trade is the volume of disputes and, with the costs of litigation eating into a cross-border deal’s profitability, international arbitration is an attractive solution. ICC provides a number of formal arbitration and alternative dispute resolution services, including the ICC International Court of Arbitration, the world’s leading arbitral institution. In addition, a less formal alternative exists in the form of a rapid, cost-effective, document-based procedure known as DOCDEX (ICC Rules for Documentary Instruments Dispute Resolution Expertise).

We are committed to moving financial investment to a long-term and sustainable trajectory
Olivier Paul, Director, Finance for Development, ICC
Financial crime
ICC Commercial Crime Services (CCS) is the anti-crime arm of ICC and is based in the UK. It is a membership organisation comprising:
• The International Maritime Bureau (IMB);
• The Financial Investigation Bureau;
• The Counterfeiting Intelligence Bureau; and
• FraudNet.

The IMB’s main task is to protect the integrity of international trade by seeking out fraud and malpractice. It provides training courses and lectures on how to spot fraudulent trade finance transactions. The IMB has observer status with Interpol and a memorandum of understanding with the World Customs Organization. It also publishes a weekly piracy report and maintains a 24-hour piracy reporting centre in Kuala Lumpur.

Under the auspices of ‘advocacy’, ICC supports the establishment of effective financial crime risk management standards and has in place a specific working group handling financial crime risk and policy. One key release involved working jointly with the Wolfsberg Group and the Bankers Association for Finance and Trade to publish a paper entitled Trade Finance Principles,11 which addresses the standards for the control of financial crime risks associated with trade finance activities and seeks to aid compliance with national and regional sanctions and embargoes.

Sustainable business
ICC works to promote sustainable, inclusive and responsible business and is committed to aligning and mobilising businesses to strengthen the global response to climate change.

Unveiled at the 11th World Chambers Congress, the Chambers Climate Coalition brings together ICC and its World Chambers Federation to call for global cooperation to ensure climate solutions are deployed at scale to enable cleaner and more resilient economies.

Showcasing the pivotal and essential role that the global network of chambers can play in driving climate action, more than 450 chambers of commerce from six continents have signed the agreement. The objectives are:
• To advocate for climate action within business networks and for well-conceived policies to limit the global average temperature rise to 1.5°C;
• To support the goal of achieving net-zero emissions globally by 2050;
• To mainstream climate mitigation and resilience guidance into chamber services;
• To work with public and private entities to support effective climate solutions as part of a transformational change that works for both people and the planet; and
• To reduce the greenhouse footprint from chamber activities without delay.

A digital future
A vital means of delivering “the spirit of modernity” that ICC Secretary General John Denton talks about is making digitalisation of trade actually happen.
In ICC’s 10th annual *Global Survey*, published in 2018, he articulates a common theme at industry events: “Digitalisation will make trade more inclusive.”

To anticipate and accompany the digitalisation of trade finance, a working group launched on 6 June 2017. Its key focus is to help the trade finance industry realise the many benefits of digitalisation, including transparency, time and cost savings, reduced errors and reduced compliance and operational risk. It has three main objectives:

- Evaluating the ICC rules and ensuring they are “e” compliant, i.e. enabling banks to accept data versus documents;
- Developing a set of minimum standards for digital connectivity of service providers across legal, liability, information security and technology (part model agreement/part technical standard document); and
- Examining the legal and practical issues related to the validity and value of data and documents in digitised form.

An updated version of eUCP (Uniform Customs and Practice for Documentary Credits Supplement for Electronic Presentation) and a new eURC (Uniform Rules for Collections Supplement for Electronic Presentation) were approved by ICC National Committees during March 2019 and came into force on 1 July 2019.

In addition, a proposal for the drafting of a new set of rules with the working title ‘Uniform Rules for Digital Trade’ (URDT) has been approved. Rapid evolutions in new technology are changing trade and supply chain finance with the result that businesses are seeking solutions that will deliver greater control and visibility within their supply chain ecosystem. The objective of the URDT is to develop a high-level framework in which businesses can operate by referencing the rules in their establishment and execute financial obligations within their own unique process and technology constructs. The provisional intention is to have the first draft available to ICC National Committees before the October 2019 ICC Banking Commission meeting in Paris.

The merchants of peace have come a long way as they embark on their journey into their second century.

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**Sources**

2. See https://bit.ly/32uQt9K at advance.org
5. See https://bit.ly/2YVVoelM at iccwbo.org
10. See endnote 9
In 1981, three years after China decided to open its doors and put in place the economic reforms that were the vision of former premier Deng Xiaoping, a young farmer from Linzi in Shandong province had another vision.

One would be forgiven for thinking it could have been a dream of an international football career. After all, Cuju – a game played in ancient China by kicking a ball around that is widely held to be the progenitor of today’s game of football – started life 2,000 years ago in the very same province.

Ma Zhi Qing ran a 240-strong grain farming people’s cooperative, and at 22 years old was already a highly experienced manager. But he saw opportunities to develop a business with national and international impact. “Our agricultural businesses needed better logistics, so I invested my savings in my very first tractor,” reflects Ma. “By 1983, I had tripled my business and had three tractors, so I decided to invest again – but this time in my first truck, so that I could get into construction transportation logistics.”

I meet Ma, now the founder and president of one of China’s largest independent oil refineries, along with members of his senior team, at their industrial premises in Zibo, a three-hour high-speed train journey south from Beijing. He is justifiably proud of the recent installation of new refining machinery and we take a tour of the entire works, complete with the health and safety-approved hard hat and jacket. This includes a visit to the ‘engine room’ where every part of the factory is visible from a central hub of screens, ensuring that any disturbance to the journey of crude through to refined oil is tackled with no downtime. His team explain how some processes have a mirror set of equipment so production can be continuous while one set rests.

This article tells the story of how pre-delivery finance positioned what was one of a number of Shandong-based independent refineries to move to a new phase of organic growth.

Foundations
By 1985, Ma had been moving limestone in his trucks for the highway construction industry as rural tracks became country roads. At this point, his role in this transformation graduated from quite literally the underground upwards when the opportunity to transport the bitumen that forms the macadam on the road surface in an oil tanker presented itself. An oil tanker was acquired, and then another and another, and when the fleet had grown to more than 12 tankers and trucks by 1994, they started to manufacture bitumen themselves. This involved buying heavy oil (the final residue in the refining process) from the local state-owned refinery. However, Ma always took a particular interest in the special oil that was used to lubricate the machinery.

Fast-forward to 1997, when Ma further invested and expanded the bitumen capacity, upscaling the technology from its basic beginnings to move the quality output from country road-standard bitumen to that required for motorways. Key to all of this expansion, says Ma, was the company’s close cooperation with its supplier of crude: Shandong-headquartered Qilu Petrochemical, part of state-owned Sinopec. Qingyuan Group was launched in 1998 and capacity had hit 80,000 tonnes a year by 1999.

Were it not for China’s economic reforms, Ma Zhi Qing would still be running a farm. Today he leads a multi-billion-dollar petrochemical corporate. Clarissa Dann visited the team to hear more about the role prepayment finance is playing in Shandong Qingyuan’s growth story.
Crude oil distillation unit at the Shandong Qingyuan refinery
Oiling the wheels

An important by-product of bitumen is wax oil, or base oil. This is bought by lubricant manufacturers such as Kunlun Lubricant (part of PetroChina), which adds a small amount of additive to develop different lubricants that find their way into most aspects of modern living – motor oil, cosmetics, printing equipment, pharmaceuticals, and foodstuffs and food wrappings being just a few examples. The proportions are around 99% base oil and 1% additive. However, the American Petroleum Institute (API) set the international standard in 1993, categorising the oils into five groups according to refining method, viscosity, proportion of saturates and sulphur content.

Qingyuan had registered its first branded base oil product in 1999, entitled ‘Qingyuan’, but while it was suitable for local tractors, it needed to be at least API-I standard for this new product line to have a chance of expansion beyond the farm vehicle market. Ma reflects: “We looked at what products were required to lubricate the tractors and step by step we developed our special oil.”

By 2005, Qingyuan had repositioned itself as a major base oil producer and was focusing on continual quality improvements and increased capacity. The product mix now includes other refined products such as diesel, gasoline, residual oil and hydrogenated naphtha. “To stay ahead of the game is to continue extending our value chain. We wanted to be innovative and go into downstream industries with our latest technologies and products,” says Ma.

Today the group is the largest privately owned producer of base oil in China, with a processing capacity of 8.6 million tonnes per annum (mtpa) and a production capacity of 1.9mtpa of API-I, API-II and API-III base oil types. It now accounts for around 35% of China’s overall capacity of high-quality API-II and API-III base oils.

Certified with the ISO 9001 quality label, Qingyuan is one of 27 API-certified companies in China. In addition, it has moved further up the value chain with its own sales of finished lubricating oil, transformer oil, other specialist oil products and aviation kerosene. In 2016, the group became the only domestic producer of white oil, the highest-quality base oil, which is widely used in pharmaceutical and medicinal applications, cosmetics and food industries. Starting with a white oil production capacity of 0.1mtpa, Qingyuan
has gradually ramped it up to the current 1.0mtpa, with plans to double that to 2.0mtpa by the end of 2020.

International trade environment
Although a huge amount had been achieved in three decades, Ma was keen to widen the gene pool when it came to sourcing crude imports, to include global oil majors. The Chinese authorities had been granting crude oil import licences to independent (i.e. non-state-owned) refineries such as Qingyuan – known ironically in the industry as ‘teapots’ because of their small size in comparison with state-owned enterprises – since 2016. By the end of that year, around 19 independent oil refineries had import quotas of almost 1.5 million barrels per day (mbpd) – more than the net imports of some European countries. Qingyuan’s total crude oil import quota for 2019 is 7.04mt.

Chinese product supplies had surged, leading to an increase in exports to other Asian markets.2 But this could not last, and a period of market consolidation followed once the teapots had expanded to compete with state-owned groups. A battle for market share between independent and state-owned companies unfolded, complicated by a slowing demand for refined products in a climate of excess capacity. As the Financial Times put it in 2017: “The goal for the surviving independent refineries is to put pressure on state-owned companies to become more efficient without creating an existential threat to their dominance.”3

Access to dollars
To take advantage of the crude import licence quotas, the group needed to settle...
Qingyuan Group first tapped the onshore USD market in early 2016

Frank Wu, Head of Structured Commodity Trade Finance Asia Pacific, Deutsche Bank

crude purchases in US dollars, explains Finance Director Chen Chun Xia. In addition, rising oil prices and increased working capital requirements meant that facilities from Chinese banks alone were no longer enough. “The refining business relies on availability of funding and it is a capital-intensive business,” she notes.

With a good track record of API-II and API-III quality base oil production behind it, together with Qingyuan Group’s additional revenue streams such as plastics, and overall financial stability (profits were continuously reinvested in the plant and machinery), the group was now attractive to international lenders.

A tightening of China’s currency outflow regulations from the State Administration of Foreign Exchange as part of Beijing’s move to boost currency and protect FX reserves in 2016 made offshore financing an attractive option for corporates seeking deeper dollar liquidity. “Qingyuan Group first tapped the onshore USD market in early 2016 and then the more liquid offshore USD market via the US$650m facility in June 2017,” recalls Frank Wu, Deutsche Bank’s Head of Structured Commodity Trade Finance Asia Pacific. Since then, the refinery has been steadily moving its funding from onshore to offshore.

Jiu Ching (HK) Holding (JCHK), an affiliated trading arm of the group, went on to sign three pre-delivery finance loans in 2018 – two for US$250m and a third for US$430m – for the purchase of crude oil from Trafigura and BP for onward sale to Shandong Qingyuan. Attracting a seven-bank syndicate of mandated lead arrangers comprising ABN AMRO, Commonwealth Bank of Australia, Deutsche Bank, First Abu Dhabi Bank, ING, Sumitomo Mitsui Banking Corporation and Westpac, this was self-liquidating debt.

The loan proceeds are disbursed to JCHK and used for crude oil purchases from the crude suppliers under a supply contract. JCHK then on-sells the crude to Qingyuan under a feedstock purchase contract. By acting as the co-borrower, Qingyuan plays the de facto guarantor role.

The facility relies on the performance of Qingyuan under the off-take contract; in other words, the ability to produce and deliver base oil to its distributor partner, CNOOC. It has a one-year tenor matching that of the facility and specifies the minimum value of base oil deliveries based on the debt service coverage ratio of 135%.

