flow

Insights from Deutsche Bank Corporate Bank

2023–2024

Big debate: What do corporate treasuries want from their banks?

Cloud of transparency: **Custody in the cloud**

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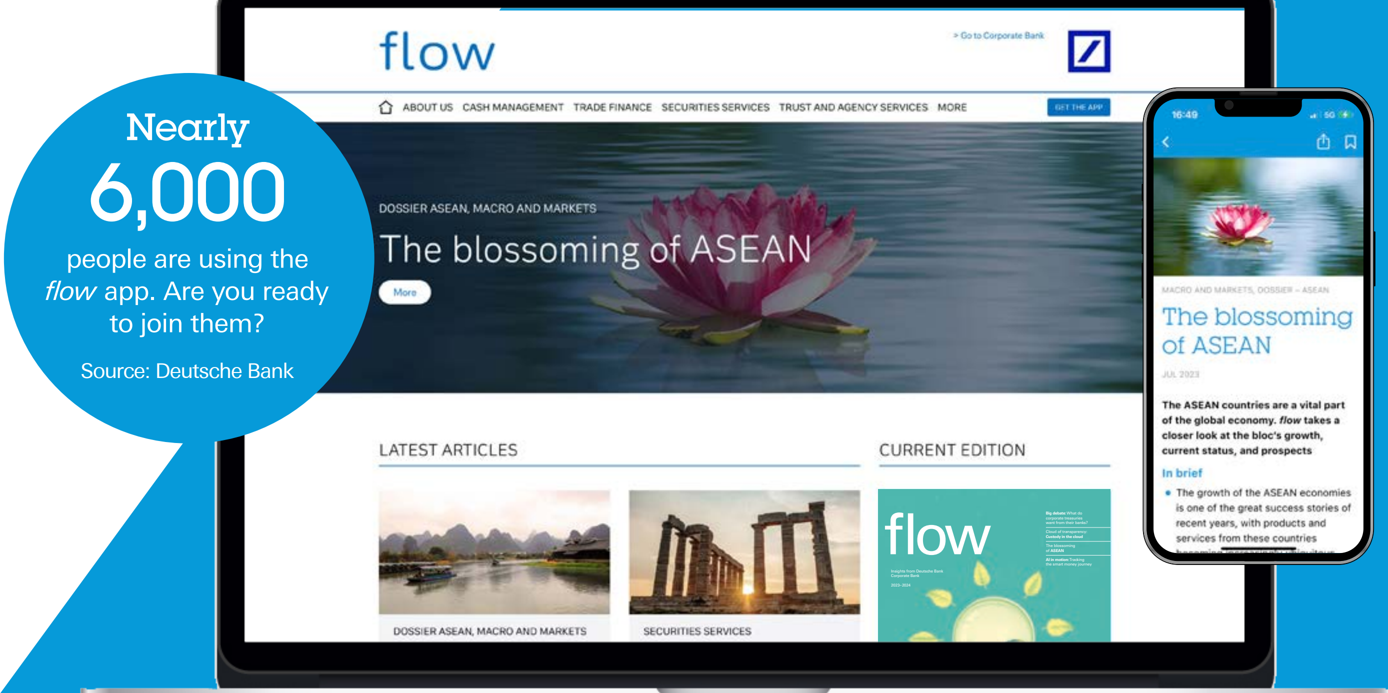

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Go with the *flow*

A year is a long time in corporate banking. As our *flow* app celebrates its second birthday, we have welcomed nearly six thousand users to our offline information service.

In this 2023–2024 *flow* annual, our central focus is on environmental, social and governance issues, or ESG. The ESG framework is now firmly embedded in daily business life, and a cornerstone of everything we do around the world. As the world heats up, decarbonisation has become the most urgent priority. Our lead feature by Lavinia Bauerochse, Global Head of ESG for the Corporate Bank, assesses global progress in limiting environmental damage, the success of which impacts us all.

Also in this edition, we asked the question 'what do corporate treasurers really want most?' The responses have provided a comprehensive sense check of expectations, which include outstanding customer service, connections, portals and applications in perfect working order, and having a trusted banking partner for innovation. Take a look at 'The Big Debate' on page 32 to find out more!

Over 90 pages, this collection of articles and guidance once again offers food for thought for your year ahead. As previously, our format comprises the core business area structures of Cash Management, Trade Finance and Lending, Securities Services, and Trust and Agency Services for ease of reference.

We hope you enjoy the read and – as ever – thank you for your support and feedback. If you have an idea for the next edition of *flow*, get in touch via *corporate.bank@db.com*.

The *flow* team

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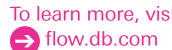

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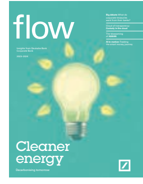

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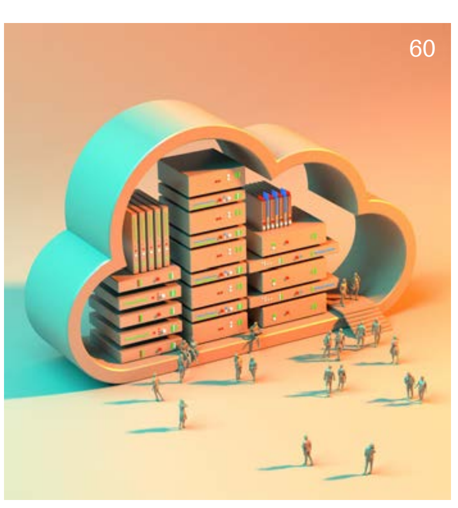
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Being frank should be the basis for all your communication; develop a relationship via continuous contact and candid discussions

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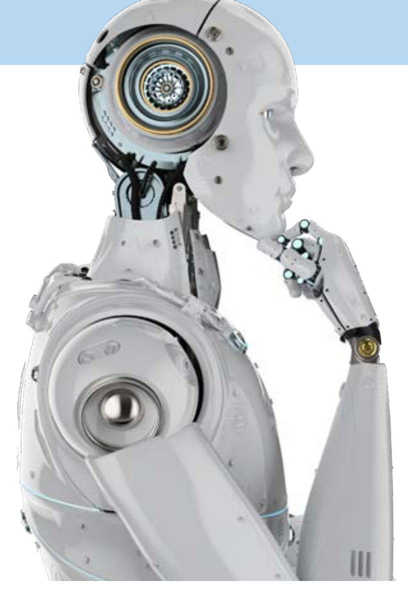


AI in motion: tracking the smart money's journey

Deutsche Bank Senior Strategist Marion Laboure takes a closer look at the explosion in artificial intelligence commercial applications by examining patent growth areas

Following the release of OpenAI's ChatGPT, interest in artificial intelligence (AI) has surged. Corporate mentions of AI increased to more than 715,000 in 2022 from 135,000 in 2020. Our dbDIG proprietary survey revealed that 41% of Americans were familiar with ChatGPT, and nearly 60% reported its adoption in their workplaces (see Figures 1 and 2).

AI is an overnight success that has been many years in the making. To properly anticipate what AI innovation is to come next, we went back to the source, looking at patents and venture capital (VC) deal activity that will translate into the everyday AI applications of the future.

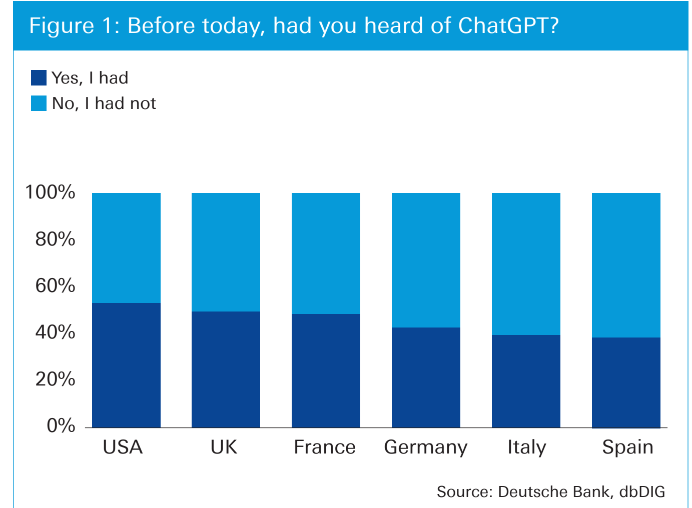
Companies are set to benefit from the explosion of AI innovation research now being deployed in the commercial world after many years of being contained to academia. Academia is usually the first mover: there is generally a 15-year lag from publication to patent. Published patents – similar to VC money – tend to involve around a one- to three-year lead-time to production.

Using the World Intellectual Property Organisation's (WIPO) Patentscope tool, we collected more than 175,000 published AI patent entries from 2012 to 2022 across 193 WIPO members, broken down into five broad categories. For VC investment, we used the OECD AI database, covering over 24,000 deals across 92 economies from 2012 to 2022. This article summarises our main findings.

1. The rise of AI: mainstream adoption in 2023 and beyond

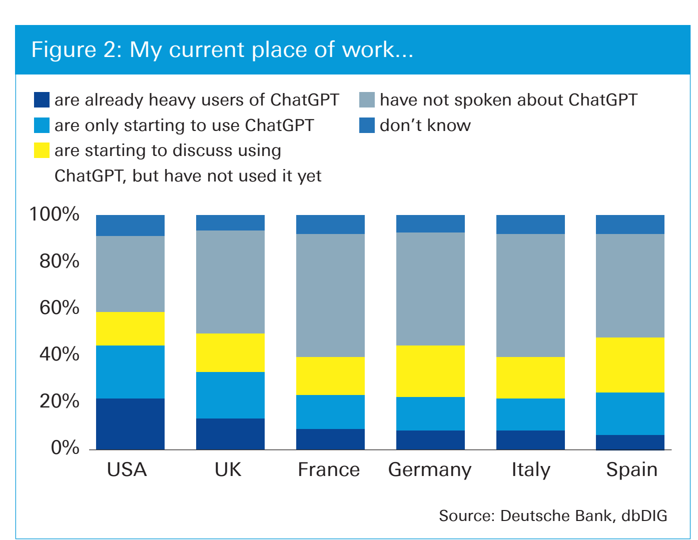
Over the past decade, around 80% of AI-related VC deals focused on sectoral applications. Another 8% were in autonomous machines and vehicles, while 13% were in the semiconductor space. The distribution of AI-related patents is similar, with almost two-thirds in sectoral applications, 19% in horizontal technology solutions such as developer tools and computer vision, 16% in autonomous machines and vehicles, and 4% in semiconductors.

Figure 1: Before today, had you heard of ChatGPT?



Source: Deutsche Bank, dbDIG

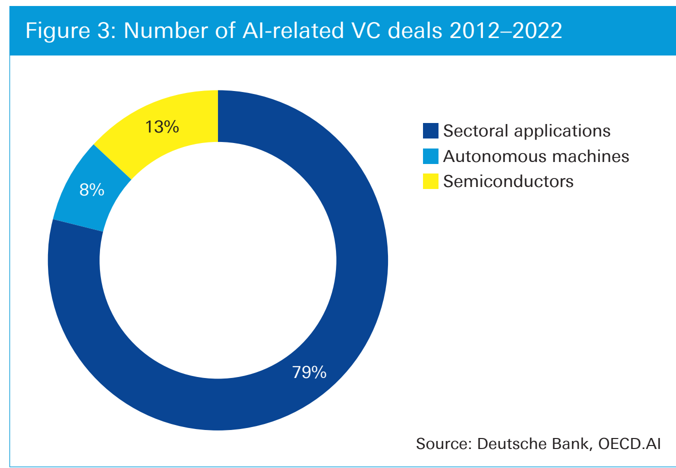
Figure 2: My current place of work...



Source: Deutsche Bank, dbDIG

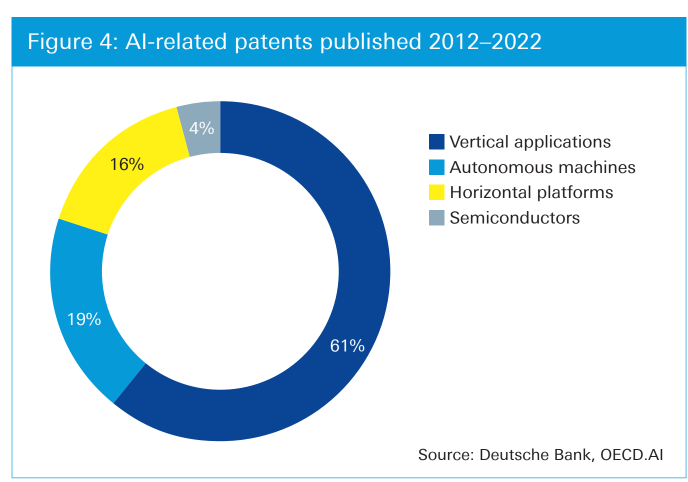
Photography: iStock

Figure 3: Number of AI-related VC deals 2012–2022



Source: Deutsche Bank, OECD.AI

Figure 4: AI-related patents published 2012–2022



Source: Deutsche Bank, OECD.AI

Patent growth areas

The application of AI across sectors is experiencing remarkable growth. VC deals related to AI increased tenfold from 2012 to 2022, reaching a total deal value of US$62bn in 2022. Patents published within sectors such as consumer, industrial, IT, transportation, healthcare and financial services have also seen a six-fold increase since 2012. Notably, established technology giants IBM, Samsung, Intel, LG Electronics and Qualcomm hold significant AI-related patents.

VC investment in AI has been concentrated in healthcare, IT and financial services. In healthcare, it is revolutionising medicine, clinical decision support, genetic analytics, healthcare administration and personal health; in IT, AI optimises traditional functions; and in financial services it enhances advanced analytics, process automation, robo-advisers and self-learning programs.

Patent activity is prominent in the industrial, consumer and transportation sectors. Industrial AI automates processes and unlocks industrial data for improved efficiency; this is projected to have a cumulative impact of €200bn by 2030. Consumer AI affects business models and categories such as media, advertising, gaming, education, price optimisation and e-commerce recommendations. In transport, AI assists with logistics and fleet management, exemplified by WiseTech Global's automation software for shipping logistics.

Autonomous machines and semiconductors

Autonomous machines, including self-driving cars and intelligent robots, have garnered significant investment and attention. They represented 8% of VC deals and 16% of patents in the past decade. Tesla's success with advanced autonomous vehicle systems, such as autopilot and self-driving features, using advanced cameras and neural networks, played a crucial role. VC deals in autonomous machines increased from 22 to 363 from 2012 to 2022, with a total value of US$11.7bn in 2022. Patents in this category grew seventeen-fold over this period.

Semiconductors play a vital role in the AI landscape, with 13% of AI-related VC deals and 4% of patents. VC deals in semiconductors rose from 40 to 515 from 2012 to 2022, with a total value of US$9.4bn in 2022. Patents in this field increased seven-fold. AI enhances processor design, improving efficiency and speed with innovations like low-precision calculations. The US leads in upstream design, while China excels in assembly and testing. Edge AI focuses on compressing algorithms for semiconductor environments, and intelligent sensors and devices provide real-world measurements. Integrating AI into these subcategories drives technological advancements.

2. Unveiling the future: emerging opportunities in 2024 and beyond

Generative audio, powered by AI like ChatGPT, has made remarkable progress in creating realistic voices and synthetic audio from text. Corporate documents mentioning generative audio have increased more than thirteen-fold from Q1 2020 to Q4 2022.

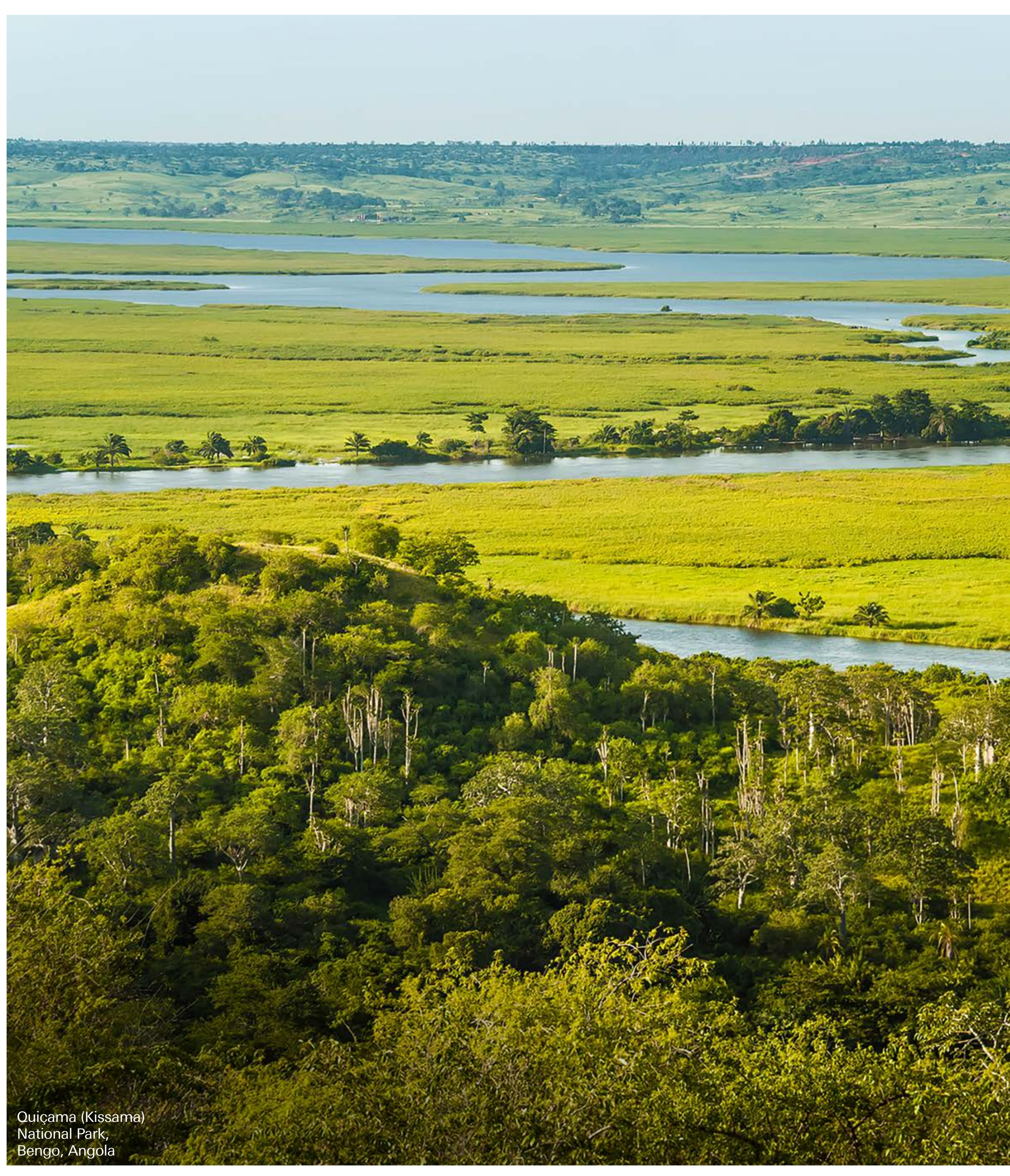
This technology democratises music and sound development, removing the need for specialised professionals. It breaks free from the limitations of voice actors and musicians, opening possibilities in gaming, communications, music, news and healthcare. Major players like Sony, Amazon, Huawei, ByteDance, Adobe, Apple and Tencent hold significant patents in this field. The four primary categories are synthetic voice, speech interaction, music generation and audio editing.

Surge in innovation

In summary, the past decade witnessed a significant surge in AI innovation, with more than tenfold growth in VC deals to 3,884 in 2022, totalling 24,310 deals. The value of these deals rose from US$1.8bn to US$83bn. Published patents increased seven-fold to 32,800. Most AI innovation focused on transportation, industry and consumer applications, while generative audio innovation is expected to transform gaming and film production.

Challenges include market concentration, data accuracy, transparency and varying regulatory frameworks. Cybersecurity is a growing concern, though, and robust regulations and cybersecurity measures are crucial for ethical and secure AI innovation.

Marion Laboure is a Senior Strategist at Deutsche Bank Research and a lecturer at Harvard University. This article is based on the Deutsche Bank Research study AI in Action: Where is the smart money going? *(May 2023)*


Quiçama (Kissama) National Park, Bengo, Angola

Angola's rebound

Angola was once a top coffee producer and could feed its people, but is now dependent on hydrocarbon exports to finance foodstuff imports. *flow's* Clarissa Dann reports on how enlightened government reforms are attracting investment and lending to support long-term energy and food security

Bordering Botswana, the Democratic Republic of the Congo, Namibia and Zambia, Angola sits at the heart of southern Africa. It has a central plateau, high plains, mountains and hills, and narrow coastal plains, while the Congo river and a vast network of waterways pass through its varied landscape.

The river systems of South Angola were of strategic importance to the former Portuguese colony, not only in terms of risk management and flood prevention, but also for building dams for irrigation during dry seasons and harnessing hydro-electric power. By the late 1950s, the Portuguese government had become used to the steady revenues flowing from diamond, coffee and petroleum exports, and its river system management was just one example of pre-independence infrastructure that maximised the potential of its natural resources.

Thanks to its rich soils and reliable rainfalls, Angola was once almost self-sufficient in terms of food security and a significant agricultural and minerals exporter. The discovery of petroleum reserves off the coast of Cabinda in 1955 fuelled an economic boom, but the current state of oil dependency (it makes up 97% of exports) only came about once the Portuguese had left. The civil war that raged until 2002 had done its damage; plantations were destroyed, flour milling capacity was extinguished, and agricultural experts such as coffee agronomists took their skills to Brazil, never to return.

Since those dark times, Angola has become one of the fastest-growing economies in the world, and with its young, upwardly mobile population of around 34 million, it is well placed to continue this growth acceleration.