The three pre-delivery financing facilities, all closed in 2018, collectively went on to win a
TXF Best Overall Commodities Finance Deal of the Year 2018 award, and Ma brought his team to Amsterdam to celebrate their success. Talking to Trade Finance TV shortly before the presentation, Ma reflected: “It took 38 years to get from my farm to where we are now. Were it not for the opening up of the Chinese economy, we would not be here now – I would still be on the farm. But we made it, and I could realise my dream of building an international business.”

Western eyes
I ask Ma and his team about their export plans. Thus far, Chinese demand for base oil-related products has outstripped capacity. However, the existing relationships with oil majors and commodity traders, and now international banks, have paved the way for developing Qingyuan’s export client bases. “I believe the market will continue to be open to us and the reform of the Chinese economy will continue,” he says.

Ma adds: “As a privately owned enterprise we were granted crude oil import licences that enabled us to source crude oil from international traders. With the support from international banks we have grown and reinvested our profits. We do believe this trend will continue and we will continue to work with international banks.”

And there is no shortage of banks happy to be part of this winning team.

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2 The Rise of China’s Independent Refineries, by Erica Downs, Columbia SIPA Center on Global Energy Policy, September 2017
3 See https://on.ft.com/2eLG4yT at ft.com
In an environment where global supply chains connect large and small enterprises, where real-time payments are becoming the norm, and where there is increasing scrutiny of corporate social responsibility, supply chain finance – empowered by intuitive data analysis – comes into its own, explains Enrico Camerinelli.

Sustainable supply chains see the participation of public authorities or private corporations seeking to achieve the appropriate balance between financial, environmental and social considerations in the execution of procuring goods and delivering services or works at all stages of the value-transformation cycle. Such considerations pertain, for instance, to the respect for core labour and safety standards in the production process, and the energy efficiency performance and innovative characteristics of the purchased products.

SMEs and trade facilitation
Trade facilitation programmes and practices have concentrated on a variety of mission-critical elements in both the public and private sectors, from education to logistics, and from infrastructure to regulatory considerations. Focusing primarily on the physical movement of goods and developing solutions around it are the commonly understood scopes of trade facilitation. However, the exclusion of financing as an element of these efforts, and as a key component of trade facilitation, misses a critical commercial reality that underpins global trade flows, trade relationships and international supply chains. New banking regulations have, in many cases, made access to trade finance more difficult for small and medium-sized enterprises (SMEs) than before, particularly when SMEs are based in developing and emerging markets, as is the case today for many SME suppliers linked to global supply chains.

SMEs play a significant role in global trade flows and economic value creation, as long as they can access timely and affordable financing – especially financing for their import–export trade operations. Since the 2008 global economic crisis, the financing of international trade has gained an unprecedented visibility among political and business leaders, with trade now being acknowledged as one of the major mechanisms that support economic recovery. Lack of adequate financing (including risk mitigation) is consistently identified as a major obstacle to the pursuit of additional opportunities in international markets. The credit crunch of the 2008 crisis was a wake-up call for corporate executives, who had to quickly find alternative sources of funding. Pockets of free cash were found by improving receivables collection and rescheduling payments with trading partners. Trade then became an engine of recovery and a subject of focus.

Beyond the bilateral
While traditional trade finance mechanisms involve trade on a bilateral basis (i.e. one buyer and one supplier), supply chain finance (SCF) schemes look at trade more holistically, in terms of the ecosystem of commercial relationships that make up an international (or global) supply chain. This foundation can then lead to consideration of the potential for better linking SCF schemes to trade facilitation practices. Financing can be provided at numerous points in the...
transaction life cycle, including against a legally recognised payment obligation (such as an invoice approved for payment), or against a receipt evidencing that the goods are held in a trusted/secure warehouse facility and can remain accessible to the lender until repayment is made. Suppliers may prefer to obtain payment immediately by having a bank discount the draft and remit monies through a loan, with repayment of the loan to take place when the obligation becomes due. Similarly, a buyer can delay the point at which it remits payment by arranging for a bank to pay the supplier but only seek reimbursement from the buyer at an agreed future date.

At many points in the life cycle of a trade transaction, a financing option or solution can be offered to one or more parties. Some options are linked to specific steps – or phases – of a trade transaction, such as the issuance of a commercial invoice or the transfer of ownership between supplier and buyer. Such event-triggered (i.e. event-based) financing might be offered at one or more points in a typical trade transaction (see Figure 1 on page 49).

Finance practitioners may present solutions in connection with transaction-related events that can serve as a basis for financing. These events include the:
- Creation of a purchase order;
- Issuance and acceptance of an invoice; and
- Acceptance of a bill of exchange under a letter of credit.

Supply chain practitioners also link SCF discussions to working capital management and optimisation, and the management of days sales outstanding or days payable outstanding.

Legal frameworks
Legal norms and prescriptions can certainly facilitate the execution of SCF schemes by creating a sense of confidence. Furthermore, they may represent a compelling reason to implement rules that would otherwise be ignored. It is widely acknowledged, however, that legal acts per se do not solve an issue. As an example, if the provisions of the EU Late Payment Directive¹ are strictly enforced, two unintended consequences may happen:
- SME suppliers risk winning in court but losing the contract. A supplier that can prove in court that it has been subjected to grossly unfair payment conditions by a client (likely a large multinational corporation) will probably claim the repayment of the recovery costs for payments delays plus the interest on the delayed payments. The likelihood is high, however, that the large multinational client will cancel the contract in retaliation.
The second unintended consequence is even more subtle and disruptive. The circumstance may occur in which the supplier is a large multinational and the buyer is an SME. This is not infrequent in industry sectors such as automotive, electronics and consumer goods. If the supplier (i.e. the large multinational) claims that payment terms received from the client (i.e. the SME) are higher than the ones established by the directive, it can go to court and, pursuant to the terms of the EU Late Payment Directive, receive more favourable conditions (i.e. get paid earlier). And the risk for the large supplier of losing the contract with the smaller client has very little impact on the supplier’s overall business performance. The conclusion is that the application of the directive has only negative consequences for the SME buyer, which now has to pay the supplier earlier and takes a hit on its working capital profile.

Of course, none of the above scenarios are the intended outcomes of the EU Late Payment Directive. SMEs can be comforted that government-based trade facilitation initiatives communicate public sector concern towards easing the burden of a long-lasting crisis off the shoulders of financially proven SMEs. With these initiatives, public bodies intend to avoid criticism of lacking clout with the larger buyers and want, instead, to set a binding contract between anchor buyers and political bodies that uses their weight to improve the financial conditions for SMEs.

Corporate social responsibility (CSR), for instance, represents one of the most significant initiatives that strongly connect public regulatory intercession between large multinational anchor buyers and their SME supply base. Public authorities are leveraging the reality that buying goods from – or trading business with – socially responsible companies is becoming a strong business-selection criterion in public opinion. It is also a reason why those companies that do not fulfil the criteria of CSR are being heavily hit with negative brand reputation.

CSR is a serious matter, defined by the European Commission as the responsibility of enterprises for their impacts on society. To further the integration of CSR into business practice across the EU, the Commission published a new policy on CSR in October 2011.²

CSR applications of SCF
Financial institutions should benefit from – and take advantage of – this new CSR sentiment. They service clients that want to kick off payment-related codes of conduct on behalf of their trade partners (i.e. suppliers and distributors) but not to the detriment of worsening their own working-capital values. Banks can leverage their SCF proposition and offer appropriate solutions to corporate clients who are eager to be financially responsible with their SME suppliers.

Just as the impact of social responsibility is setting the pace of the EU political agenda, CSR’s impact on business results is so high on banks’ lists of priorities that the chief executives of some of the world’s largest banks³ created the Banking Environment Initiative (BEI) in 2010.⁴ Its mission is to lead the banking industry in collectively directing capital towards environmentally and socially sustainable economic development. The BEI achieves its mission by focusing on topics where industry-wide action is needed. The most important of these is to identify how banks can better support their corporate clients’ needs on key sustainability topics.

In 2010, the Board of Directors of the Consumer Goods Forum (CGF) committed its 400 members, representing a combined procurement power of over US$3trn, to achieving zero net deforestation in their supply chains by 2020. The BEI answered this call for action by issuing the Soft Commodities Compact,⁵ the result of two years of extensive collaboration with the CGF, to establish how to align the banking industry with this goal.

The Soft Commodities Compact includes two commitments:
- Banks will work with consumer goods companies and their supply chains to develop appropriate financing solutions that support the growth of markets producing palm oil, timber products, soy or beef without contributing to deforestation.
- Banks, where needed, will raise the standards they expect of certain players in the supply chain.

US$3bn
dispersed by IFC’s GTSF to nearly 1,000 suppliers across 14 countries since 2012

Source: IFC
Supporting SMEs via SCF requires more than simply offering a selection of financial instruments

clients in high-risk geographies so that they are encouraged to improve their sustainability performance in line with CGF expectations through 2020.

The first tangible result of the Soft Commodities Compact is the Sustainable Shipment Letter of Credit (LC), a financing solution that can be used by banks to incentivise the international trade of sustainably produced commodities. By allowing trade finance banks to differentiate between sustainable shipments and conventional ones, the Sustainable Shipment LC opens up the opportunity for banks to encourage and financially support growth in the trade of sustainably produced goods. The International Finance Corporation (IFC) – a member of the World Bank Group – has confirmed it will offer preferential terms for this type of shipment to its partner banks, offering potential reductions in the cost of capital.

In line with such SCF-supported CSR strategies, the IFC launched the Global Trade Supplier Finance (GTSF) Program to provide short-term, post-shipment capital to suppliers in emerging markets immediately after the buyer agrees to pay. GTSF determines the supplier’s interest rates based on a combination of the buyer’s cost of credit and the supplier’s performance against the buyer’s environmental and social (E&S) standards. It offers suppliers monetary incentives to make E&S improvements, and helps them pay their workers fully and on time. In Vietnam, under the GTSF Program, the IFC has joined forces with Nike, Puma and other brands to form the Vietnam Improvement Program, and has cumulatively disbursed more than US$270m to their suppliers.

End-to-end analysis

Supporting SMEs via SCF requires more than simply offering a selection of financial instruments. It demands a more thorough (i.e. smarter) approach that consists of understanding and mapping a company’s information flows, business and operational processes, and data insights. By leveraging CSR criteria, far-sighted banks will start assessing corporate credit risk using statistical data related to a company’s end-to-end supply chain performance – which could encompass on-time deliveries, compliance with sustainability protocols, correct shipping documentation and on-time payments – in order to obtain a more accurate risk profile. This will allow banks to decide what degree of risk they want to take and enable them to price it accordingly.

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Heart of the enterprise

Business software provider SAP leads a consistent programme of innovation, the latest being its digital boardroom. Head of Global Treasury Steffen Diel demonstrates why leaving one’s comfort zone and being permanently curious can work miracles

Shortly before the reunification of Germany in 1989, one young Deutsche Bank vocational trainee at the Mannheim office found himself in East Germany when Berlin-based Deutsche Kreditbank sold the corporate and private banking deposit-taking business to Germany’s largest bank as part of the currency union.

“It was an exciting time and an absolute highlight of my training,” says Steffen Diel, now Head of Global Treasury at enterprise application software provider SAP. “Our counters were open for 10 hours a day and there was a constant flow of people wanting to invest their money in savings plans and other products,” he recalls. This was the first time savers had encountered a Western bank and it was a round-the-clock operation to collect the East German marks and write the savings plans.

In the H1 2019 issue of flow, we talked to Stefan Gruber about the investor relations element of SAP, who provided the background to how SAP was founded and its growth trajectory. This second part of the story goes into the engine room – or digital boardroom – with Diel, sharing the corporate treasury perspective and revealing how SAP quite literally “drinks its own champagne” (as the company puts it) when designing winning treasury solutions.

In the beginning
Diel had always been interested in banking and asset management. “Where you can invest, and how you manage yield and risk, was, at an early age, one of my passions,” he reflects. And it was for this reason he selected Deutsche Bank in Mannheim “to lay a solid foundation” for his future career.

By 1996, Diel knew that his heart really lay in being part of the corporate treasury function rather than a banking career, so he took the plunge and moved to KUKA, the robotics producer, where he stayed for eight years. “I was working directly with the CFO and it was a great experience starting the treasury function from the beginning where you could design it properly and build connections to accounting and to the planning team.” As it happened, they implemented SAP as their enterprise resource planning (ERP) scheme at the time, with treasury being the very first module.

“Sometimes people ask me if 20 years or so in treasury is boring, and I always say the same thing – it is not, because treasury isn’t just treasury, it provides answers to accounting, tax, planning and investor relations questions every day, so I am always using the business administration I covered in my studies, and I can apply it on a very wide basis.” Diel believes it is this breadth of application that explains why people stay in treasury for a long time.