Photography: Angola Image Bank™

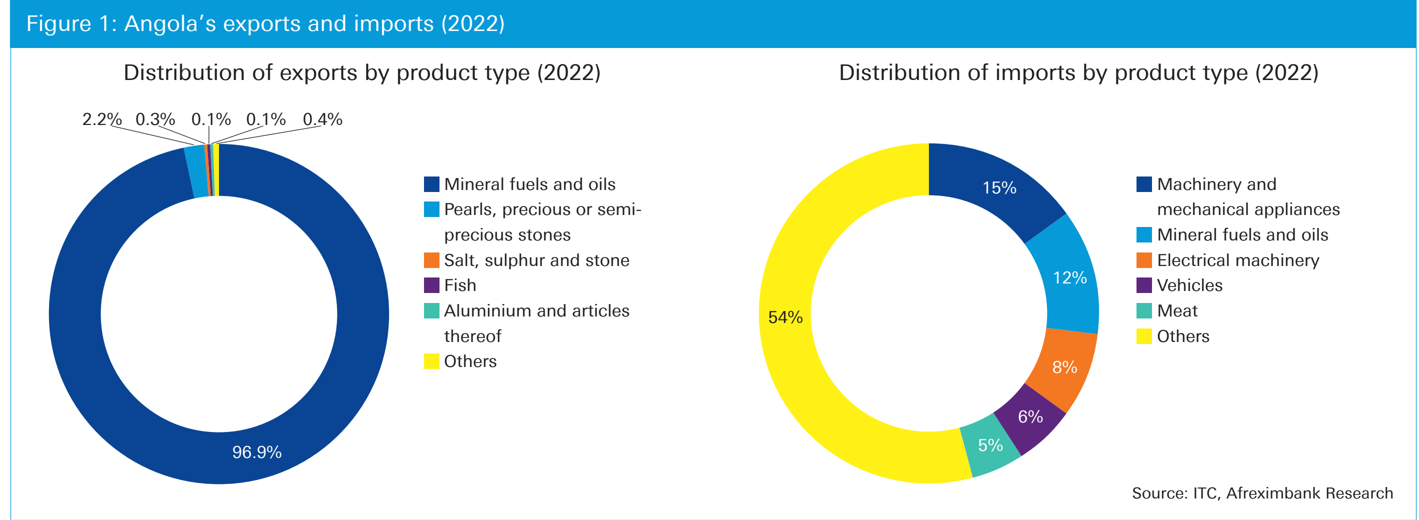
Its status as an oil exporter has supported an appreciation of the national currency (kwanzas), helping to curb import inflationary pressure. However, annual inflation remains stubbornly high (over 20%), with food prices the main contributing factor. In short, Angola is at an inflection point, with food and energy security within its grasp.

Enlightened reforms

José Eduardo dos Santos served as President from 1979 until 2017. While the transition to his successor, fellow MPLA (People's Movement for the Liberation of Angola) party member João Lourenço, went smoothly, it coincided with a slump in crude prices that persisted throughout much of Lourenço's first term of office. The fiscal pain was exacerbated by the increased spending and reduced receipts during the Covid-19 pandemic. A lengthy recession followed, together with a quintupling of the country's debt service costs, a debt restructuring with Chinese lenders, and an IMF bail-out loan. This was an unwelcome distraction to a government committed to finding efficiencies in public spending and diversifying its economy.

But Angola bounced back from this: crude prices and FDI are on the up, and Lourenço was re-elected in August 2022 with a small majority. The most rapid progress has been made in the past few years, reflects Andreas Voss, Deutsche Bank's Chief Country Officer for Nigeria and Head of Trade Finance for Financial Institutions across Sub-Saharan Africa. He points out that the bank had exited the country in 2015, removing USD clearance when it was hit by sanctions and a dollar shortage that resulted in restrictions in dollar access. "If you wanted to make

Figure 1: Angola's exports and imports (2022)



Source: ITC, Afreximbank Research

a trade, you had to put dollars with the Central Bank," he recalls.

Transforming the state-led and oil-funded economic model into a sustainable, inclusive, private-sector-led growth model requires high-level political commitment, strong coordination and communication capacity, and solid institutions, according to the World Bank.

"Angola is the only country in Sub-Saharan Africa that did really well in trying to remove restrictions and implement major reforms," Voss continues. This is attracting investment and lending; for example, the EU and Angola agreed their first sustainable investment facility in November 2022. Another important reform was the softening of local content and partnership requirements for foreign investors.

Angola's successful implementation of the IMF programme in January 2022 earned congratulations from the IMF Executive Board, which commented on 6 March 2023, "Directors encouraged the authorities to maintain the reform momentum and diversify the economy to safeguard the hard-won macroeconomic stability and to ensure an inclusive and sustainable growth."

Vera Daves De Souza, Angola's Minister of Finance, is committed to making the private sector the main driver of economic growth, having already announced plans to sell shares in Sonangol and 194 other state-owned enterprises. She wants the country to be less dependent on oil revenue, and in a better position to be part of the solution to the climate change problem. "We need to put our effort into the real economy," she told *The Banker* in an interview in October 2022. "Putting in the infrastructure will motivate the banks to give loans to the private sector." The National Development Plan 2023–2027 addresses how the country plans to reduce oil revenue dependency to no more than 20%.

"The government has made some hard decisions, but the reforms will in the long term have a very positive impact and it has done a fantastic job. Banks are encouraged by the government's support for investment and improved value chains," says Voss, who confirms that Deutsche Bank has clean lines to Angolan banks to support investment in agriculture and food processing, among other transactions.

However, the balance between driving through unpopular fiscal measures and managing civil unrest is a difficult one. "There is an elevated threat of widespread political and socio-economic unrest in the coming year, particularly in light of an imminent gradual phasing out of fuel price subsidies," noted Pangea Risk on 31 March.

Angola is the only country in Sub-Saharan Africa that did really well in trying to remove restrictions and implement major reforms

Andreas Voss, Chief Country Officer for Nigeria and Head of Trade Finance for Financial Institutions, Deutsche Bank

Hydrocarbons

Although oil was discovered in Angola in the 1700s, it wasn't drilled until 1915, and was first commercially produced in 1955–56. The sector continued to function through both the war for independence and the civil war. By 2021, mineral fuels and oils comprised around 94% of Angola's export earnings, with precious/semi-precious stones accounting for an additional 4.6% (see Figure 1).

Angola's offshore oil was first discovered in 1968, and much of the country's known oil reserves are located far offshore and deep (or even 'ultra-deep'), which results in relatively high production costs. When the oil price falls to around US$50/bbl, Angola's oil sector becomes comparatively less attractive than other hotspots. Now that oil prices are higher, FDI has flowed back in. Angola is Africa's second-biggest oil producer, and it holds Africa's second-greatest reserves of oil too. Production has declined in recent years because of the rapid depletion of mature reservoirs and a reduction in investment. However, the rise in oil prices has "accelerated the pace of new investments in Angola's oil and gas sector over the past few months," as Pangea Risk notes.

"A lot of investment is pouring in from the oil majors," observes Danai Koutra, Head of Natural Resources Finance UK

at Deutsche Bank. But the investment – and the bank lending – is doing more than merely getting hydrocarbons out of the ocean floor. It supports the Angolan government in its ESG objectives as well as its energy security. One example of this is the Azule Energy seven-year US$2.5bn pre-export financing signed in August 2022.

The company was formed as a 50/50 joint venture (JV) between the Angolan operations of oil industry leaders BP and ENI, making it Angola's largest independent equity producer of oil and gas. It holds stakes in 16 licences (of which six are exploration blocks) and a participation in Angola LNG JV. Azule Energy also took over Eni's share in Solenova, a solar company jointly held with Sonangol, and the collaboration in the Luanda Refinery.

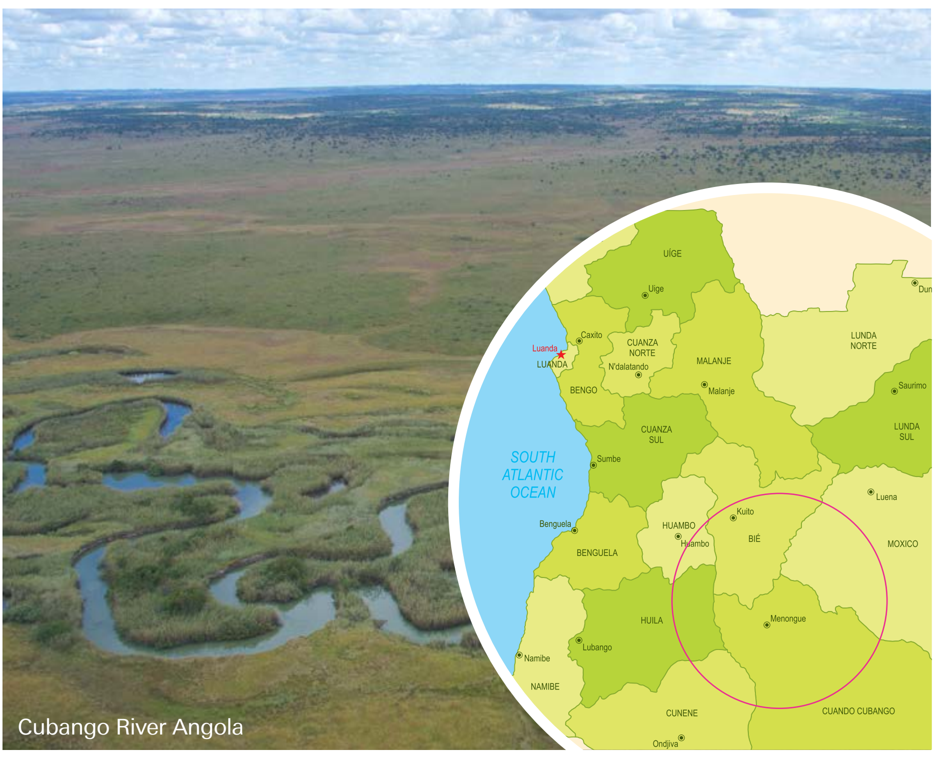
As Koutra explains, "The oil and gas industry has the appropriate skillset to help us all move towards net zero… with opportunities for investment and further employment." The country already draws more than half its energy from hydroelectric power thanks to its vast waterway network, and is well-placed to harness its on- and offshore wind resources. "Angola is looking towards continents such as Europe, which is home to a plethora of companies with extensive expertise in successfully executing wind energy projects and can serve as ideal partners," noted Energy, Capital and Power in 2022.

Agriculture and food production

Just before independence from Portugal in 1974, Angola was one of the largest coffee producers in the world, and an important producer of palm oil, bananas, sisal and sugar cane. Its agri-businesses were key export earners, diversified so there was a balance of cash crops and domestic foodstuffs. Cattle were reared in the drier south, maize was cultivated in the central highlands, and the climate of the north favoured not only coffee, but also cassava and cotton. While the war for independence and the civil war took out the entire infrastructure (Angola now imports half of its food), its natural resources endure, and revitalisation of this former land of plenty is a key government priority.

Angola has 35 million hectares of arable land, but at present only around 10% of this is cultivated. Of this 10%, only around 10% is commercially farmed – the bulk of farms being small and largely devoted to subsistence or communal farming.

Photography: iStock



Cubango River Angola

> Putting in the infrastructure will motivate the banks to give loans to the private sector
>
> Vera Daves De Souza, Minister of Finance, Government of Angola

With agriculture comprising only around 10% of Angola's GDP, the scope for further investment and lending to add value here is significant.

Banco de Desenvolvimento de Angola (BDA) is a public financial institution created with the aim of supporting Angola's sustained economic growth. Deutsche Bank acted as sole arranger, agent and lender on the €56.9m export agency-covered financing to support a private sector project in Angola. The transaction, which closed in April 2023, falls under the Framework Export Credit Agreement signed in May 2019 between Deutsche Bank, BDA and the Ministry of Finance to fund private investment projects in the country.

The funds are financing a new turnkey food processing plant promoted by Angola-based food production company Carrinho Empreendimentos LDA. The supply and construction of the new plant will be provided by Andreotti Impianti S.p.A. (Italy) – an Italian engineering company that is active in the design, manufacture, erection and start-up of plants for the production of edible oils and fats.

Located in Lobito, the plant will be the largest of its kind in Africa, with throughput capacity of up to 4,000 tonnes of soybeans or 2,400 tonnes of sunflower seeds per day. Construction of the soybean and sunflower crushing plant is expected to take around two years and create approximately 300 direct jobs and thousands of indirect jobs related to soybean and sunflower planting. Patrícia D'Almeida, BDA Chief Executive, says the plant will make "a valuable contribution to Angola's ongoing process of economic diversification".