Digesting growth
Nobody, says Diel, should notch up years with an organisation without checking their learning curve. And doing that can sometimes mean that it is time to move on. In 2006, he joined SAP as Head of Treasury Finance. He was responsible for group liquidity...
A global presence of banks was a clear criterion when we decided on our core bank group.

Steffen Diel, Head of Global Treasury, SAP
planning, financial risk management, subsidiary financing and the corporate finance remit such as external funding (e.g. mergers and acquisitions finance). Leading a team of four people, he joined just at the time when SAP was looking to the debt capital markets to fund its next phase of growth through acquisition. Up until then, he explains, “SAP never had any financial debt, not a single euro”.

First on the list was Business Objects, which SAP bought for €4.2bn, announcing its inclusion into the company on 22 January 2008. This marked a growing trend of consolidation in the business software industry – Oracle had acquired Hyperion in 2007 and IBM took over Cognos in 2008. A string of other acquisitions followed, including cloud-based business commerce company Ariba (US$4.3bn, May 2012) and expenses toolkit Concur (US$8.3bn, September 2018).

“To take the mergers and acquisitions (M&A) path, we had to develop certain capabilities and expertise from scratch, constantly improving our effectiveness and transforming the financing structure,” reflects Diel. Up until that point, the treasury function was almost entirely focused in Germany, but as the company grew and developed into a global organisation regional treasury teams were set up. “Now we have a team of nine people from all around the world, from São Paulo to Shanghai and Beijing,” comments Diel.

SAP regularly publishes its Days Sales Outstanding and cash conversion ratio, which are, says Diel, “the most important metrics”. Inventory management isn’t really an issue, but overdue receivables involve senior management and SAP has customer councils that are focused on reducing these.

**Capital structure**

When he arrived at SAP, one of Diel’s initial tasks was to write a white paper on capital structure. An updated extract of this was published by *TMI* in 2013.² A proper understanding of a company’s capital structure is an important part of the treasurer’s curriculum, he says, because of “recurring strategic funding discussions with senior management”; and the increased importance of intangible businesses (knowledge-based industries) in the global economy during the past two decades compared with the role of traditional, tangible business models.

For a software company such as SAP in a constantly changing technology market environment it is important, says Diel, “to have the ability to seize opportunities as they arise”. This might be M&A opportunities, but also organic growth investment. “To ensure permanent access to debt financing it is important to have a strong credit rating,” Diel declares. “Since 2010 we have invested more than US$40bn in acquisitions [see Figure 1 on page 55]. And while SAP is a very dynamic and growth-operating business, it has a somewhat conservative financial profile – which is what appeals to both debt and equity investors. The combination plays out very well.”

**Rating preparations**

SAP embarked upon its rating journey in 2014. “We started in the first quarter to prepare the process working with Moody’s and Standard & Poor’s,” recalls Diel. “By the summer we were all set with a single A rating on the horizon. But just a couple of weeks before the ratings committees met to finally decide on the rating, SAP made one of its biggest acquisitions ever [Concur], making our discussions with the ratings agencies void again.”

This is, apparently, a day in the life of treasury, and Diel was pleased that even with the additional debt volume of €7bn, the single A rating was preserved. Track record is imperative to ratings agencies, and SAP’s history of repaying debt quickly when it did not have a rating, combined with its very high cash flow, helped build the trust.

**Inside the digital boardroom**

“Competitive advantage cannot be understood by looking at a firm as a whole. It stems from the many discrete activities a firm performs in designing, producing,
marketing, delivering and supporting its product,” declared the esteemed Harvard Business School Professor Michael Porter.³ Porter went on to classify the value chain into “primary activities” and “secondary/support activities”. Firm infrastructure, including finance, is in the “support” category, but actually holds the whole enterprise together. What SAP has done is develop a means by which organisations can bring both activities together into one dashboard. SAP maintains that some “77% of the world’s transaction revenues touch an SAP system” and that it helps “companies of all sizes and in all industries run at their best”.⁴

At the heart of all this is the ERP system. The architecture has changed over the years – client/server having made way for cloud – but the principle has not. By positioning itself as the ‘must-have’ business application and analytics software, with a consistent innovation programme, the company has not only become the leading global business software provider in the world, but accepts the responsibility this brings when its tools are inside a customer’s enterprise. “We must help leaders in all sectors find the proper balance between human judgement and machine speed”, noted CEO Bill McDermott in the 2018 annual report to investors.⁵

Corporate treasury is a vital component of the support activities and Diel noted there was a huge opportunity to build proper functionality with instant reporting as part of the overall offering, although of course the ERP architecture does not prevent third-party providers connecting through an interface. Diel and his treasury team became the perfect pilot customers. “We see in the treasury community what requirements treasurers have,” he explains. The flagship offering is SAP Treasury and Risk Management, which integrates with cloud-based SAP S/4HANA, the ERP for large enterprises that superseded the SAP R/3 (there is also an SME version). “Its development was heavily driven by my team,” says Diel. Gone are the days of endless customisations that got in the way of developing robust reporting solutions. Now, treasurers can set up dashboard solutions in the SAP Analytics Cloud designed especially for corporate treasury customers.⁶ This is, in turn, integrated into the overall digital boardroom that has feeds from the ERP, customer relationship management and human resources systems to provide, as the website puts it, “one source of truth across all business areas”.⁷ Without the need to connect to third-party technology via application programming interfaces (Diel is justifiably proud of the one-stop-shop approach), the dashboard provides a real-time view of major treasury risk and finance key performance indicators such as:

- Liquidity and investments;
- Financial risk;
- Indebtedness; and
- Trapped cash.

The Deutsche Bank view

Working with SAP as both a client and a strategic partner enables Deutsche Bank to constantly challenge our business model and learn from one of the largest vendors in the enterprise software industry, particularly regarding the importance of treasury workflow integration. In an ever-evolving industry, we are proactively shaping the treasury of tomorrow, rather than being solely bound by the anticipated requirements of the market.

Ole Matthiessen
Global Head of Cash Management
Deutsche Bank

Visiting us at db.com/flow
It also features market overview and scenario modelling tools. “We are working on a cash flow planning tool which is based on the enterprise’s profit and loss and the value driver tree, so you can get the benefit of multi-year planning,” says Diel.

Using fictitious data, he demonstrates how the balance sheet exposures of all SAP subsidiaries around the world can be seen at the touch of a button. “Then you have a report where you can see the accumulated euro exposure of a certain legal entity … and as we drive via thresholds we see exactly which legal entities exceed the threshold,” he adds. When asked for a sample scenario, Diel explains: “If you are a treasurer and have the euro exposure of South Korea, for example, you don’t know what is behind the exposure. It could be a receivable against the US dollar. Or it might be a receivable against the Japanese yen. With this balance sheet exposure application you can drill down to the very last posting and see what drives the exposure.”

This is why, he says, SAP needs banks with a strong regional footprint. The company can’t be in all the countries that use its products. “A global presence of banks was a clear criterion when we decided on our core bank group,” he explains.

“We have had a very strong relationship with Deutsche Bank for a number of years,” Diel adds. “The bank has supported and driven most of our M&A finance transactions, but also in cash management, guarantee business as well as FX and interest rate management. We work closely together. And that obviously presents a broad and intense collaboration platform.”

Right now the team is working on a fraud prevention project via a distributed ledger solution and an ‘intelligent’ (automated) hedging solution.

Our visit to the vast Walldorf headquarters near Mannheim brought back memories of another visit two decades earlier to
the US Microsoft ‘campus’ in Redmond, Washington, where everyone seemed very at home in their work environment. Creativity and trying new things are also embedded in this company’s culture, along with its passion for continuous learning – and its people. Data scientists and technology experts need to be in an environment they can feel comfortable in – and the same applies to the finance team, which has designated roles such as stewards, business partners and transformation agents.

Diel is justifiably proud of SAP’s approach to diversity, which goes beyond well-written CSR reporting. As Executive Sponsor for SAP’s diversity and inclusion implementation for the board area, he reinforces the message that differently abled people (rather than ‘disabled’) bring unique innovation dimensions just as powerfully as cross-generational inclusion taps into different experience sets.6 Diel says this responsibility brings him “a lot of joy”.

“Above all, be curious,” he concludes. “And leave your comfort zone.” It’s clear that Deutsche Bank’s loss of a talented graduate trainee in 1996 has been SAP’s gain, and Diel is a key artery within the beating heart of what makes SAP such a special kind of enterprise.

The Deutsche Bank flow team talked to Group Treasurer Steffen Diel at the SAP Walldorf headquarters on 28 June 2019

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Figure 1: Selection of SAP acquisitions since 2012
Nov 2018 Contextor SAS. Robotic process automation technology and strategic for SAP S/4HANA
Nov 2018 Qualtrics. Technology platform for experience data management, with 9,000 enterprises on the platform. US$8bn
Jan 2018 Recast.AI. Conversational artificial intelligence technology
Sep 2017 Gigya. Customer identity and access management
Dec 2016 Abakus. Cloud-based cross-channel marketing measurement solution
Sep 2016 Hipmunk. Travel search technology (to align with Concur)
Sep 2016 Altiscale. Big data-as-a-service solution
Sep 2016 Plat.One. Internet of Things platform
Jun 2016 Fedem. Engineering analysis and modelling software
Feb 2016 Roambi. Mobile-centric analytics and data visualisation solution
Oct 2015 Multiposting. French software-as-a-service recruiting software
Sep 2014 Concur. Cloud-based expense management and solutions. US$8.3bn
Mar 2014 Fieldglass. Contingent labour procurement and workforce management solution
Jan 2013 Ticket-Web. Online ticketing solutions for sports and entertainment venues
May 2012 Ariba. Cloud-based commerce network and spend management solution. US4.3bn

The full list since 2010 can be viewed at https://bit.ly/2Kvbvg4, sap.com
Creative sounds

Until Spotify disrupted the music ownership model, the music industry was under siege from piracy. Now revenues are growing again, and the landscape has changed for both artists and fans. Clarissa Dann reports on how the Swedish audio media phenomenon has applied its corporate treasury infrastructure to support this incredible growth story.

“For a start, you can throw out all those CDs that are taking up that shelf space,” said Daughter Number Two. “Nobody listens to music that way anymore.” She then proceeded to download an app onto my phone in the form of a green blob with soundwaves, and quickly demonstrated with carefully chosen samples that my entire music collection – from David Bowie, Pink Floyd and Dido through to the complete set of the Monteverdi Choir’s *Bach Cantatas* (in church year order) – could be Bluetoothed across from my iPhone to a portable speaker.

In fact, it was annoyingly easy to get going, and I have never looked back. Nor, it would appear, have 100 million other paid subscribers of this Swedish audio streaming platform that provides digital rights management-protected music and podcasts from record labels and media companies where almost 70% of revenues are paid back to the music industry in royalties.

The Spotify story was one of the main points on the agenda at a recent Global Treasury Leaders Summit staged by The Economist Events; part of a treasury engagement programme supported by Deutsche Bank that won a World Media Award. Presenting at the event, Spotify’s new Treasurer, Patrik Hallerström, shared with delegates how enabling innovation and adapting technology in small steps supported Spotify’s rapid growth from its formation in 2006 through to its listing on the NYSE in April 2018, and onwards to the €5.98bn revenues reported for 2018. Before he joined Spotify, Hallerström had spent 15 years in various positions in treasury departments in the manufacturing and telecoms industry. It was the perfect preparation for navigating this particular industry disrupter.

**Pirates of the airwaves**

During a 15-year period from 1999 to 2014, music industry revenues declined by 40%, with piracy being the main culprit. The
There is a lot of focus on how we should invest cash in the right way to continue our growth.

Patrik Hallerström, Treasurer, Spotify
all-time revenue high of US$27bn within the worldwide music industry in 1999 had almost halved by 2008, despite a range of efforts to tackle the problem. Sweden, noted The Guardian in 2013,¹ “had the worst piracy in the western world”, and record labels were laying off staff. The ownership model, explained Hallerström, was broken and artists were suffering.

In 2006, Swedish entrepreneurs Daniel Ek and Martin Lorentzon deployed their knowledge of technology and their passion for music to find a solution. The mission was to help change the way people enjoy and discover music via a method that did not involve piracy and downloading. As Ek put it in an interview with The Guardian: “People were listening to more music than ever in history, and yet the music industry was doing worse and worse. So the demand for content was there, but it was a different business model.”