Outlook

In short, this resilient and rebounding country presents huge opportunities for investment and lending. The Angolan government has had to make tough decisions, impacting its popularity, but these are shaping up into the basis for a long-term positive trajectory for the country's economy.

The blossoming of ASEAN

The ASEAN countries are a vital part of the global economy. *flow* takes a closer look at the bloc's growth, current status, and prospects

The Buddha noted that "If we could see the miracle of a single flower, our whole life would change". Underpinning the East Asian Miracle, as described by the World Bank in 1990, have been "rapid demographic transitions, strong and dynamic agricultural sectors, and unusually rapid export growth". The economic bloc comprising The Association of South-Eastern Nations (ASEAN) provides an ongoing example that this continues today.

Where you will find ASEAN exports

This general lack of awareness relates not just to the growing ubiquity of ASEAN products and services, but also to ASEAN capital, whether deployed within the bloc or beyond. For example:

- The Australian parent putting chocolate spread on their child's toast before pouring themselves a coffee will likely find Indonesian cocoa beans mixed into the former, and Vietnamese arabica coffee beans in the latter.
- The African tourist on holiday in London who enjoys a Chang beer at a bar after a hard day's retail therapy at Battersea Power Station will have experienced a beverage brewed in Thailand, and the shops in a retail development made possible by a consortium of Malaysian investors led by S P Setia and Sime Darby Property.
- The Indian co-workers in Amsterdam celebrating a business deal with a seafood dinner while staying at the Grand Hotel Krasnapolsky will likely eat prawns from Vietnam, in a hotel chain owned by the Thailand-based Minor International.

As Burkhard Ziegenhorn, Head of ASEAN at Deutsche Bank's Corporate Bank, notes, "ASEAN is benefiting from strong consumer market growth." He continues, "We are talking here about the real economy – for example, companies going abroad and setting up semiconductor chip factories in Malaysia, or other companies exporting frozen fish and seafood from Vietnam."

This article takes a closer look at the current status of ASEAN economies and the macro and business themes that will drive their future direction.

Rapid progress

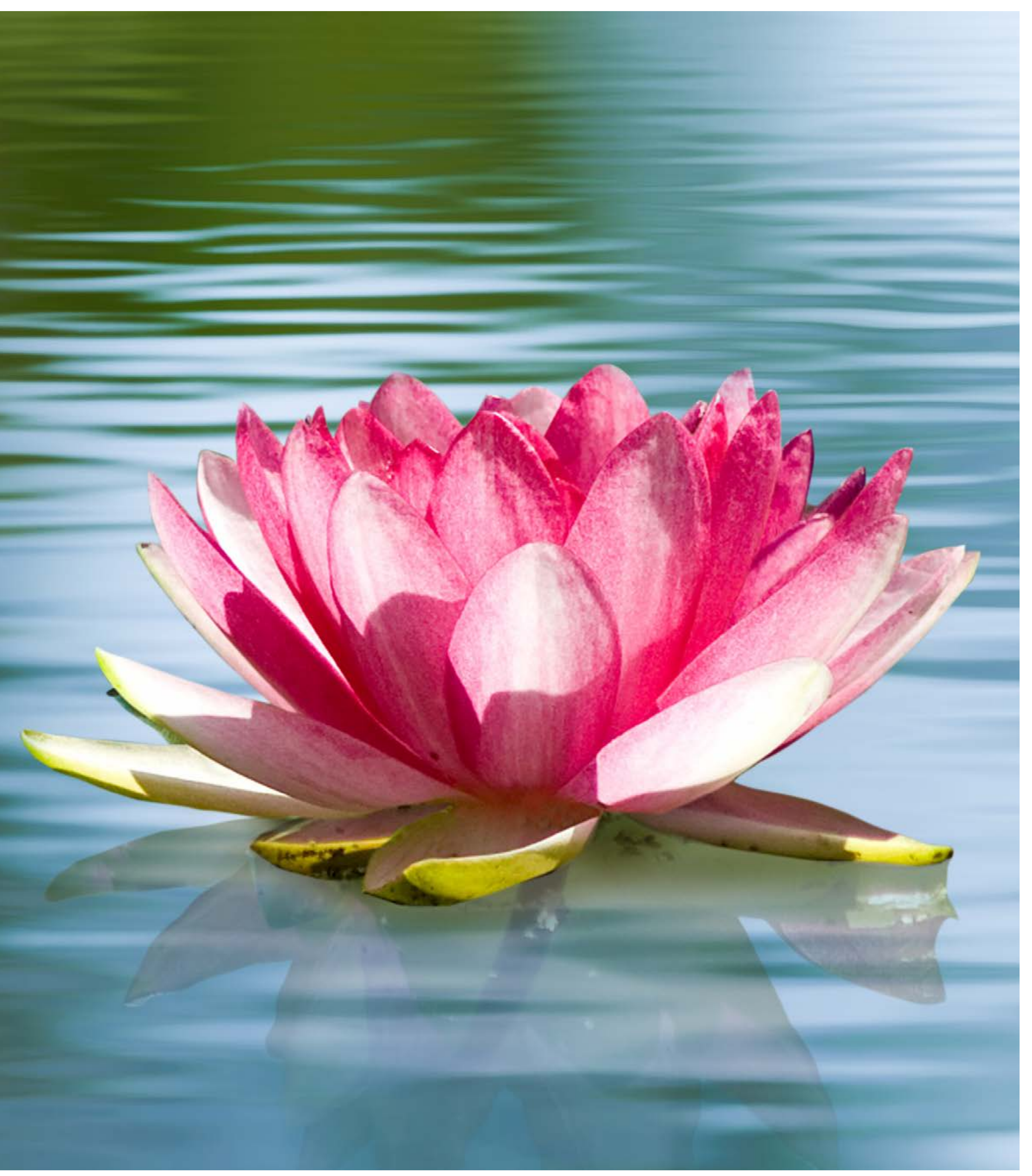
ASEAN's economic development provides a shining example to other parts of the world with its rapid progress from low-income to middle/high-income economy status.

In particular, the transformation is noteworthy as a model to other regions because it did not happen through aid or philanthropy, but rather through foreign direct investment (FDI), supporting enterprise and good old-fashioned hard work. Indeed, the examples provided above of intra-ASEAN FDI are nothing new, and are actually how the East Asian Miracle came about.

Photography: iStock

Key influencers of growth in ASEAN

- Emerging middle classes and new consumers
- Deepening financial markets
- Emerging local multinational companies
- Supply chain shifts



As Japanese companies sought to establish manufacturing plants overseas, they were welcomed by ASEAN governments, since they would provide both jobs and training in new technologies. In short order, these Japanese-trained people in ASEAN host countries established their own businesses – some supplying their previous patrons, others competing directly with them. In addition, China's influence in the region continues to grow – the high-speed trains in Laos connecting the border of Thailand to Southern China being just one example of RMB investment. China is currently ASEAN's largest trading partner and the second-largest source of FDI, with the prospective upgrade of the ASEAN-China Free Trade Agreement looking set to maintain this momentum.

"While data suggests that ASEAN's role has broadened in the last decade, it also points to China's continued central role in global manufacturing. The Covid pandemic also revealed the relative integrity of China's manufacturing ecosystem and the world's continued dependence on it," comments Deutsche Bank Research Asia Chief Economist Juliana Lee.

Malaysia and Singapore (next to Taiwan, which is not in ASEAN) have some of the world's largest semiconductor chip manufacturers, assembly and testing companies, and related outsourced services, and many are locally owned, notes Yusof Yaacob, Deutsche Bank's Chief Country Officer for Malaysia and Head of SEA Investment Banking Coverage.

Four key influencers of growth

ASEAN countries account for 3.4% of the world's GDP, but they contributed disproportionately more towards the growth rate of global GDP: 9% on average from 2012–2022. ASEAN countries constitute around 9% of the world's population, and given that the majority of these people are young, the growth story will play on for quite a while yet. In addition to demographics, four key themes stand out as drivers of further growth. *flow* spoke with experts from key ASEAN markets to understand these themes, and how they relate to recent changes in their home markets.

1. Emerging middle classes and new consumers

These groups in Indonesia, the Philippines, Malaysia and Vietnam are all driving demand for telecoms, financial services and enterprise solutions in the automotive industry, and fast-moving consumer goods. Michael Chua, Deutsche Bank's Chief Country Officer for the Philippines, provides one example of FDI into the ASEAN financial services and enterprise solutions sector. Deutsche Bank helped design and implement cash and FX management solutions for Mercedes-Benz Group AG's subsidiary Mercedes-Benz Group Services Phils., Inc. (MBGSP). MBGSP is the group's finance operations service delivery centre

> ASEAN is benefitting from strong consumer market growth
>
> Burkhard Ziegenhorn, Head of ASEAN at Deutsche Bank's Corporate Bank

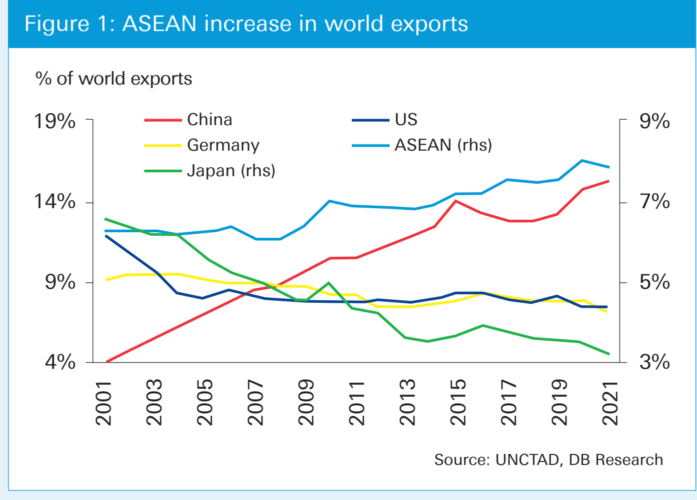
in the Philippines, with 1,000 people in two sites (650 headcount in Cebu City and 350 headcount in Clark, Pampanga), empowering different entities and business partners worldwide within the group to make financial data-guided business decisions.

2. Deepening financial markets

Local and regional financial markets are attracting domestic investors through insurance companies and asset managers, among others. This is likely to continue as the growing population, together with its emerging middle classes, gets more sophisticated. Rising demand in this area is evidenced by Deutsche Bank's work on payment systems for Toyota Astra Financial Services, a joint venture in Indonesia between Toyota Financial Services and Southeast Asia's largest independent automotive group. In addition,

Key facts: ASEAN

Figure 1: ASEAN increase in world exports



Source: UNCTAD, DB Research

While intra-subregional trade is most significant, China is the number one destination for ASEAN's exports, followed closely by the US. However, ASEAN continues to run a significant trade deficit with China but a surplus with the US. (See Figure 1.)

During the past decade, ASEAN enjoyed increased importance to global trade; its share rose one percentage point to reach 7.5% in 2019, with Vietnam leading the way. However, Vietnam's rapid rise in technology-intensive manufactured goods was led by FDI from economies such as South Korea, long before the US/China competition, as MNCs sought more price-competitive locations.

FDI inflows into ASEAN have risen sharply over the last decade, with Singapore leading the destinations. Despite strong headwinds

infrastructure financing (such as that earmarked for Indonesia's new capital city, Nusantara) is attracting much FDI, adds Siantoro Goeyardi, Deutsche Bank's Chief Country Officer for Indonesia.