Enter streaming. Record labels were approached with content rental propositions, engineers were hired to develop the optimum technology and Spotify (literally ‘spot’ and ‘identify’) was built on a core set of values that underpin it today: innovation, passion, collaboration, transparency and fairness. “It’s part of Swedish culture and it’s how we work together, how we treat our users, and how we want to be seen in the community,” said Hallerström. Spotify streams audio experiences (music and podcasts) on different platforms and wants to be wherever the users are – tablets, smartphones and laptops.

Launched originally as desktop-only in the Nordics, France and Spain in 2008, the service reached the UK in 2009 where it started to gain momentum with paid subscribers, then continued in 2010 to the Netherlands and then on to the US which, said Hallerström, “was and continues to be a critical market for us”. The service reached Australia in 2013 and global adoption continues apace, while all the time work continues in getting the music industry to understand that streaming and digital delivery is the future.

By March 2019, Spotify reported an unassailable 217 million monthly active users, 100 million of which were paid up subscribers (see Figure 1 on page 59). In its 2018 annual report, the Recording Industry Association of America (RIAA) noted that in the US, “Revenues from streaming music platforms grew 30% year-over-year to reach US$7.4bn, contributing 75% of total revenues for 2018, and accounting for virtually all the revenue growth for the year.”² In other words, streaming has reinvigorated industry revenue growth and afforded artists a channel through which they can distribute and amplify their work in the most efficient way possible.

Scale and flexibility
“What makes us successful is our ‘freemium’ business model,” explained Hallerström. “It provides us scale and flexibility and reduces friction. It is actually very hard to monetise a free business model, but it’s also hard to scale up a paid-only model. So freemium works for us – around 50% of free users become subscribers over time.”
These stats resonate as, having personally experienced both the free and paid options, I could not imagine going back to random advertisements and shuffled tunes. It took the company eight years to reach 10 million paid subscribers, but then customer acquisition accelerated and the last 10 million arrived in just four months in the period leading up to March 2019. “There are around 1.3 billion payment-enabled smartphones and only 12% of those are streaming music. We service half of those. We see the addressable market growing to around three billion and we will leverage our freemium model,” Hallerström declared. He continued, “It costs less to acquire subscribers and the lifetime value of being on the platform and getting engagement makes it sensible for us to keep growing and increase the enterprise value of the firm.”

The company works just as hard to attract and retain artists. “We don’t just want to be relevant for our users, but also for our artists,” noted Hallerström. A Spotify artist receives advice and support on how to be more informed about distribution and marketing using the data insights on tracks played. He told the story about a US band that had no idea they were popular in Argentina, but the data pointed to a following there. A tour was booked that was phenomenally successful. “You see other bands changing their set lists on gigs when they see the data, depending on the most popular songs in that country,” he added.

Growth comes before profit right now for Spotify because this increases the enterprise value. A glance at the 2018 full-year accounts reveals an operating loss of US$43m – an improvement on the US$378m loss for 2017. “If we stop growing we will become profitable, but it’s about being the largest in the industry. We have a positive free cash flow and there is a lot of focus on how we should invest the cash in the right way to continue our growth,” said Hallerström.

Operational support
Such rapid expansion demands a lot from support functions around the organisation, and corporate treasury is the lynchpin. Until 2013 there was no dedicated treasury and Hallerström’s predecessor, Johan Bergqvist – who joined in 2013 – not only managed obvious treasury functions but also investor relations, corporate finance and the management of the share register. “As we
grew we put the payment infrastructures in place and focused on how to manage FX risk and positive cash flows from investments,” reflected Hallerström, who had worked closely with Bergqvist from the beginning.

In that time, the treasury function itself has evolved to eight people (seven in Stockholm and one in New York), and the complexities of a business model comprising cash coming in from millions of monthly subscribers in 35 different currencies called for a robust infrastructure that could cope with it all.

Treasury hub
In 2014, the treasury team turned to the Kyriba treasury management system (TMS) to create a “solution-orientated and agile treasury to support short and long-term business expansion”.

According to Kyriba,³ the initial stages of the implementation focused on building the bank reporting architecture via Kyriba’s integrated SWIFT Service Bureau, structuring the Spotify entities to align with the cash pools set up within the enterprise. The TMS provider continues, “A payment import from and general ledger export to the main enterprise resource planning (ERP) solution were set up, as well as a market data feed and online trading platform interface.” Legacy spreadsheet-based cash positioning feeds were reconciled to the new process. Segregation of duties built into the approval workflows were shared between the treasury team and accounting department centrally within Kyriba. This provided visibility and security of payments, while reducing reliance on bank-specific software. The last part of this first stage was the prior day reconciliation workflow with cash categorisation and transaction matching, allowing Spotify to post general ledger journals for all bank activity to the ERP system on a daily basis.

All global payments are run from Kyriba, and its implementation as a payments system into the ERP system itself provides valuable insights on data about group payments – and makes it easier to navigate Sarbanes-Oxley Act (SOX) compliance now that Spotify is listed on the NYSE. SOX is the US regulation in place to protect shareholders and the general public from accounting errors and fraudulent practices.

Enfolding all of this are the Spotify corporate treasury guiding principles. “How do we work?” asked Hallerström. The answer is to “think ahead and not get stuck in the process that works today”. This means working with banks and service providers in order “to get where we want to be tomorrow”. Collaboration, he emphasised, is key both internally and externally with Spotify partners. And all the time, the focus is on scalable processes and technology – Spotify is not encumbered with legacy systems and started with a pretty clean slate. “When we look back, we have not had a huge project that consumed resources – we kept the
steps small and learned on the way, rather than a big bang approach.”

Cash collection and reporting
Although centralised in Stockholm (the majority of the subscription-based flows, with the exception of the US market, go into one entity), treasury is in different markets that require a distinct local presence or activity and a separate strategy for extracting revenues. “We can do this from a centralised treasury while acting local,” added Hallerström.

The majority of cash flows come from Europe and North America courtesy of paid subscribers, with the US representing the largest market for the group. But, said Hallerström, “Latin America is doing really well and we have gained traction in Mexico and Brazil. The expansion drives investment in infrastructure and we need to ensure we have scalable processes in the organisation and in treasury.”

Before Spotify enters a new market, the team do their homework well in advance, as challenges and set-up vary from market to market. “The Nordics and the UK have a lot of paying subscribers compared with free users, and in Spain and Italy the reverse happens and a lot of work goes into converting free to paid. When we enter India and other emerging markets, we have to think different, as users in those markets are not accustomed to paying for streaming music.”

The freemium business model requires intuitive financial systems to ensure that non-paying active users remain separated from premium paid users, and that assumptions for forecasting on conversions from free to paid are accurate. In addition, with new users joining each month, accounting systems have to deal with the fact that a proportion of each subscription falls into the next financial year.

Robotic process automation
Another area of development is on the currency risk segment. Spotify did no FX hedging before 2016, and given that it collects revenues in 35 different currencies there is a significant FX exposure to manage. Hallerström said that the company has now implemented a hedging programme, automated it and added robotics.

This, he added, “is not about taking work away from people, but more allowing the robot to do repetitive work, so that we can take informed decisions and work on other tasks.” The treasury team started small by taking low-hanging fruit and using robotic process automation (RPA) to transform six different financial processes. Getting it all to work means being sensitive to where other stakeholders in the finance team are on the journey. “If the robot breaks, we need people to understand the process and what to do. Careful use of RPA is about working out what is right for your business and trusting your gut instinct,” reflected Hallerström.

The group is continuing to find new ways to innovate and is one of the 28 supporters of Facebook’s new cryptocurrency project, Libra. Others include Uber, Mastercard and Vodafone.

The exciting journey continues.

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Filling the data lake

As real-time cash management shapes the consumer experience and negative interest rates attack passive deposits, corporate treasurers are employing API-enabled analytics in determining what cash needs to move where and to optimise their FX positions, reports Elizabeth Pfeuti
As the world enters an era that thrives on low latency, it is up to treasurers – and their banking partners – to bring their liquidity management up to speed. Failure to do so would lead to falling behind both competitors and the demands of customers and regulators, while missing out on the biggest opportunity yet to embrace business efficiency.

Among the key changes treasurers need to tackle is the switch from the London Interbank Offered Rate (Libor), the Euro Interbank Offered Rate (Euribor) and the Euro Overnight Index Average (EONIA) to other UK, European and global overnight rates. Contracts drawn up using rates that will soon become obsolete need to be rolled over or renewed, to be in place for when the updated indexes take over.

An additional task for companies operating in euros is to adapt to running two rates: the Euro Short-Term Rate and the new Euribor from 2022. But as market participants feel their way in this new landscape, liquidity might initially be less than they are used to. In this case, contingency plans – which treasurers should be comfortable with – should be crafted and put in place early on.

Changing regulation has added to workloads, but, along with the other challenges, it has also created an opportunity to seek out new and more efficient ways of finding the right balance of company liquidity. That upside is not lost on enterprise resource planning and treasury management systems vendors as they deploy cloud technology to bring dashboard/flight-deck visibility to corporate treasury teams – SAP being one example of this.¹

Lightning reactions
“The key for businesses is to have optimum liquidity to enable lightning-quick reactions to the consumer, supplier and regulatory...”
demands,” says Vanessa Manning, Global Head of Liquidity Management at Deutsche Bank. This translates as the ability to have cash instantly available at any point in the working day for whatever purpose – the holy grail for both corporations and those who work with them.

“Initiatives such as the Single Euro Payments Area and revised Payment Services Directive have raised the ante for both businesses and their banking partners, while intercompany loans and transfers, such as those demanded by profit split guidance issued by the Organisation for Economic Co-operation and Development, mean cash has to be moved around the internal company architecture frequently and efficiently,” adds Marc Recker, Head of Cash Market Management at Deutsche Bank.

CFOs need to be aware of all these moves to ensure tax and interest are correctly accounted for and can be agreed by all parties. A complicating factor is the disparate nature of even small companies. Many are split by country, division, historical launch and diverse other business-led factors. This means many operate as stand-alone entities with their own processes, staff and systems, which may have mushroomed due to mergers and acquisitions and/or global expansion.

For those trying to oversee company-wide liquidity, this is the worst of all possible scenarios. It is inefficient and costly and impedes the visibility required by management to drive forward corporate planning. It is no surprise, therefore, that centralising corporate treasury is a firm favourite at EuroFinance and the Association of Corporate Treasurers conferences and training events.

“The answer to the liquidity question, for corporations at least, is not to hold more cash but make more cash available, with visibility the first link in that chain,” says Manning. “The sticking point for many is that account structures have remained the same for 20 years or more. Demands from consumers and regulators have moved more quickly than businesses, and their partners have been able to react.” Tough trading conditions in the aftermath of the financial crisis have also often limited the availability of upgrade investment.

While a significant exercise, rationalising the number of accounts in use by a company can significantly cut costs.

More than that, bringing disparate pools of cash into one place also allows much better visibility of what is available – and what is going on in a business.

Banking partners have taken the initiative to offer solutions for managing the number of accounts held by businesses of all sizes and how they work together. Taking accounts online is the first step to consolidation and instant access. Virtual accounts offer new tools that facilitate manual processes, such as invoice matching and automatic account closure following a period of inactivity. By consolidating and streamlining cash pools, CFOs have improved visibility of their accessible liquidity and can take the next step of upgrading the end-of-day processes.

The application programming interface (API) era

Working in real time is something treasurers have seldom had to do, nor have they had the tools available to enable it. End-of-day processes that sweep cash at a set point regardless of what trading happens afterwards have been the standard for decades. This system requires companies to hold extra cash in case of errors or slippage, which is inefficient and costly, especially with some regions’ negative interest rates hitting overnight deposits.

But this current and traditional method could soon be history, as banks and their partners work to implement networks that talk to each other 24/7. A global industry study of more than 300 corporate CFOs and treasurers by financial services consultancy Ideas and Action found that “corporates’ expectations today are very much related to the ability to scale, automate processes and gain efficiencies”, and that “the most important capabilities they look for from their banks today are the ability to process transactions in real or near-real time, the ease of using online banking systems and platforms, and provision of mobile banking” (see Figure 1).²

The momentum is coming from supply chains and the corporate customer network; particularly for those corporates facing consumer markets. A 2018 Economist Intelligence Unit (EIU) report, The future is now: How ready is treasury?, noted that “treasurers now see multi-channel payments and mobile as sources of disruption to their underlying businesses. This means they will now have to adapt their models to be able to deal with changes in supply chain product life cycles and real-time ecommerce”.³
In a real-time environment, businesses can move funds and resolve issues as soon as they present themselves, rather than wait for the allotted time to analyse. This is a huge step forward; no longer needing to maintain cash pools in case funding runs short, they now have what amounts to a ‘just in time’ approach to liquidity management that sees cash allocated as required and sweeps it away to work harder when it is not. This approach brings greater precision to the timing of supplier payments, servicing of loans and provision for tax obligations. Under new rules on profit appropriation, intraday settlement and real-time liquidity can ensure a company is both compliant and able to demonstrate at a moment’s notice its cash position and records.