3. Emerging local multinational companies

Flush with profits from their growing domestic middle-class consumer base, but having exhausted options in their home markets, emerging local multinational companies (MNCs) are going abroad to make additional investments. Pimolpa Suntichok, the bank's Chief Country Officer for Thailand, points out that ASEAN MNCs have been investors outside of their home markets "for a long time" and that they are active purchasers of assets throughout the world. One example is the acquisition of Allnex, the industrial coating and resin producer headquartered in Frankfurt, Germany, by Thai petrochemical producer PTT Global Chemical Public Company Limited (PTTGC). Deutsche Bank in Thailand and Germany worked swiftly and successfully for its Thai client to structure a cost-saving court-guarantee alternative to more traditional escrow arrangements, showing client and adviser both breaking free of capacity constraints.

4. Supply chain shifts

Much has been made of the trend of 'nearshoring' manufacturing capacity, but some of the shifts have been subtle and yet still significant. For example, ongoing tensions between the US and China are leading to supply chain reconfigurations from China into ASEAN countries, observes Huynh-Buu Quang, Deutsche Bank's Chief Country Officer for Vietnam. While some of these moves may not appear to be seismic – moving production from China across the border into Vietnam, for example – the sense of sanctuary this shift to safety has given to manufacturers and investors alike is palpable. Adidas, Nike, Apple and Samsung are just a few examples of MNCs that have moved production from China to Vietnam.

Energy transition and rising demand

Just as companies have had to pivot to ensure supply chain resilience, so too are companies and governments in the region having to pivot their energy mix to ensure climate change resilience.

To continue its growth into the long term, the region needs abundant and secure energy. Continued investment in existing energy sources does still need to be made in addition to renewable sources as the transition progresses. For example, Thailand's state oil company, PTT, has been busily acquiring Western assets, which helped it reach the rank of 177th in the 2022 Fortune Global 500. Despite the global momentum away from fossil fuels, there is still a high cost involved in rolling out renewable energy, and the incentives needed to accelerate clean energy transition pose a challenge for all governments – including those of ASEAN countries.

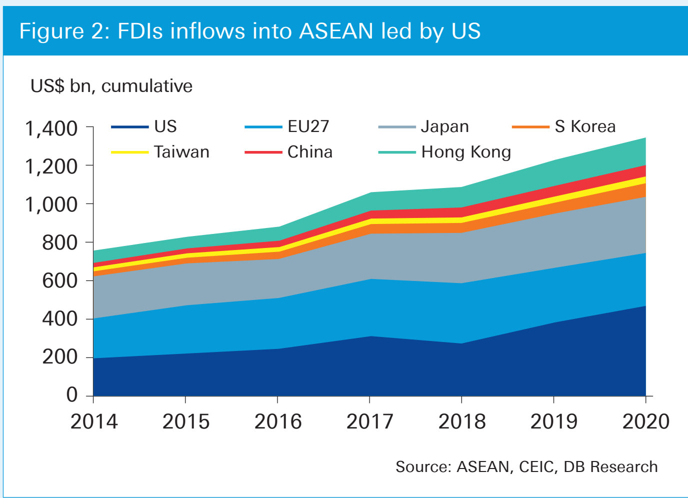
ASEAN companies are nonetheless showing initiative in seizing the opportunities provided by the energy transition. For example, Malaysia's state-owned energy company Petroleum Sarawak Berhad (Petros) announced on 15 March 2023 that it had obtained its first licence for carbon storage to begin its strategic role as the resource manager for Sarawak's natural carbon capture, utilisation and storage (CCUS) resources. The Malaysian state has also announced plans to export hydropower to Singapore and to produce green aviation fuel from algae.

Another example of ASEAN outbound FDI is that of the Bangkok-listed RATCH Group, which has invested in Australia's renewable energy capacity, in the form of six wind farms and one solar farm. Deutsche Bank helped RATCH with the refinancing of several of these renewable generating assets.

Forecast: continued flowering expected

When Samrit Chirathivat opened Thailand's first department store in 1956, nobody could have predicted that the resulting Central Group, a family-owned conglomerate, would one day own Berlin's flagship department store KaDeWe and co-own the London landmark store Selfridges. Such is the rate of the spread of ASEAN products, services and capital, one can safely predict that in the not-too-distant future, it will take a miracle for people to not see the blossoms produced by ASEAN's hardworking and innovative companies and people.

Figure 2: FDIs inflows into ASEAN led by US



Source: ASEAN, CEIC, DB Research

from the Covid pandemic outbreak in 2020, the subregion's share of world FDI inflow averaged 11.9% in 2019–21 – more than doubling from a decade earlier and almost on a par with China's share of 12.2%, albeit lower than the 18% for the US. (See Figure 2.)

By sector, FDI inflows were dominated by financial, followed by manufacturing, then wholesale and retail trade and real estate – but, excluding flows to Singapore, manufacturing was the dominant industry sector.

The US stood out as the leading source of FDI inflows into ASEAN economies (Indonesia, Malaysia, Singapore, Thailand and Vietnam), with the financial sector as its top destination from 2012–2021. Japan followed, with its investment dominated by manufacturing – and well above FDI inflows from the EU.

Mexico City skyline

Latin America's resurgence

Despite political upheavals, Latin America is enjoying renewed growth, as firms shore up supply chains with nearshoring and mitigate currency volatility and inflation. LatAm correspondent Ivan Castano Freeman reports for *flow*

Latin American companies are rushing to fund expansion and slash risks from volatile currencies, as they move to profit from nearshoring opportunities amid sluggish economic growth.

The trend is boosting financing opportunities for global lenders, including Deutsche Bank, which is working to structure deals in its key markets of Mexico, Brazil, Colombia and Chile. The bank sees opportunities to provide foreign exchange and derivatives services for corporate treasurers, including fixed income, interest rate swaps, cross-currency swaps and FX forwards.

"There are several transactions we are working on with clients," says Isander Santiago-Rivera, Head of Deutsche Bank's Institutional Client Group-Fixed Income Ex-Brazil/Mex at the Investment Bank. For instance, a Peruvian firm is currently looking for ways to import raw materials from China while circumventing the transaction's potential currency headwinds.

"They want to purchase products in Asia, but it can take up to three months for them to arrive in Peru," explains Santiago-Rivera. "During that time, the dollar can appreciate, raising their purchasing costs as they earn in soles. If they sign a forward purchase agreement with us, we can guarantee a fixed currency rate for the transaction so they can focus on their business."

Photography: iStock

Post-Covid resurgence

Historic market volatility, coupled with rising interest rates in the US and Latin America, have boosted appetites for complex corporate financings, according to bankers.

"After Covid, companies started to import more from other countries," says Santiago-Rivera. "But because of the high volatility in all asset classes, there is a greater need to purchase products in ways that limit this."

Strong prices for the region's top commodities (such as crude oil, and metals including copper and, increasingly, lithium), mean trade finance could gain sharply this year. Given this backdrop, Ignacio Ramiro, Managing Director for Structured Trade & Export Finance at Deutsche Bank, expects demand for the bank's bread-and-butter trade products, such as short-term guarantees, working capital and letters of credit, to remain strong in 2023.

Amid the stated currency risks, his Madrid-based team is busy structuring joint financings, such as those marrying trade finance loans with interest-rate and FX hedging. "We are living through a period of instability that affects both interest and exchange rates, so any kind of hedging or risk mitigation solution will continue to be in high demand," he notes.

Global currency volatility has become so acute that Argentina and Brazil, South America's largest economies, announced plans for a common currency to finance transactions in the troubled Mercosur free-trade bloc; the plan could eventually include two other members, Uruguay and Paraguay. In an interview with the TV channel GloboNews given in January 2023, former Brazilian Finance Executive Secretary Gabriel Galipolo stated that the proposal had "nothing to do with replacing national currencies", but rather that "the current low convertibility of the Argentine peso motivates the teams to think today of another form of unit of account, looking to foster trade between the two countries." He added, "Today, the risk for Brazilian exporters is convertability." The talks are still at an early stage.

Nearshoring focus

Meanwhile, financial institutions are rushing to finance growth-hungry corporates in Mexico that are keen to move away from 'just in time' logistics

to 'just in case'. Nearshoring, which essentially means manufacturing close to markets, is taking off as the US/China trade conflict continues – impacting the ability to source products from China.

Because of this, local bank Banorte expects to bolster Mexican shipments by US$34bn annually, propelling Latin America's second-largest economy into a new era of prosperity. Altogether, the shift, which is seen as benefitting the Aztec nation's automotive, computer, transport, electric and telecoms export sectors more strongly, is expected to add US$168bn of shipments by 2028, the bank said in a research report. On 26 March 2023, Banorte's Chairman and Regular Director, Carlos Hank González, told Reuters that the bank was adding 800 people to the workforce "just to be able to capitalise on the opportunities for nearshoring".

"There is high interest from companies in the Northern (US border) region to grow exports," confirms a second Carlos González, Research Director at Mexican investment bank Monex, adding that industrial real estate firms, or so-called Fibras, which are leading gains in the Bolsa da Madrid (the Spanish stock exchange), are rushing to procure funding to enlarge industrial facilities. "Many of the industrial and manufacturing parks in the country are at 100% capacity," González adds. "We need much more infrastructure lending and investment."

In order to not miss the boat, Monex is ramping up its cash management, factoring and other investment banking activities, confirms Business Head Alejandra Pérez, adding that the firm is eyeing "many opportunities".

> Any kind of hedging or risk mitigation solution will continue to be in high demand
>
> Ignacio Ramiro, Managing Director for Structured Trade & Export Finance at Deutsche Bank

Mexican strength

The Americas Deutsche Research team expects Mexico to benefit most from the global supply chain reshuffle. Proximity apart, the country is hugely integrated with the US and has a long-running free-trade agreement. This is the former North American Free Trade Agreement (NAFTA) that became the United States-Mexico-Canada Agreement on 1 July 2020. This has helped cross-border trade expand by 20% annually in recent years.

The team notes that more corporate activity and more investment projects will bring an increased need for banking services, including cash flow financings and FX hedges. These could also feature solutions for foreign units of large corporations that need to repatriate profits in diverse currencies.

If nearshoring fully materialises, Mexico – which posted a GDP of US$1.4trn in 2022 – could outpace growth in neighbours suffering from a marked slowdown. These countries include Colombia, which will see a huge growth drop to 1.0% this year from 7.5% in 2022, according to the International Monetary Fund (IMF). It will be followed by Chile, whose economy is forecast to sink by 1.0% versus a 2.4% gain last year. Meanwhile, Mexico and Brazil will see gains of 1.8% and 0.9% respectively, compared with just over 3% last year, the IMF adds.

Deutsche Bank Research notes that Latin America's flagship currencies, such as the Mexican peso and Brazilian real, will end the year higher than the dollar, as the greenback continues to weaken and central banks end a rate-hiking spree to curb inflation.

Exports, meanwhile, will trend higher as commodity prices remain high, benefitting metals exporters in Chile and Peru as well as oil producers in Mexico, Colombia and Venezuela.

Lithium boom

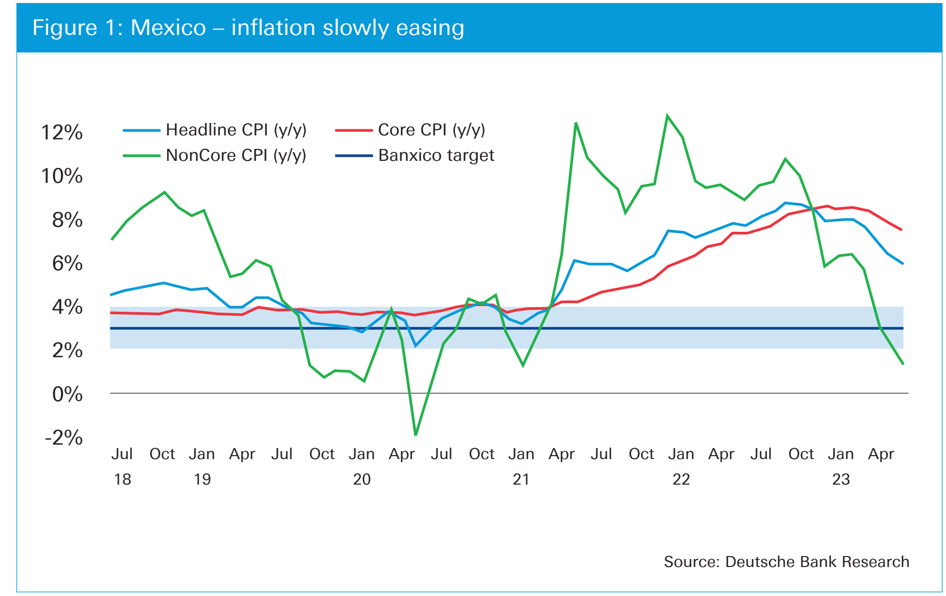
Lithium could become a star Latin American export as countries such as Bolivia, which has the world's highest reserves of the new 'white gold' that is used to make electrical vehicle batteries, race to develop manufacturing and export capabilities. Indeed, Bolivia recently struck a US$1bn deal with China's leading battery maker, CATL, to churn out 100,000 tons of lithium by 2028, a feat that could transform its impoverished economy.

The stakes in the lithium race are so high that Chile, the world's second-largest producer after Australia, has announced that it will nationalise its industry, making lithium a more crucial growth prong than copper, the sales of which are declining.

But there will be obstacles, mainly technical and political. The challenge for Peru and Chile is to add value by eventually producing lithium batteries for export, not just raw materials.

After years of upheaval, analysts see Latin America's political landscape stabilising. Lithium apart, Chilean political risks have diminished, while calls demanding the resignation of Peruvian President Boluarte have quietened down. Given that she only took over from Pedro Castillo in December 2022, following his removal after impeachment, this does suggest a period of comparative calm.

Figure 1: Mexico – inflation slowly easing



Source: Deutsche Bank Research

Deutsche Bank in Mexico, from left to right: Francisco Martínez, Coverage; Facundo Piña, CFO; Alejandro Gutiérrez, Trader; Xavier Avila, Head of Derivatives Latam; Adolfo Hegewisch, Legal & Compliance; Jorge Mier, COO; Marliz Mejía, CEO; Christiana Riley, former CEO Americas; Jorge Sánchez-Lara, co-head ICG Latam; Cyntia Soto, PA to Marliz Mejía; Carlos Rodríguez, Coverage

After 60 years in the region as Global Hausbank, Deutsche Bank has refocused its strategy for Mexico, re-entering the Mexican market through a broker-dealer to be able to offer FX and interest rate derivatives locally.

As Mexico's peso continues to fluctuate against the US dollar amid a recent rate-hiking campaign to fight inflation, "We are helping clients hedge FX and interest rate risks," says Marliz Mejia, Chief Executive of the bank's Mexico office, housed in Mexico City's Torre Virreyes skyscraper. As an example, "a Mexican corporate can issue a US dollar bond to tap the international markets. Their liability and coupons are in USD but their revenues are in Mexican pesos. In this case we can issue a cross-currency swap to help them hedge the risk of the dollar/MXN rate," Mejia explains.

Nearshoring opportunities

Nearshoring is gaining traction as the US cuts its reliance on Chinese goods. The trend is expected to bolster Mexican shipments north of the border by US$34bn annually, according to Banorte.

"With companies coming here to install factories, you will have manufacturing services that will require broad infrastructure including energy, data centres, roads, etc.," Mejia reflects, adding that Deutsche Bank will help fund this new manufacturing ecosystem as it develops.

The enlarged Mexican office will also work to provide corporate treasurers with tailored solutions to help them expand their operations. These firms will include both German clients working with the bank globally, and new Mexican and foreign customers.

Despite protests against a string of reforms, Colombia doesn't face the same calls for radical constitutional or structural overhauls that have hit Chile and Peru. In Brazil, there is no "existential threat" after President Lula won his third term, notes Deutsche Bank Research, while democracy and peace are prevailing in Mexico.

Moving on up

Deutsche Bank's confidence in the region is illustrated by the expansion of its workforce and movement of capital into Latin America, according to Ricardo Cunha, Head of Emerging Markets for Brazil. He told Bloomberg in December 2022 that the bank "began strengthening its operations in the region recently, with the addition of new staff in Brazil to look after hedge funds, onshore fixed-income and commodities, in addition to currencies and derivatives local trading activities".

Six months on, the bank's growth in Brazil has continued. According to Cunha, it spans across: structured credit transactions; FX, inflation/FX/rates/commodity hedging; debt capital markets; and macro coverage of institutional clients. Financing solutions (often related to capex or acquisitions) have been arranged across the digital infrastructure, chemicals, water and sanitation, energy, shipping, oil and gas, packaging and renewables sectors – sometimes with a development finance or multilateral finance partner, Cunha adds.

In addition, the bank has revamped the representative office in Mexico, (see boxout) where the economy continues to grow quicker than expected, while inflation slowly inches towards Banxico's target (see Figure 1).

Ivan Castano Freeman is a freelance financial journalist based in Bogotá

Photography: Deutsche Bank

Recession risk

With the Federal Reserve skipping a rate hike at the June 2023 Federal Open Market Committee (FOMC) meeting following the most aggressive round of tightening since Paul Volcker, maintaining the balance between taming inflation and averting recession continues to be the central macro focus for markets, reflect Deutsche Bank Research economists

In our 2022 *flow* US Regional Focus, we noted how Fed rate hikes in spring of last year demonstrated that the monetary policy stance was quickly adjusting to the new reality of persistently high inflation, but "the risk of tipping the US economy into recession" was ever present.

A year later, not much has changed. On 26 June 2023, US Treasury Secretary Janet Yellen said in an interview with Bloomberg News that the US recession risk is "downgraded". However, Deutsche Bank Research has argued over the past two to three years that "the US is heading for its first genuine policy-led boom-bust cycle in at least four decades". At the time of writing, this remains the house view.

In their 5 June World Outlook, Deutsche Bank Head of Global Economics and Thematic Research Jim Reid and Group Chief Economist David Folkerts-Landau point out that this was initially evident in the Fed allowing a surge in the money supply over 2020–21, "which, if you had any monetarist sympathies, was likely to lead to high inflation. Since the strong demand underlying this inflation was induced by expansive fiscal and monetary policy, it seemed inevitable that an aggressive cycle of rate hikes would be needed to deal with it."

While progress towards lower inflation can be seen in core goods, housing and repaired supply chains that have helped reduce prices for household furnishing, new vehicles and vehicle parts, it will be "a long time until the Fed has peace of mind", the Americas Deutsche Bank Research team said in a follow-up report published 16 June 2023.

With recession looming, an increasing focus has been on the timing and extent of future rate cuts. "If the economic outlook evolves as we now anticipate, with the unemployment rate around 4% by Q4 2023 and 4.5% by Q1 2023, we now see the Fed cutting rates in March 2024, one meeting later than our previous expectation. We then see the Fed undertaking 275 basis points (bps) of cuts over the year, coming primarily through 50bps increments," the team notes.

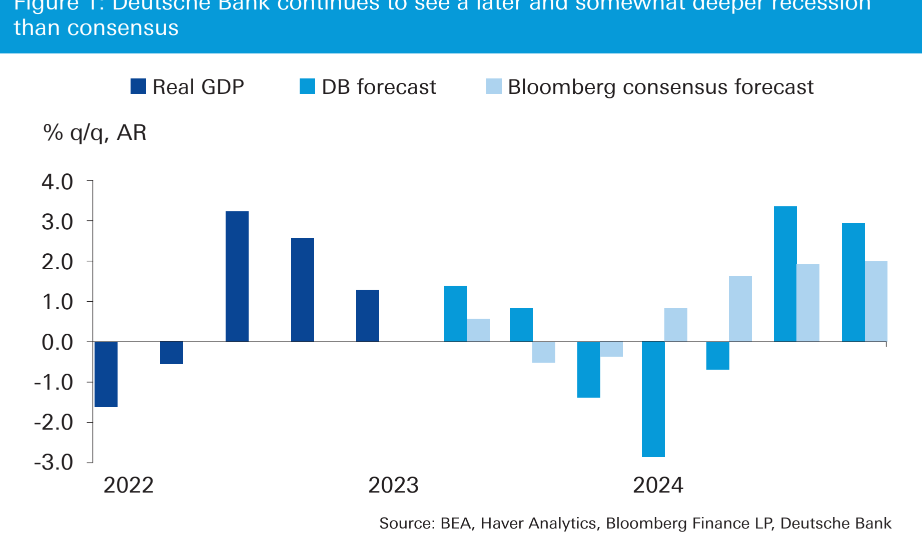


Figure 1: Deutsche Bank continues to see a later and somewhat deeper recession than consensus

Source: BEA, Haver Analytics, Bloomberg Finance LP, Deutsche Bank

Tight labour market

"In Q4 of 2019, we had an unemployment rate of 3.5 to 3.8%, but core inflation of 2%," reflected Brett Ryan, Senior Economist at Deutsche Bank Research, on Trade Finance TV (November 2022). "But the pandemic precipitated a huge influx of fiscal stimulus at a time when there was maximum monetary policy. Trillions of dollars given to consumers accounted for all the goods spending in 2021, and brought huge supply chain issues and shipping costs – causing inflation." He added that "the labour market in the US is the tightest it has been".

"When you are re-opening an entire economy all at once, with everyone scrambling for the same person, this bids up the prices for labour," added Ryan. "While supply chain issues have started to recede, services prices are picking up a lot. This is a problem for central banks, and that's why we are seeing outsize interest rate moves."

The imbalances in the labour market are being driven both by elevated demand and constrained supply, mostly among the 55-plus age group, and a lack of immigration, the US Deutsche Bank Research team notes. They add that while some progress has been made on bringing the labour market into better balance and reducing inflation, both remain far from the Fed's objectives: "This reality has led to the Fed continuing to raise rates even in the face of banking sector stresses."

The tightrope of taming inflation while avoiding recession looks set to be with us for some time.