The era of APIs has hit banking and is starting to percolate through to corporate treasury clients. The use of APIs, which is gaining pace in retail banking, highlights how digitisation allows partners to communicate seamlessly and automatically in order to bring accounts up to speed in real time. As conduits in the proliferation of open banking, they also have an instrumental role in open architecture being widely adopted in the banking community. Furthermore, their success in achieving this depends on complex security algorithms, which are embedded into banks’ API frameworks, to firmly secure and protect client messaging.

This constant connection could immediately remove the need to reconcile and settle transactions in batches, which create untimely and stubborn roadblocks in a treasurer’s day. “By speeding up transaction agreements, the need to stockpile spare cash in case of errors is drastically reduced, which smooths out the demands on company liquidity and allows treasurers a more accurate view of what is available,” Manning reveals.

APIs also remove the need for round-the-clock staffing, with a digital, automated crew agreeing transactions and moving funds 24/7. Using artificial intelligence (AI), these systems can learn where specific businesses face obstacles and become hyperaware of potential issues.

Information bonanza

Through an API, clients and their partners can also access and analyse a huge range of data to use for additional purposes besides accounting. Using the ISO 20022 XML digital language, APIs pass a much broader amount of information between partners about deals, rates and transactions than companies have traditionally accessed, reports Manning.

“This information is amassed in vast data lakes that are analysed to pull out trends or frequent errors, or highlight where a company could be capitalising,” she says. “Banking partners, including Deutsche Bank, have invested in analytics to thoroughly examine where businesses can make efficiencies and run a more streamlined operation. They can highlight where cost is leaking from a business and where more growth can be squeezed from.”

Recker notes how “these analytics can also help a bank understand what its clients need from partners in terms of liquidity management, cash optimisation and investment”. With potentially billions of transactions – with external customers, suppliers and intracompany transfers – banks are increasingly using AI to select key themes from the data and analyse them in the context of a client’s business and operating model. “By identifying valuable, commercial data, AI and machine learning can help banks work with clients to create a bespoke system that works specifically for them,” says Manning.

Each business is different, but treasurers know their specific needs and hurdles. The EIU report respondents said that “the most likely use for AI in treasury will be analysing and predicting supply chain bottlenecks, followed by forecasting working capital needs and predicting payment flows”. They also know how vital the efficient management of cash and liquidity is to the growth of their underlying business and its overall success. Once the correct level of available cash can
Security, liquidity and yield are the key drivers for our corporate clients

Reyer Kooy, Head of Liquidity EMEA & APAC, DWS

be established, company executives can take stock and plan how to manage their balance sheet, ensuring that unused cash is put to work rather than being stuck in contingency pools.

Low interest rate environment

While interest rates remain low – or negative in some regions – treasurers need new options to enhance their cash positions. Following a decade of these close-to-zero rates, traditional methods of merely posting assets in an account have become too costly for many. Treasurers have seen inflation eroding balances; some even having to pay their bank a negative interest rate for holding cash, which has compelled them to seek options on financial markets.

Money market funds (MMFs), which hold short-term fixed income and liquid debt instruments, have been regulated and remade since the financial crisis. They now provide treasurers with somewhere to place cash overnight at relatively low risk.

DWS, the asset management business majority owned by Deutsche Bank, runs a wide range of these MMFs, along with a spectrum of actively managed pooled and segregated investment accounts for clients. Within total assets of around €700bn, almost 9% is held and invested in liquidity and MMF investments, according to Reyer Kooy, Head of Liquidity EMEA & APAC at DWS.

The funds are operated in several major world currencies, meaning a company also has options when planting cash from different regions. “Security, liquidity and yield are the key drivers for our corporate clients,” Kooy says. “And we attend to them in that order. We work to very conservative investment guidelines within the MMFs. Yields are competitive to other short-term investment options despite a highly conservative approach. Our main institutional MMFs employ no leverage, hedging or investment in currency outside of that being committed by the investor.”

This performance comes, in part, from the size of some of DWS’s MMFs – up to US$10bn – which allows the manager to make investment gains by holding assets with longer duration, but still offer daily liquidity to investors. This size also ensures liquidity can be almost immediately withdrawn from MMFs, so companies can access their cash without causing ripples across the fund for other participants.

Importantly, MMFs are also classed as a cash equivalent when noting on a balance sheet, rather than a treasurer having to strike a mark-to-market valuation of assets – as can be the case with other investment vehicles. “With increased automation, banks will soon be able to pass through any unused cash to these funds almost instantly and recall it when needed by the business,” says Manning. “With a more streamlined, accurate and visible consolidated cash position, treasurers can make more of their investment strategy.”

For the moment at least, MMFs need to keep assets overnight for the instruments within them to yield, but 24/7 access that allows cash to be available when a company might unexpectedly need it could be the next flex test for the funds.

For cash that does not need to be accessed as frequently or quickly, Kooy explains that DWS’s corporate clients have a range of solutions that allow them to tier their cash according to their likelihood of needing the money quickly. “These pooled or segregated fund strategies may be tiered by different liquidity profiles and investment styles to suit a client’s needs,” he says. “These funds are carefully targeted and managed to enable companies to meet their specific goals.” The funds hold a range of financial instruments and are actively managed, offering the opportunity of making higher returns through targeting a longer-time horizon than MMFs.

A bespoke approach can also help companies invest in a way that is important to them. Another area where DWS expects further growth is in environmental, social and governance (ESG) investing as the drivers are increasingly incorporated into investors’ guidelines. As such, the asset manager is introducing a sophisticated ESG framework in money market and short-duration mandates and mutual funds.

FX flexibility

Juggling different regulatory standards, economic policies and pressures is becoming a common theme for many companies as they seek common ground to transact with clients and suppliers around the globe. And nowhere is the ground more common than the transaction settlement currency, which can span a handful to an unlimited number.

“For businesses that run with a volatile cash flow, static currency hedging can prove ineffective and often costly,” says Johnny Grimes, Deutsche Bank’s Head of Corporate Bank FX. “By implementing an automated system that allows for and adjusts to the constantly moving in and outflows of the business, hedges can be altered swiftly to ensure a balance sheet is protected from market swings and unforeseen supplier issues.”

Deutsche Bank has worked with Japan’s Yusen Logistics, an international freight forwarding and logistics company, to implement an FX hedging system for its German subsidiary. Thanks to increased automation, its currency positions that were once calculated at month end are now moving towards real time. This information can be inserted into Yusen Logistics’ treasury management system and fed into an overall cash position to improve a treasurer’s visibility of company liquidity.

Elizabeth Pfeuti is a freelance financial journalist

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For the past 40 years, the London Interbank Offered Rate (Libor) has been the touchstone for financial instruments, the world’s most widely used benchmark interest rate, reflecting the reference rate at which banks lend and borrow between themselves. By the end of 2021, Libor will disappear, if not completely then at least effectively. Libor's retirement has repercussions that reach significantly beyond the interbank market. Libor is the basis of around US$200trn of loans and derivatives (10 times the size of US GDP1), from variable rate loans to interest rate swaps, and is referenced in both financial and commercial contracts globally.2

For corporate treasurers, the impact is extraordinary, from the legal validity of contracts to the cost of borrowing, hedge effectiveness of derivatives and the wider accounting implications of changes to the reference rate. Effectively, the end of Libor is one of the most significant events of most treasurers’ careers.

Tolling the Libor bell
Despite its dominant position, Libor’s change in fortune looked likely as early as 2008. Libor is based on daily submissions of estimated borrowing rates by a panel of banks, as opposed to actual transactions, so its calculation includes an element of judgement of banks’ credit risk. Following the global financial crisis, banks gradually came to rely less on the interbank lending market, so the market on which Libor rates are measured became less active, and therefore the rate itself less relevant. Furthermore, financial and commercial counterparties increasingly questioned whether the interbank rate was a meaningful benchmark for entirely different transactions. Confidence in Libor was also significantly eroded following the high-profile rate-rigging incidents that came to light in 2012, and banks themselves became less comfortable with submitting data for the Libor calculation.

In 2017, with Libor increasingly seen as an anachronism – albeit one which was still heavily used – the governing body for the regulation of Libor, the UK’s Financial Conduct Authority (FCA), announced that banks would no longer be compelled to submit data for the purposes of calculating Libor from 2021.3 Consequently, even if it continues to exist in some form, Libor will no longer be a viable benchmark interest rate.

By the end of 2021, Libor will have all but disappeared. Helen Sanders looks at what treasurers should consider amid the phasing out of this widely used benchmark interest rate
While the 2021 date is most commonly cited, the risk of the UK leaving the EU with ‘no deal’ in October 2019 could complicate these timelines. If the UK becomes a ‘third country’ with no equivalence, the FCA would need to reapply under recognition or endorsement options within the EU Benchmarks Regulation before 1 January 2020, when transitional provisions expire, to avoid EU-supervised entities becoming unable to use Libor.4

Review, revise, renegotiate
Consequently, treasurers and their partners have only 18 months – or less – to review, revise and potentially renegotiate hundreds, maybe thousands, of commercial and financial contracts that mature after 2021. They also need to model the potential impact on accounting, hedge accounting and corporate earnings. While some have already embarked on a transition programme, others will need to step up the pace and prioritise. In many cases, treasurers may need to upgrade or modify systems to support multiple benchmark rates, and model different benchmark rates in parallel, which adds further pressure on timelines.

Some contracts will have fallback provisions to transition to a different reference rate if the benchmark rate stipulated in the contract is no longer viable. This is the most benign – but not the most common – situation. Looking at debt contracts, for example, fallback provisions are not consistent across jurisdictions or financial institutions. Treasurers and internal business partners also need to ensure that the fallback provision is reflected in financial and commercial systems so that interest, penalty and other payments are correct.

In other cases, the contract clause which refers to the reference rate becomes null and void, while the rest of the contract remains in force. This might appear to be a reasonably acceptable situation until it becomes clear that, without provision for the calculation of variable interest rates or penalty clauses, the contract has little purpose, and is certainly ambiguous and high-risk. This affects not just financial contracts, but also supplier, contractor and customer contracts that have late payment penalty clauses that reference Libor. Similarly, discount rates on leases, commodity futures and impairment testing of non-financial assets such as goodwill also frequently reference Libor.

Treasurers have 18 months – or less – to review, revise and potentially renegotiate commercial and financial contracts that mature after 2021

Commonly, however, contracts simply become null and void, leading to substantial business and financial risk if these are not revised or replaced to transition to a new reference rate. In the case of a debt agreement, if the change is significant enough it may be considered from an accounting perspective under the US Generally Accepted Accounting Principles (GAAP) or International Financial Reporting Standards (IFRS) to be a termination of a previous loan and creation of a new one, potentially resulting in a gain or loss on the income statement.

Modelling market value
The potential impact on adopting a new reference rate is financial as well as contractual. Libor’s replacement rates, such as Sofr (Secured Overnight Financing Rate) for US dollars (first published in April 2018) and €str, the Euro Short-Term Rate (confirmed in September 2018), are calculated quite differently to Libor, which could result in a change in interest and other payments. While Libor is a forward-looking rate published over multiple periods – for example one, three and six months – and fixed at the start of the interest period, Sofr is an overnight, backward-looking reference rate (risk-free rate or RFR) that does not include a credit element as they are based on actual transactions. RFRs are more closely correlated with other money market rates. Fixings on RFRs such as Sofr and €str tend to be lower, so the value of variable rate instruments will change. There may also be some initial constraints on liquidity in RFR markets given their immaturity. Treasurers therefore need to consider both the valuation and liquidity implications of variable rate financial assets and liabilities.

Redesignating hedge relationships
The hedge accounting headache has afflicted treasurers for years, and the retirement of Libor will not help to alleviate this. Many treasurers have set up rigorous systems, processes and reporting to achieve hedge accounting treatment on derivatives such as interest rate swaps that lock in the value of variable rate borrowings. However, under US GAAP and IFRS rules, if the terms of a derivative, such as the interest rate on which it is based, change, it may need to be de-designated and the hedge is no longer deemed effective. It could also be difficult to prove that hedges are effective at inception and on an ongoing basis. When using regression testing, for example, data points for an RFR such as Sofr are not available before April 2018. There are also the implications of Sofr and €str being overnight rates rather than longer-term tenors for borrowings and associated derivatives. At the very least, therefore, treasurers need to review, remodel and consider the implications of the Libor retirement on each of their variable rate borrowings and the derivatives that are linked to them.