Photography: iStock

Cash management

The latest cash management insights, from the evolution of Swift Go to liquidity management amid rising interest rates

Client stories
How Siemens, home24 and Roche have leveraged virtual accounts *22–25*

Liquidity management
Assessing the impact of rising interest rates *26–27*

Swift Go
How has the standard evolved since its 2021 launch? *28–31*

Debate
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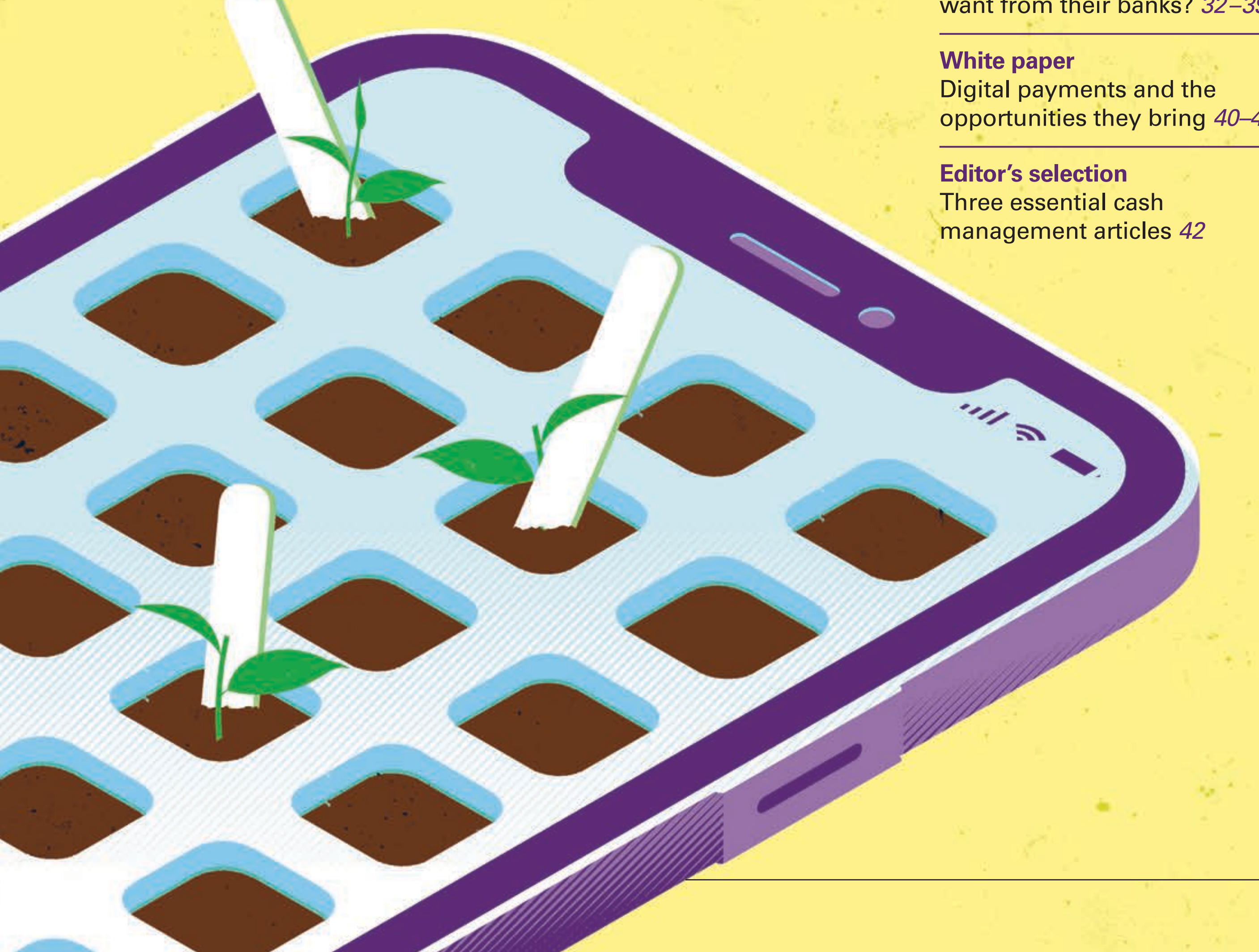


Virtual accounts in action

Virtual accounts have become a popular solution for treasurers looking to drive efficiencies. *flow* highlights the practical applications, and shares how Deutsche Bank clients Siemens, home24 and Roche have leveraged the technology to transform their treasury operation

Large corporates have tended to maintain multiple bank accounts across various regions. These complex structures are costly to maintain and introduce numerous administrative inefficiencies in liquidity management.

By carving real bank accounts into multiple virtual accounts, each with its own identifying features, treasurers can reduce the number of real accounts they have to manage.

How the structure works

Once a real account has been opened, and the client's relationship with Deutsche Bank has been established, virtual account numbers are allocated to each real account. An accompanying virtual ledger management tool is used to self-administer each virtual account and assign user entitlements across the virtual structure. They can be opened and closed with ease, eliminating the need for new documentation, in-branch meetings, or additional account fees.

Treasurers can set up a virtual account for each customer, each entity or business line, as per their requirements. A virtual IBAN (or PayerID) can be issued to payers to enable automated recording of funds to the correct virtual account. Assigning accounts with this level of granularity makes it easier for treasurers to reconcile receipts and complete the order to cash cycle faster.

Because the 'real' bank account is a consolidated reflection of each underlying virtual account balance, there is no need for additional liquidity concentration techniques. Clients will receive statement reporting on the 'real' account, which will continue to benefit from all the features of the bank account product. The virtual ledger management tool allows for segregated reporting and data to be generated across the virtual accounts, and to be made available to different users.

Virtual accounts are not on a distant horizon – they're here today. Organisations ranging from small firms to multinationals are finding that virtual accounts can not only improve operational efficiency and make it easier to scale the business, but also improve customer experience, reduce reconciliation exceptions and enhance liquidity. The three Deutsche Bank client case studies below – each relating to a different industry – help demonstrate this.

Virtual accounts are not on a distant horizon – they're here today

Photography: home24

A new suite of virtual accounts for home24

Consumers' buying habits for furniture and home accessories are changing, with a notable shift in demand away from physical stores and towards online purchases. At the forefront of these developments is home24, a Berlin-based e-commerce store that, since its launch in 2012, has grown to become one of Europe's largest online furniture companies

Today, home24 serves almost 2.3 million customers and employs over 2,000 people across Europe and Brazil, with the company well-positioned to continue its strong growth trajectory. In 2022, for example, it acquired the lifestyle brand Butlers and launched a curated marketplace for third-party suppliers, with a view to continuing to grow its market share in the future.

The rapid growth of the business is underpinned by its treasury department's embrace of payment processing automation. "In order to make the business scalable, we invested in process automation early on," says Philipp Steinhäuser, Chief Financial Officer, home24. "One key pillar of this strategy has been our use of virtual account numbers (vIBANs) since 2016, which has driven a host of internal efficiencies for our treasury function."

Automating the identification and reconciliation of receipts

For home24, the bulk of receipts come from purchases made on account, allowing goods to be delivered and viewed before they are paid for. Although the benefit to the customer is clear, home24 processed and allocated these receipts in-house and, without an effective automated solution, doing so was costly and resource intensive.

That was the main driver towards the use of vIBANs. From the end-customer's perspective, vIBANs are identical to traditional account numbers. For home24, however, they facilitate direct reconciliation and can considerably reduce administrative costs. Both the implementation and ongoing maintenance of vIBANs is cost-effective, and the time and effort required for manual reconciliation is reduced.

"Since we started using Deutsche Bank's virtual account number solution in 2016, it has enabled us to achieve an automatic reconciliation rate of almost 100%," explains Diana Hollmann, Head of Treasury, home24. "We have also seen an increase in customer satisfaction, as fewer unreconciled receipts need to be refunded, which in turn avoids customer enquiries and cancellations."

Laying the foundations for growth

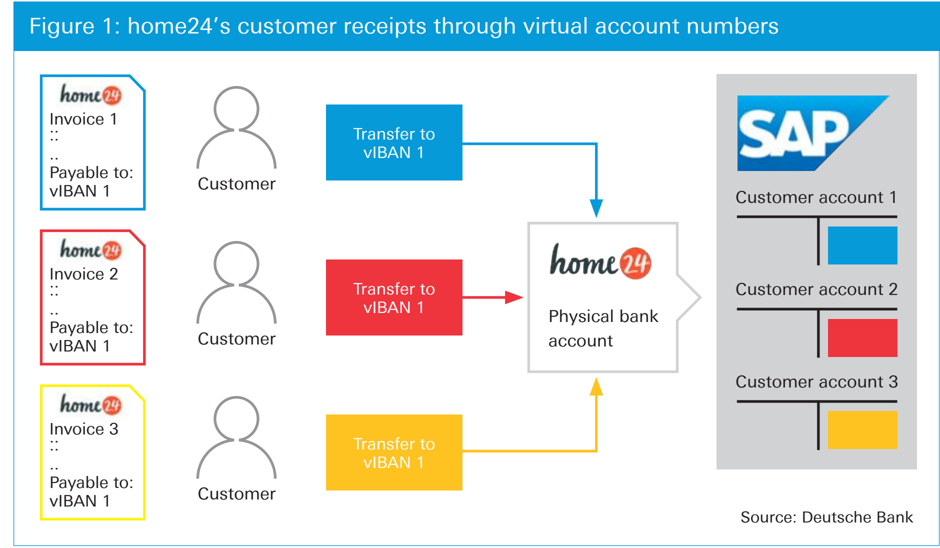
Each customer is given an order-related or customer-related vIBAN, which helps to avoid incorrect entries and provide much greater transparency over cash flows. A vIBAN, linked to a physical bank account, is assigned for each order, with the customer transferring funds directly to the vIBAN. Once the payment is received, the vIBAN allows the payment to be allocated to an open invoice entirely automatically. Existing customers are allocated a recurring vIBAN, and new account numbers are available for guest customers. In both cases, the vIBAN is automatically generated and linked to the company's enterprise resource planning (ERP) system.

Each physical bank account can also be assigned an almost unlimited number of vIBANs, meaning that the solution is highly scalable. As home24 looks towards the next stage in its growth strategy of adding new products and expanding to new European markets, the company's embrace of automation will remain an important lever in its success.

Our use of vIBANs since 2016 has driven a host of internal efficiencies for our treasury function

Philipp Steinhäuser
Chief Financial Officer, home24

Figure 1: home24's customer receipts through virtual account numbers



Source: Deutsche Bank

Implementing a virtual account structure with a difference for Siemens

With operations across the globe, Munich-based Siemens, Europe's largest industrial manufacturing firm, is familiar with complexity. This particular initiative involved the conversion of Deutsche Bank IBANs into virtual IBANs

For Siemens, the aim of virtualisation was to deliver new levels of efficiency to the company's internal cash and liquidity management processes. The creation of a Single Euro Payments Area (SEPA)-wide virtual account set-up has helped drive better outcomes for their clients. "We need to be able to provide an instant response, and virtual accounts are one essential part that enables us to offer just that," comments Heiko Nix, Head of Cash Management and Payments at Siemens.

Nix has seen significant enhancements around enterprise-wide monitoring, control and maintenance activities. But an even more important benefit for him is improving time-to-market when, for example, setting up new entities – particularly when entering new countries.

Having all transactions booked to the physical account effectively gives Siemens real-time cash concentration across the related structure, potentially removing any need for regional end-of-day pooling. This not only raises the prospect of liquidity optimisation, but also drives simplification of regular bank account attestation processes and assures full transparency for each entity.

A seamless transition

Throughout the project's implementation, it was crucial to avoid any disruption to the customer experience, so Siemens approached the pilot in a unique way. Typically, bank account virtualisation has meant creating new virtual accounts, informing customers of the change in IBAN and then, following a transition period, closing physical accounts. This inevitably disrupts customers, requires action from them, and results in delays to receipt. Instead, Deutsche Bank worked with Siemens to ensure the virtualisation was completed immediately and without customer involvement.

The switchover had to be instantaneous, such that Siemens could continue its operations seamlessly. By retaining the same IBAN in the switch to virtual account numbers rather than creating a new one, the solution overcame what had proven for many corporates to be a seemingly insurmountable barrier, as Siemens looked to centralise their banking structures.

> We need to be able to provide an instant response, and virtual accounts enable us to offer just that
>
> Heiko Nix
> Head of Cash Management and Payments, Siemens

Looking ahead, this move is just the first step in a bigger roll-out of a centralised, SEPA-wide virtual account set-up. Nix confirms that Siemens will soon be rolling out the virtual accounts further afield, starting with the Netherlands. The additional jurisdictions being covered will eventually form Siemens' European accounts structure with Deutsche Bank.