Collaborate and consult
The shift from Libor to RFRs such as Sofr and €str is an industry-wide transformation, so treasurers do not need to face it alone. The US-based Alternative Reference Rates Committee published a Paced Transition Plan4 to help entities to transition from Libor to an alternative RFR, including guidance on fallback provisions and other issues. However, treasurers need to align and coordinate closely with external financial and commercial counterparties and technology vendors, as well as internal business partners in legal, treasury, information technology, procurement, sales and other business functions to understand the implications of Libor’s retirement and plan their transition.

Helen Sanders is a freelance financial journalist and former Editor of Treasury Management International

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Under fire for rising costs and lengthy processing times, the global correspondent banking model has frustrated corporate clients and prompted market entrants to develop alternative solutions. *flow’s* Graham Buck assesses whether the model is fit for future purpose.

The traditional model
According to a 2018 McKinsey/SWIFT report, cross-border flows represent one-sixth of total transaction values, but international payment revenues total up to US$200bn globally, divided evenly between transaction fees and FX revenues. The report puts this at 27% of global transaction revenues, increasing by 6% each year.

An outline of the correspondent banking model is useful in understanding the issues. The Bank for International Settlements defines it as: “An arrangement under which one bank (correspondent) holds deposits owned by other banks (respondents) and provides payment and other services to those respondent banks.”

Take as an example a French company ready to pay for a shipment of oil from its Malaysian supplier. It issues a payment order to its bank (the respondent bank) to initiate payment. With no clearing system between these two countries, the respondent bank begins the process by sending the funds to an intermediary or correspondent bank.

This correspondent bank acts on behalf of the respondent bank, either passing...
The end goal of fast, efficient and secure cross-border payments is within sight

Stefan Fruschki, Head of Regulatory Management, Institutional Cash Management, Deutsche Bank

Such checks also add to the time taken to process a transaction as they must be conducted by each bank along the chain – often including different types of checks for different jurisdictions.

The FTR also mandates that banks along the transaction chain must ensure that full information on the party issuing the payment order and the beneficiary party has been received and is passed on to the next bank in the chain. To mitigate the cost of these checks, banks will typically deduct their fee from the payment itself, meaning the beneficiary often receives less money than expected.

These fees are determined and deducted after the respondent bank has begun the transaction process. As the respondent bank cannot predict the path that the payment will take along the chain, transparency over the cost of cross-border payments is often impossible. This is frustrating for the customer, who is left in the dark as to how much of the original payment will be credited to the beneficiary account.

'Split' transactions

Given these challenges, some businesses – particularly fintechs – have sought alternative methods of executing a payment, with the aim of making the process faster and cheaper. The most prominent example of this involves ‘splitting’ the transaction into two parts.

The first step is for the ordering party to make a payment directly to its payment provider. The payment provider then approaches its own bank and initiates a second transaction, requesting that the funds be transferred to a bank in the payer’s target destination. Through this method, the payment provider’s bank acts as the payer, enabling the bank in the target destination to pay via the domestic clearing system, as a local payment.

Separating transactions in this way enables alternative providers to limit the number of banks included in the transaction chain, which speeds up the payment by avoiding clearing cycles and reducing the fees incurred.

Faster, cheaper – but better?

The two-step approach appeals from the customer’s perspective in terms of offering cheap, fast and reliable payments. Even regulatory bodies welcome the resulting competition; most recently, Poland...
introduced the split mechanism in 2018 in a bid to combat VAT fraud.

However, it also opens up payments to a significantly greater risk of fraud. Splitting the transaction typically results in the receiving bank in the target destination lacking visibility over the ordering party, while the bank that provides the account to the payment provider lacks information on the beneficiary. With so little data provided on both payer and payee, the risk of fraud and money laundering is greatly increased.

While it remains legal to split transactions in this way in certain jurisdictions, safety concerns have led European regulatory bodies to make the practice illegal. As a result, intra-European payments must now be run through local clearing systems but, in the absence of a standardised, global payments regulation, outbound cross-border payments to non-EU jurisdictions can continue to be moved using the split-transaction model.

Splitting the transaction where jurisdictions allow therefore remains an attractive option for corporates. The choice of whether to use a regulated bank process or an unregulated payment service provider (PSP) for cross-border transactions often hinges on speed and cost, which are two strengths of the split-transaction model.

Yet split transactions are not sustainable for cross-border payments going forward. Instead, Fruschki argues: “Corporates should introduce a third factor – responsibility – into their considerations when assessing options for cross-border payments.” He adds that “while cut-price alternatives are tempting, they often impose a strain on the financial system that upholds them.”

An improved model
Corporates cannot be expected to choose between efficiency and responsibility indefinitely, so the onus is on the financial services industry – including banks, fintechs and PSPs – to collaborate in devising a better solution.

Progress is being made here, with SWIFT’s standard in global payment innovation since 2017 – SWIFT gpi – helping to improve the transparency and speed of cross-border payments run through the correspondent banking system. In July 2019, a trial payment from Australia to Singapore’s Fast and Secure Transfers domestic instant payment service, integrating SWIFT gpi, was settled in just 13 seconds.

Each of SWIFT’s cross-border messages comprises several data fields that provide detailed information on the payer and the payee in a transaction. These must be completed and passed on by each stakeholder in the payment chain, ensuring continuous transparency. There is even scope for SWIFT gpi payments to be connected to domestic instant payments systems – such as Europe’s fledgling TARGET Instant Payment Settlement – thus avoiding end-of-day cut-off times and ensuring that funds are credited on the same day they reach the beneficiary bank.

Fee-based frustrations are also being addressed. Deutsche Bank and its peers are developing a solution to ensure that recipients always receive the full amount due, with all fees charged directly to the ordering party.

“The end goal of fast, efficient and secure cross-border payments is within sight,” concludes Fruschki. “As we approach the finish line, corporates must decide whether the short-term gains in terms of speed and security outweigh the less pressing but ever-important need for a safe, efficient and secure global payments system.”

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Connecting capital

International investors can’t get enough of China, and Hong Kong Exchanges and Clearing has been at the innovation coalface, facilitating access by upgrading its post-trade systems and using new technologies to accelerate the settlement of securities traded through the Stock Connect links between China and Hong Kong.

China’s capital markets have never had it so good. With the inclusion of the country’s A-shares in the MSCI indexes\(^1\) and Chinese bonds in the Bloomberg Barclays Global Aggregate Bond Index, China’s A-share market is expected to embrace a record high foreign investment in 2019, totalling in a range between US$70bn and US$125bn\(^2\) (see Figure 1, pages 78–79).

Facts like these, coupled with the ongoing internationalisation of the renminbi (RMB) currency, could not make Charles Li happier. As Chief Executive of Hong Kong Exchanges and Clearing (HKEX), he has made it his mission to facilitate capital flows between Hong Kong and mainland China through the Stock Connect trading links,\(^3\) thus connecting global capital with Chinese issuers on the Hong Kong Stock Exchange. Now, given the expected capital inflows, he is keen to push those links towards an even grander vision: connecting China with the world.

His bold three-year plan for HKEX is designed to transform its predominantly equity-based exchange and futures exchange into a global market leader in the Asian time zone.

**China-anchored**

With a key part of this plan being anchored by China, HKEX is looking to increase the international portfolio diversification of Chinese mainland investors and to facilitate further internationalisation of the domestic capital markets through infrastructures across asset classes such as exchange-traded funds. These aims follow hotly on the heels of its updated listing regime,\(^4\) and the expansion of Stock Connect to bring international capital into Chinese companies’ shares within the country and to attract international companies to list in Hong Kong so that Chinese investors can invest in them.

Li’s plan will also see HKEX leveraging the growth of China’s fast-growing bond market\(^5\) amid government attempts to boost its currency by allowing its wider use in Belt and Road Initiative countries and by more foreign banks as RMB-clearers.\(^6\)

“We believe that with China stepping out and meeting the world, we have an opportunity to create a post-trade ecosystem to connect that market with the world,” notes Li.

Perhaps the most important thread of Li’s plan to bring China closer to the globally connected community is technology. With this in mind, HKEX is exploring whether technology can help it to: expand its range of products and services; improve the client experience in trading, clearing and settlement; solve operational challenges and improve efficiency. This exploration has already borne fruit.
With the continued growth of Stock Connect, which is the main reason for MSCI including the China A-share market in its indexes, HKEX is expanding its role and upgrading its systems so that it can cope with the increased flow of cross-border transactions – as the weight of that market in the MSCI indexes increases (see Figure 1 below) – and intermediate further outflows from Chinese investors as well.

Driving these upgrades is HKEX’s self-awareness of its critical function: as central agent it’s about using technology to do things faster and more efficiently, without market participants having to refresh the bells and whistles and ancillary systems. “Our industry is faced with the critical choice of whether or not to refresh and maintain its technology, and whether the exchange could potentially consolidate those investments so that the clients continue to receive the service, but the delivery is actually all shared, consolidated and run by the exchange,” observes Li.

Choosing technology wisely
For HKEX to accomplish these efficiencies through technology, Li believes that it should employ new technology that allows it to make small improvements, instead of making large investments in systems and hiring new staff. “We’re interested in using new technology that helps us to do all these new things that we don’t do today that have revenue potential.”

Such new technologies are those that enable HKEX to improve efficiency and reduce costs. According to Li, HKEX is exploring the application of artificial intelligence (AI) and machine learning technologies in its business. “It’s about using those technologies to do our jobs better and quicker and servicing our members and clients more efficiently.”

The aggregation, sharing and monetisation of data are also presenting the market with a way of trading where the underlying assets are no longer real assets in companies and commodities, but the real assets are actual data. “There is a role for central market players to organise the industry and provide the most basic common infrastructure for trading and monetising data as a new asset class,” asserts Li.

Other technologies that are popular are those that address fundamental differences in market structure between East and West. Li is convinced that distributed ledger technology (DLT) has the ability to address nuances between the intermediated structures in the West, where there is a “convoluted” web of relationships between the exchange, broker dealers, custodians, and buyers and sellers. “DLT works well on a centrally operated market like an exchange. It can become a big enabler to do things differently, and means we can...
better connect all key participants, automate the cross-border post-trade process and make the environment a lot cheaper for participants to operate in.”

**Upgrades in progress**  
By advancing its technology capabilities, HKEX is doing three things: upgrading its systems, improving internal productivity to introduce some incremental efficiencies and using new innovations to facilitate market access.

Firstly, the firm is revitalising its post-trade infrastructure across all business processes and systems, including clearing, securities settlement, and collateral management and nominee functions. Setting out HKEX’s technology agenda, Head of Group Strategy James Fok says: “The technology used over the past 20 or 30 years needs a bit of a reboot, so a big element of this change is cultural. It’s about introducing new processes in a multi-phased programme.”

The programme, which is called Next Generation Post-Trade, contains multiple phases. In the first phase, HKEX will strengthen and simplify the risk management framework of all the clearing houses on to a single risk-based model. This structural enhancement will improve the safety and integrity of the securities market and place HKEX at the forefront of international best practice for risk management. The first phase also includes Client Connect, a new web-based interface which gives trading and clearing clients direct access to HKEX services and digitises the majority of paper-based services and duplicative processes. “We have taken out around 30,000 manual processes a year and compressed down the number of paper forms from 60 to 43 online or electronic form requests, which means we have removed a lot of risks of error from the system,” explains Fok.

Secondly, HKEX’s Innovation Lab is looking at technology that can help its various businesses introduce newer processes and weed out redundant ones to improve speed, efficiency and productivity in the business. This includes advanced data analytics, AI and machine learning to improve the efficiency and accuracy of data. It is also using AI to pick up the key fields in unstructured corporate actions notifications in order to replace the manual process in corporate actions messaging.

Thirdly, HKEX is using new technologies to innovate externally, improve process efficiency and reduce the risks for international investors who are accessing the Chinese market.

At the innovation coalface with DLT  
Using these new technologies, HKEX is running one of the highest-profile blockchain projects in the securities industry to address the differences in market structures between mainland China and international investors and their agents when accessing A-shares through the Stock Connect gateway.

The China A-share market settles on a T+1 basis. Securities are exchanged on trade date, and cash settled on T+1, through the China Securities Depository and Clearing Corporation (CSDC), while many international markets settle securities...
on T+2. The China Interbank Bond Market settles on a variable settlement basis between the buyer and seller of the bonds, and the settlement cycle can range from T+0 to T+2 through either the CSDC or the Shanghai Clearing House. This creates a misalignment in settlement practices and is the biggest issue facing international investors, who are used to operating on true delivery versus payment of securities in T+2.

The DLT proof of concept aims to resolve operational challenges for these international investors executing Stock Connect trades that settle to a T+0 timetable, getting post-trade processes in shape for faster settlement as well as better buy-in processes and prevention of failed trades. The compressed settlement timetable necessitates a rapid upstream sharing of information prior to settlement to avoid the risk of international investors trading A-shares on Stock Connect, incurring the cost of a buy-in for trades not settling on time.

Typically, these international asset managers and their broker, their global custodian and the sub-custodian rely on the T+2 cycle for time to complete a sequence of reconciliations in which the price of the trade and the fees and commissions are agreed sequentially and bilaterally, and the cash and securities are put in position for settlement. This would necessitate compressing two days of work on post-trade allocations and settlement initiations into four hours between 15:00 and 19:00 Hong Kong time when transacting in China to meet the settlement cut-off times. Time zone differences mean that it is very difficult for investors based in Europe or the Americas to perform to that timetable, and there is a compulsory buy-in regime for securities that do not settle on time.

In the absence of a T+2 margin for error, or window to operate in when an investor or broker in the US provides a settlement instruction after matching a trade, Fok says HKEX is working with participants in the chain, including Deutsche Bank as sub-custodian, “to apply blockchain technology to tie the settlement instruction to the trade and allow for an automated step-by-step functioning of the post-trade processes to take place, without someone having to give fresh instruction once a trade has been matched”.

Network effect
The blockchain-powered post-trade processing network will operate upstream into the Hong Kong central securities depository (CSD), enabling all parties to get the information they need to process in parallel so that the transaction can reach the CSD for settlement finality quicker. Such a transformation of the post-trade workflow is achieved by introducing a private permissioned network based on DLT.

The DLT network will be deployed in the Stock Connect settlement process and allow all participants linked to it – the asset manager, global custodian, broker, clearing participant and sub-custodian – to access the necessary information (for example, the balances of cash and stock in their accounts and settlement details) and status of the trade in near real-time simultaneously, so they can complete their share of the process in time to settle. “The HKEX DLT initiative will change today’s sequential processes to being concurrent, reducing certain costs and creating new potential,” notes Anand Rengarajan, Head of Securities Services, Asia Pacific at Deutsche Bank. “This will evolve Hong Kong’s cross-border capital market services into a new paradigm that can also change the industry structure. We will be at the forefront of this new future with HKEX and our key clients.”

Given that it is a private network, it only allows participants to access the information they need to see. For example, the global custodian sees the settlement details, but does not see the commission paid to the broker. The prototype demonstrates near real-time synchronisation of post-trade status between asset managers, brokers, custodians and the Hong Kong Securities Clearing Company Limited, the HKEX clearing house. This enables these financial institutions to complete their compliance checking and internal processes simultaneously, instead of the chain having to wait for one link to complete its part of the settlement process, before passing the information along to the next link.

HKEX is also looking to shorten the initial public offering (IPO) settlement cycle – the
five-day period between the end of an IPO and the start of trading – by digitising the process of pricing and trading shares so that banks and brokers can grant retail investors credit if they choose to subscribe for those IPOs. In the case of any oversubscription, that cash can be immediately returned to those investors. “This effectively takes out the process of retail investors writing cheques or sending deposits ahead of time, and puts in its place a solution that will allow us to settle on a similar timeline to other major markets,” notes Fok.

Relationships that matter
In the meantime, the concept of custody via Hong Kong using a nominee structure and HKEX’s post-trade infrastructure to hold securities on behalf of the international investor in the Chinese CSDC is enabling international investors to access the Chinese market. “Given China’s unique T+0 settlement timeframe A-share market is a no-fail market, we work with partners such as Deutsche Bank to put in place the pre-trade controls to enable us to meet Chinese requirements,” explains Fok.

This also leverages existing solid relationships with the Securities and Futures Commission of Hong Kong and the China Securities Regulatory Commission, which Fok says takes a proactive approach to identifying problems that need to be solved, and coming up with solutions. It is relationships like these that will guide HKEX’s plan to be more globally relevant and to connect China with the world using new technologies.

With these relationships in mind, Fok confidently concludes: “We feel we are well placed to advise Chinese policymakers and regulators – like we did with Stock Connect – on what international investors need in order to participate in the Chinese market and to play an advocacy role on behalf of the international investment community, which is looking for even more efficient ways of tapping into the Chinese market.”

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The Deutsche Bank view
Through various initiatives and a collaborative approach with industry partners, HKEX is enabling opportunities for growth in the capital markets. Deutsche Bank is proud to be associated with this important market infrastructure, given its strong role in championing innovation

Michaela Ludbrook
Global Head of Securities Services
Deutsche Bank

HKEX sees in the Year of the Pig with the Lunar New Year’s First Day of Trading
Digital homes

ENotes are driving the surge in digital mortgages for residential housing. BAML’s Eileen Albus tells Janet Du Chenne how new innovations are helping to improve the consumer experience and lower lenders’ costs.

If becoming a homeowner is a top priority for 72% of millennials, more so than travelling (61%), getting married (50%) or having children (40%), it is little wonder that the mortgage industry is finding better ways to connect and consume. It has introduced electronic notes, or eNotes, which are digital versions of the promissory notes or documents borrowers sign promising to repay their lender for the amount borrowed.

The eNote contains all of the information that would be included in a traditional paper note – property address, title agent address, loan amount, percentages, etc. – but is created, signed and managed digitally. Its digital make-up has been said to reduce the time it takes for a typical mortgage to close from 45 days to less than 30.

The take-up of eNotes has been remarkable. The Mortgage Electronic Registration System (MERS®) – a US national electronic database that tracks changes in servicing and beneficial ownership interests in residential mortgage loans on behalf of mortgage lenders and originators – shows that the total number of registrations of eNotes up to June 2019 was 402,526. MERS® registered 7,593 eNotes in June alone, compared with 558 in June 2018.

This rapid growth is a key indicator that the residential lending industry continues to drive towards greater digitalisation of the production process that improves the consumer experience and lowers lenders’ costs (see Figure 1 on pages 84–85).

However, for an industry that until a few years ago was largely paper-based and was still reeling from the financial crisis, the road to digitalisation has relied heavily on industry collaboration. For Eileen Albus, Director – Mortgage Finance at Bank of America Merrill Lynch (BAML), this meant not only getting comfortable with the technology, but also having a partner to review and hold the eNotes in an ‘eVault’ – a secure digital repository for the exchange of documents – making it one of the first large bank warehouse lenders to offer an e-Note solution to mortgage companies.

Discovering eNotes

The journey of discovery began when Albus first joined the bank after the financial crisis. Back then, digital mortgages seemed a taboo subject. Over the next few years, however, there was increased chatter at industry meetings about how eNotes were being used to fund closings. “It seemed this was going to happen because it’s what millennials wanted and we needed to be ready for it,” Albus explains.

This prompted Albus and her team to research the collateral behind eNotes and the reporting and risks involved, particularly in how they could be transferred and how they would be held up in court – it had to be the legal equivalent of what is done with a paper note. They also analysed cybersecurity needs and considered the processes that needed to be in place for
this new concept in order to get internal approval to fund them.

“When I first mentioned doing electronic notes, I remember colleagues saying that it will never happen and there is no way anybody will sign a digital mortgage and feel comfortable,” Albus says. “I reminded them that if they had bought a car in the last three years they would have probably signed for it using an iPad or computer, and that the mortgage space would see the same trends in terms of purchasing or refinancing homes.” In other words, when people started to think about digital mortgages in terms of their own personal transactions, it began to make a lot of sense.

All systems go

Then, about three years ago, management gave Albus the go-ahead to begin working on a capability to be able to support eNotes as one of the first major warehouse lenders in this space.

Key to her exploration was an understanding of what would happen if the mortgage company to which they were lending defaulted and BAML needed to step in and own the notes. “What was also critical for us to understand was where we could liquidate the collateral and sell it,” she says. To allay these concerns, US-government-sponsored enterprises Fannie Mae and Freddie Mac were ready to buy eNotes and securitise them in the secondary market. “Not only did that give us the comfort that we were on the right track, it also gave lenders and our clients another reason to do it.”

However, not many of them were immediately convinced, and most of the market participants that came together to discuss eNotes were small lenders that were waiting for one of the big banks to step in and offer them before they would follow suit.

That moment came a few years ago when a large US mortgage company started to look at eNotes in the borrowing process. BAML followed suit and, after meeting with its document custodians, engaged Deutsche Bank as a third-party document custodian in mortgage lending to build an e-Note solution. “They worked in parallel with us, talking to technology vendors and amending the loan agreements,” recalls Albus. “Our technology people were on the phone with theirs, all speaking the same language.” An understanding of how these eNotes should be reviewed and held led Deutsche Bank to develop a secure eVault for the exchange of documents.

In implementing the eVault, the mortgage agreements and the underlying systems and technology that process them needed to be updated. Furthermore, clients needed to set up technology upgrades and eVaults that could have systems that communicated with Deutsche Bank’s eVaults, which would in turn have to communicate with Fannie Mae’s or Freddie Mac’s eVaults.

As an e-Note lender you have to be very detailed on your requirements, your systems and the data that you’re taking in

Eileen Albus, Director – Mortgage Finance at Bank of America Merrill Lynch

The moment of truth

The key moment came when the large US mortgage company said it was putting everything in place and BAML was ready to hit the on switch. The key piece was the technology that needed to be built so that Deutsche Bank could review and hold the collateral file as the third-party document custodian, reporting to BAML, MERS® and the mortgage company.
“We had already tested the solution with Deutsche Bank to ensure that it worked, that all the eVault systems could talk to each other and that all parties had what they needed to be able to use the technology,” recalls Albus. “Deutsche Bank did not wait until we had a client so that we could put money to a transaction and know how to bill for it. It would not have worked if the client was ready to go, but we didn’t have the systems and eVault to work with.”

**From strength to strength**
This preparation has paid off. Since getting approval for a pilot eNote programme with the major US lender in May 2018, that lender has transacted over US$10bn in eNotes with BAML. In the same year, the warehouse lender signed up six additional lenders, and a further five large lenders are in negotiations to finance eNotes.

This is just the beginning. According to Albus, more investors are buying eNotes and she expects that in the next three to four years, more of BAML’s mortgage book will be electronic based, as investors become increasingly aware of the benefits of digital mortgages (see Figure 2). The market for selling eNotes has also expanded over the last year, with more lenders and investors purchasing them. Other warehouse lenders are following suit.

According to Albus, this should prompt lenders looking to build up an eNote portfolio to reassess their existing custodial arrangements. “They will want someone who is able to meet their needs – they will not want to wait six months for the other party to be ready with an electronic solution.” As the first true third-party document e-custodian, Deutsche Bank’s eVault solution is offered to lenders and to mortgage companies with whom the bank does not have a direct lending relationship.

**Final note**
Going forward, Albus concludes that the technology and how eNotes are reviewed and then held will be fundamental to this expansion in the market. “Since a key piece is understanding how a court would look at a foreclosure, as an e-Note lender you have to be very detailed on your requirements, your systems and the data that you’re taking in,” explains Albus. Nothing can lapse or be disconnected, or you could have a problem proving your ownership in a courtroom. “This means taking care of the data and being aware of cybersecurity; working with an eVault custodian to ensure you have the means in place to protect yourself and your data while you’re financing the collateral to make sure that your position and priority interest in the loan is enforceable.”

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Rene Keller, Chief Data Officer and Group Innovation at Deutsche Bank, explains why clients, fintech and Big Tech should work with banks to not only make sense of legacy data, but create new ways of moving money more efficiently.

Turning to your early roles in banking, what information trends did you observe?
I've been on the investment banking and the private banking side in various IT roles at Credit Suisse and UBS, and both sides have been digital for decades. Trading was – and still is – about the integration of information and making that information available to the decision-makers in real time and in a form they can execute against. It's always been a race to use highly sophisticated technology to create an edge for the firm and the clients.

Private banking, by contrast, is about using information to help clients make longer-term decisions. As clients became better informed through the internet and different platforms, we provided our advisers with smart analytical information about markets, and the value was in matching that to the investment portfolio or the strategy of their clients.

When did the opportunity to make a real difference in the IT industry first present itself?
I moved from Swiss Life in Zurich to Dublin in 2012 to join a fintech (formerly Information Mosaic, now IHS Markit) which developed securities post-trade solutions with a focus on corporate actions processing for tier-one banks, including UBS, Northern Trust and ING. After analysing their back-office processes, we on-boarded them onto a process that the company designed.

Our clients wanted to evolve the product further with us. This was the first time that I came into contact with agile development, and we even let the clients join our agile teams to steer that development. Those
By going beyond the requirements of PSD2, we have a much wider interface with about 2,500 developers on our API portal and 19 live solutions.

With your experience at the stock exchange, can you comment on how application programming interfaces (APIs) could work in the securities services and payments world? An exchange like Deutsche Börse – which operates a vertically integrated model with trading, clearing and settlement all under one roof – is constantly exchanging information with its financial services institution clients in specific and standardised formats. So for them APIs, which are nothing more than a well-defined interface for the way you exchange information, have a long tradition. But an exchange only interacts with large financial institutions, not end-clients.

However, in the retail and corporate banking space, this innovation is dependent on the ability to standardise APIs in a time-critical manner, just as plugs are standardised to fit power sockets in walls. This is not as critical for exchanges, which depend on a relatively stable and high-performing infrastructure underneath and do not need to communicate with the end-user.

How relevant are APIs to the bank? They are very relevant and, for me, a dream come true. When I started in IT, there were about 100 different hardware platforms, operating system programming languages and database systems. You almost had to be an artist to create a picture that brought this all together on a canvas in order to create a solution.

However, APIs present a very standard and clear way of exchanging information because they can be plugged in anywhere. It is about removing and managing complexity. This in combination with cloud computing, and the availability of infrastructure at a very low price point, makes it possible to develop new solutions very quickly. Innopay’s Open Banking Monitor highlights the hard work our teams have put in to make the API portal a good experience for developers. The more developers like it, the more likely they are to build solutions from it.

You returned to the banking sector just as PSD2 was unfolding. How did you seize the opportunity for innovation?

At Deutsche Bank we created a much wider interface than what PSD2 was actually asking for. We created hackathons and invited external firms to program against that API of PSD2, or as we call it ‘DB OpenAPI’. By going beyond the requirements of the regulations, we now have 19 solutions that are live and are adding value, and we have expanded from retail to wholesale, where we have about 2,500 developers on our portal.

Why should innovation be ‘business as usual’? Innovation needs to happen everywhere in companies, and it’s all about the culture. Questioning the way we do things and putting new technology in place can help us to do what we do more efficiently. Then there is the case of how we use innovation from the client’s perspective. One scenario is to invite clients in to have a whiteboard session, in order to hear what their real needs are and co-create solutions.

How are we harnessing data to deliver meaningful analytics to clients?

Analytics are meaningful to clients when they show relevant and useful insight around usage of data and prediction of events. We are doing this right now and can certainly add more value with the APIs and enhanced data analytics capabilities that we have. It is about developing these capabilities around regulatory initiatives, such as know your customer and PSD2, so that clients not only trust us with their money, but also with their data.

And finally, how do banks remain relevant in a platform/fintech universe?

I think there is a big transformation happening and the face of banking is going to change. We need to work with fintechs, but I don’t think they are the biggest challenge. It’s the Big Techs that will have a much bigger impact – Facebook’s Libra project is a case in point. On the other hand, we can learn from these companies. In some areas we will be a fierce competitor, and in other areas we will be working with them.

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Shortages in housing and disparities in economic opportunity continue to be major problems in many countries, including highly developed economies. In the US, addressing these sorts of challenges has come to encompass more than state assistance, with the private sector also playing an important role. Banks, in particular, provide capital in underserved areas through the Community Reinvestment Act of 1977, and in the process facilitate investment that balances social impact with financial return.

Further to this point, in recent years there has been something of a shift in sentiment in financial markets, as individuals and institutions increasingly recognise the importance of environmental, social and governance factors in their investment decisions, and companies become more aware of their own social responsibilities above and beyond legal obligations.

Michaela Ludbrook, who is Managing Director and Head of Transaction Banking, Americas, the business in which the Community Development Finance Group (CDFG) sits, explains: “Deutsche Bank has been a leader among banks in supporting economic and housing development in New York City and was an early adopter of impact investing, having used its New York City experience to become the first bank to launch an emerging economy microfinance fund. We recognise the seriousness of our role in supporting local communities and the potential that our programmes have for helping to transform lives in those areas that are underserved.”

Bold initiative
In New York City, which is the primary focus of Deutsche Bank’s CDFG, there is a chronic housing shortage, so much so that Mayor Bill de Blasio launched an ambitious initiative to create 300,000 units of affordable housing by 2026. It has yet to solve the problem. In September 2018, New York City Comptroller Scott M. Stringer noted that, between 2005 and 2017, rising rents led to the disappearance of more than 425,000 affordable apartments – those renting for US$900 or less per month (in 2017 dollars) – from the city’s housing inventory. And 55% of them – 235,000 apartments – saw their rents increase to between US$1,051 and US$1,650. On the other end of the affordability spectrum, apartments renting at above US$2,700 a month more than doubled. Many people are therefore being priced out of the market.

No wonder then that much of the CDFG’s nearly US$600m (by commitment) loan and investment portfolio focuses on the city’s affordable housing stock. One such commitment is a US$10m loan to the New York City Acquisition Fund, which helps non-profit developers compete for viable sites with commercial developers.

Driving inclusion
The CDFG’s portfolio also includes an array of impact loans and investments with non-housing social enterprises, not-for-profit organisations and fund managers that seek...
to generate a social good while providing an economic return for the bank.

One such example is the US$500,000 debt investment in Sixup, a US Treasury-certified Community Development Financial Institution (CDFI). It uses technology and an innovative approach to credit risk underwriting to provide affordable gap financing to enable high-achieving, low- and moderate-income students to graduate from quality four-year colleges and achieve pathways to meaningful careers. Many of the student borrowers are the first in their families to attend college. “Through our impact-first New Initiatives Fund (NIF), which is part of the Deutsche Bank Americas Foundation, we were able to provide catalytic capital to Sixup to help it grow from 34 to almost 1,800 loans in less than two years,” explains Jim Baek, Director of the CDFG.

Similarly, a US$500,000 debt investment as part of the foundation’s NIF was made in Pigeonly, an early-stage social enterprise, to expand its marketing capabilities. Pigeonly provides low-cost communications services to the families and friends of people in prison. It can provide 40–60% savings on telephone calls compared with typical prison charges, which can be upwards of US$15 for a 15-minute call. Pigeonly was founded by Frederick Hutson, who served five years in prison for trafficking marijuana. He launched and honed the business with backing from highly competitive accelerator programmes, including Y Combinator. The company’s customers, who are mostly low-income families, benefit from financial savings. In addition, various studies have shown that regular contact with family during time served can improve recidivism rates.

Opportunity Fund, a not-for-profit CDFI, is another client of the CDFG. Opportunity Fund’s mission is to drive economic mobility by providing affordable capital and responsible financial solutions to entrepreneurs and communities. Furthermore, the fund makes microloans for small businesses and invests in high-impact real estate community projects through the New Markets Tax Credit Program.2 Opportunity Fund’s CEO, Luz Urrutia, explains that they are filling a significant market gap for affordable loans: “Capital is a big issue for many small businesses – around 64% of employers report facing financial challenges and access to credit was cited as one of the top reasons.”

On a daily basis, 8,000 loan applications from small businesses are declined by banks in the US. Of great concern is that a significant number of declined loans are requested by ethnic groups and women-owned businesses, which suggests that financial inclusion is still a work in progress. Nevertheless, since its founding in 1994, Opportunity Fund has originated in excess of US$440m through over 17,000 loans that have supported more than 45,000 jobs.

Grand plans
Opportunity Fund has just launched a bold five-year strategic plan. This will include a fourfold increase in the number of loans made over the past 24 years. “Between 2019 and 2023 we plan to originate US$1.2bn in loans to small businesses and invest US$174m in New Markets Tax Credit,” says Urrutia. “This will help nearly 30,000 small businesses and sustain 100,000 jobs. Some 90% will be businesses run by minorities and more than 70% will be run by low-income people.” The tax credits will finance 12 new community real estate projects, providing services such as healthcare, youth development and shelter to 60,000 people in need.3

In order to meet its ambitious targets, Opportunity Fund will raise US$100m in new debt capital from banks, foundations and other impact investors. “We will also sell loans to interested parties and raise US$47m in philanthropic support over the five-year period. The market need is so significant that we cannot do this alone; we need to bring in partners,” says Urrutia.

One of those new partners is LendingClub, an online lender that refers small business borrowers to Opportunity Fund through an integrated technology platform. “Our other non-profit and for-profit partners include community partners, CDFIs, truck dealerships and food truck fabricators. These entities help us reach borrowers that Opportunity Fund couldn’t reach on its own,” Urrutia adds.

“Deutsche Bank is also a terrific partner and is helping in creating a more inclusive financial system. We cannot do our work without our partners and we are certainly stronger by aligning ourselves with the bank to access its global presence, its expertise and its culture of philanthropy.”

Neil Jensen is a freelance writer, author and consultant and former Editorial Director at Deutsche Bank

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The Open Banking Implementation Entity (OBIE) was set up by the UK’s Competition and Markets Authority (CMA) in September 2016 to foster greater innovation and competition following its investigation into the supply of personal bank accounts and banking services to small and medium-sized enterprises.

A new direction
The investigation prompted the CMA to stipulate that the nine largest retail banks in the UK must fundamentally change the way they operate by offering customers the opportunity to securely make their personal data available to other parties, so that they can do more on their behalf.

It resulted in the creation of open banking as a secure way for customers to take control of their financial data using common application programming interfaces (APIs) and data standards that can be used by the developer and innovating community to make sharing financial information simple and safe.

This new technology is creating a more open and level playing field for fintechs and third-party providers (TPPs) to compete with the larger, more established retail banks and the wider financial industry, and it has considerable overlap with the Second Payment Services Directive (PSD2).

Progress
The market has responded enthusiastically. At the time of going to press there were 132 regulated providers of open banking-enabled products, made up of 83 TPPs and 49 account providers with many more applying to the Financial Conduct Authority for regulatory authorisation.

Beyond this regulatory driver, the OBIE is currently working with TPPs and banks to explore the opportunity for the creation of further premium and commercial APIs which go beyond the regulatory requirement, such as age verification. These will create an even more comprehensive set of common standards around which TPPs and banks can continue to build their products.

User cases
Open banking will continue to transform the way consumers and small businesses manage their money, providing access to extraordinary new services that will solve everyday problems. For example, consumers today are able to aggregate their accounts from different banks on a single app, enable services that can spot when they are about to go overdrawn and provide a cheaper alternative to the bank’s standard overdraft, or share their transaction history with a loan provider for the purpose of affordability checks as an alternative to normal credit checking.

It means that automated personal financial managers are becoming more sophisticated and accurate; for the financially stretched, new automated debt management and budgeting advice services are becoming available; and new comparison tools can be developed that will prompt consumers to switch to a better savings rate or lower-cost loan.

It also means that, for the first time, customers can initiate payments directly from their personal bank account. So, for example, in the future if you buy something online there will be no need to provide debit card details or for the merchant to keep the card on file.

The opportunity for corporates
There is also an opportunity for TPPs to be part of the Payment Initiation Service Provider community. For example, an online retailer can enable easy payments direct from a customer’s bank account to reduce card interchange fees. New streamlined payment options based on this technology will continue to develop over the next two to three years and will make a fundamental difference to the payment options available for any company that is transacting directly with the end-consumer. In effect, this improves the customer experience, creating innovative new payment methods and saving money for the merchant.

Moving forward together
The OBIE will continue to manage the ongoing development of the standards, support the banks and TPPs, and manage the Directory, which is a way of checking that the parties within the ecosystem are regulated.

There is increasingly a lot of discussion about the convergence of the different standards around the world, such as with the Berlin Group in Europe and with similar bodies in the US, Canada and Australia. There is definitely an appetite for common global standards.

The CMA may have been the original torchbearer to push for change, but this need for common standards around sharing personal data securely and seeking the right level of protection and control are global trends. And the world is watching.

Miles Cheetham is Head of Propositions at Open Banking Ltd
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    - Best Domestic Custodian, Indonesia
    - Best Domestic Custodian, Malaysia (2nd consecutive year)
    - Best Domestic Custodian, Philippines (2nd consecutive year)
    - Best Domestic Custodian, Vietnam
    - Best Domestic Custody and Fund Administration Mandate, India – Motilal Oswal Asset Management Company
  - **Leadership award**
    - Custody Leadership Award Asia Pacific – Anand Rengarajan, Head of Securities Services
  - **Global Investor Magazine Sub-custody Survey 2019** (country awards, June 2019)
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