Photography: Siemens

Roche's treasury transformation journey

For Swiss multinational healthcare company F. Hoffman-La Roche AG, aka Roche, effective treasury operations have always been high on the agenda, not only for adding value in terms of efficiency, but also for positioning itself to realise the benefits of emerging opportunities

The company's treasury team embarked on an ambitious drive towards automation in 2004, aiming to streamline operations, minimise manual processes and improve cash visibility. This journey has yielded valuable results for the group. Roche has largely optimised its banking and cash management operations with a focus on operational efficiency. In this respect, 2023 will be a significant milestone in marking a full decade since its treasury pioneered Deutsche Bank's virtual IBAN solution.

Roche's aim with this project was to rationalise banking relationships and accounts, reduce the know your customer (KYC) burden, minimise fraud potential and improve security by centralising payment and collection processes (see Figure 2). According to Martin Schlageter, Roche's Head of Treasury Operations, "Virtual accounts were the key to fully replacing our local banking infrastructure with a completely centralised one."

A pioneer in account virtualisation

While much has changed over the past 10 years, Roche's commitment to real-time treasury has delivered consistent benefits for the group. During that period, the set-up has evolved in line with prevailing market trends and client needs. Through continuous extension of the solution and a growing range of supported transaction types, Roche has been able to close all external bank accounts for almost a third of its group companies, and give the treasury team better oversight of bank account opening and signatory management.

The treasury team at Roche now has visibility and control over 100% of cash flows that are part of the on-behalf-of (OBO) structure. All payment instructions, including both manual and file-based payments, are known in advance of execution, enabling better cash positioning and forecasting. Additionally, subsidiaries can access comprehensive insights and reporting of incoming and outgoing flows across their accounts with the in-house bank.

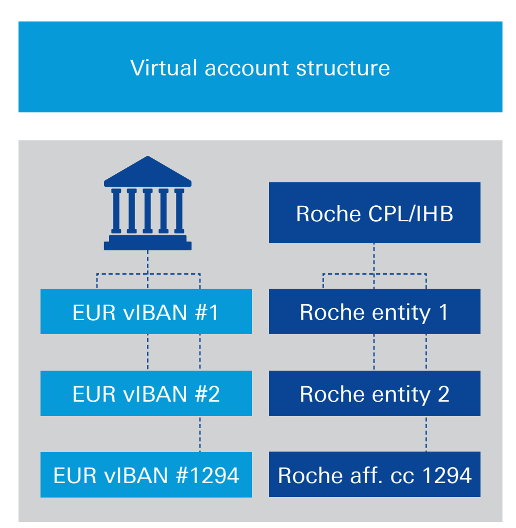
Although some countries have regulations that prevent subsidiaries from being fully integrated into the group's in-house banking model, the treasury has still rationalised and centralised its cash and banking model substantially in these locations. For example, more than 186 group entities use the Roche in-house e-banking solution for manual payments, an unparalleled achievement in corporate treasury.

The result is reduced operational costs, financial benefits through economies of scale and a harmonised, robust process and technology infrastructure. The team can now respond quickly to changes in the business and wider market developments.

Embracing real-time treasury through virtual accounts and other innovative treasury initiatives has allowed the Roche treasury team to become a better strategic partner to each business. The treasury function now both advises 'upwards' to senior management and the CFO by providing better strategic insights into liquidity and risk, and 'sideways' across the wider Roche group. Group companies approach the treasury for support on how to optimise their payments and collections processes, and reap wider supply chain benefits.

Transformation at Roche's treasury team has been a long-term, non-linear and continuous process, delivering incremental benefits that strengthen operational and strategic foundations.

Figure 2: Roche's in-house bank made possible through virtual accounts



How it works

- Main real CPL account carries cash balance and executes all payments *'on behalf of'* the entity
- Virtual accounts are held by CPL (account owner) and assigned to a group entity (ultimate beneficiary) for their collections
- Client receives a customer payment, sent to a virtual IBAN
- Credit appears in real CPL account bank statement (MT940/Camt.053)
- CPL allocates the collection to respective entity in-house bank account (cash pool)
- Local accounts are closed

Source: Deutsche Bank

Are treasurers' investment priorities shifting with rising interest rates and scrutiny over bank risks?

Managing cash and liquidity is as important as ever, but in the last year, the environment has changed dramatically. Helen Sanders reflects on what this means for short-term investment strategies

Only the most seasoned treasurers have experienced rapidly rising interest rates and inflation; for many, their early careers were marked by tumbling interest rates during the global financial crisis of 2008–09. Although a trial by fire for many, it also meant that uncertainty became familiar treasury territory.

More recently, as Thomas Mayer, Head Cash Sales GY/CH/A & EMEA

Now that ESG is a significant priority at corporate strategy level, its importance in corporate investment policies is likely to grow

Head Investment Solutions at Deutsche Bank comments, "Covid-19, the flight to liquidity, supply chain disruption and geopolitical challenges were also unprecedented, so treasurers are accustomed to uncertainty."

As the economic impact of Covid-19 became clearer, companies repaid their borrowings. Today, new uncertainties have emerged, with inflation and rising energy and borrowing costs affecting both customers' discretionary spend and corporate costs. Cash flows are being reforecast, and financial resilience has become a renewed priority as companies anticipate a lengthy recession.

Risks, costs and returns

The need to manage uncertainty is comparable to treasurers' experience of the global financial crisis and Covid-19, but the interest rate environment is not. In theory, rising interest rates should mean that companies can compensate for higher costs and depressed revenues through higher returns on their cash investments. In reality, this is rarely the case. More commonly, treasurers have been drawing on credit lines to create a liquidity buffer, and therefore higher investment returns are offset by higher borrowing rates. Likewise, lack of visibility and certainty over future cash flows mean that investment terms are often no longer than two to three months, so treasurers are not able to pick up higher returns further along the yield curve.

This lack of visibility and certainty also means that treasurers remain conservative in their choice of investment products. Current accounts, term deposits, money market funds and, in some cases, short-term bond funds remain staple investment choices, but some have extended into triparty reverse repurchase agreements (reverse repos). These transactions offer similar returns to term deposits but with a significantly improved risk profile, as the investor holds the underlying collateral for the term of the repo. Reverse repos are familiar to many treasurers, but following an extended period of low interest rates, during which they may have fallen out of investment strategies, it may take time to adapt policies to reinstate them.

Managing a wider range of investment instruments can increase the administration burden for corporate treasuries. Investment platforms may help overcome this challenge, and are likely to be further developed in the future: platforms such as Deutsche Bank's Cash Investment Service bring together a suite of products such as (money market) funds, reverse repos, or even deposits with a panel of counterparties in a single offering.

Some companies that have large free cash balances and negligible debt enjoy reliable cash flows. Treasurers of these companies can invest cash more strategically, taking advantage of higher returns available for longer maturities. This was less of a priority during the extended period of low interest rates, but despite growing opportunities for yield generation, treasurers remain conservative. Mayer says, "Treasurers' performance is not measured on investment returns, but on their ability to support the company's liquidity needs. To achieve this, security and liquidity are priorities, as opposed to yield."

A new pillar of cash investment policy?

ESG issues have emerged as a major focus in recent years. Leading banks, including Deutsche Bank, have introduced innovative ESG-linked borrowing and investment products. To date, these instruments have not yet become a fundamental element of treasurers' investment policies; however, as recent Economist Impact data reveals, 45% of treasurers are setting ESG benchmarks for short-term investments, and 43% are looking at instruments such as green bonds to fund sustainability initiatives. Companies are therefore by no means rejecting or deprioritising ESG; however, considerations remain around ESG impact, the availability of green or sustainability-linked investment products and investment policy:

- First, companies will typically focus on making the business itself more sustainable, as opposed to prioritising ESG-linked investment policies. They are therefore embedding ESG considerations into their business strategy and operations, such as carbon emissions targets and the use of green energy. An auto manufacturer is more likely to concentrate on investing in research and development of electric vehicles than in ESG-linked investment products.
- Second, there is an issue of capacity. Mayer explains, "Banks can only offer a certain volume of green or sustainable investments, as this is proportionate to the amount of green or sustainable assets that they are financing."
- The third issue relates to investment policy. While a treasurer would likely opt for a 'green' term deposit over a 'grey' one if all other terms were identical, fewer than half have ESG-linked investment targets as part of their policies, although this is likely to change over time. Furthermore, the short-term nature of most corporate cash investment tenors is inconsistent with the longer-term financing of ESG-linked assets, such as wind farms.

Banks can only offer a certain volume of green or sustainable investments

Thomas Mayer, Head Cash Sales GY/CH/A & EMEA Head Investment Solutions, Deutsche Bank

Now that ESG is a significant priority at corporate strategy level, its importance in corporate investment policies is likely to grow, particularly as ESG-linked products become more widely available and ESG values and priorities are disseminated across the business. This is unlikely to be to the detriment of security and liquidity, however. As the past 15 years have proven, uncertainty is the only certainty, so financial resilience, protection of capital and access to liquidity are likely to remain fundamental.

Helen Sanders is a consultant to the financial services sector, and former Director of Education at the ACT and Editor of Treasury Management International

Going the distance with Swift Go

The launch of Swift Go in early 2021 was billed as another milestone for the cross-border payments space. A couple of years on, how has the story developed? *flow* investigates

In recent times, the cross-border payments industry has often been criticised for lack of transparency, speed and security, as well as high costs. Although that may be true for a very small percentage of cross-border payments (the vast majority are in fact straight-through processed within minutes), the industry is continuing with its transformation journey to overcome the remaining pain points and respond to changing client demands.

The first step in the transformation came with the introduction of Swift gpi in 2017, which provides end-to-end tracking for high-value cross-border payments. Today, Swift gpi has become the default standard for high-value cross-border transactions, and the industry has shifted its focus towards reinforcing these strong foundations to further remove frictions.

This is where Swift Go comes in. Built upon the existing Swift gpi rails, the new service, focusing on lower-value payments (up to 10,000 in Euro, USD and GBP), enables consumers and SMEs to send fast, predictable, cost-effective and secure low-value payments. It also brings the potential for banks to reduce costs and drive revenues.

> Swift Go has its parameters that should make it cheaper for us as banks to process
>
> Marc Recker, Global Head of Product – Institutional Cash Management, Deutsche Bank

Opportunities remain

To identify where improvements could be made in low-value, cross-border payments, Swift surveyed 4,000 consumers and more than 2,000 SMEs across eight global markets: Australia, China, Germany, India, South Africa, Saudi Arabia, the UK and the US. It found that 85% of respondents consider their banks as the first port of call for international payments. Only 44% of consumers and SMEs reported actually preferring bank services for these payments, however, with other respondents preferring alternative solutions, such as fintechs and money transfer operators.

"For those that do still prefer banks, the key drivers are the security and trust they offer, whereas those that prefer alternative offerings cite the ease, speed and competitive pricing they

Photography: iStock

190
banks
live on Swift Go
Source: Swift

provide as the main draw," says Fabien Depasse, Global Product Lead, Swift Go & Pre-validation, Swift. "It's really about the overall user experience: having predictability from the start, knowing exactly how much it is going to cost and when the payment will arrive."

A way forward was mapped out in the results for the traditional banking community: 83% of SMEs and 76% of consumers agreed that they would be likely to consider banks if they were able to provide the same level of service and experience as fintech offerings.

"There is volume to be regained here. There are new volumes to develop, and there are new opportunities for additional payment volumes in the consumer and SME space," explains Depasse. "It's driven by our ability as an industry to deliver on the ease, the speed and the competitive prices and match that user experience."

The story so far

Swift Go builds on the foundational success of Swift gpi, which, over the past six years, has made significant headway in improving high-value cross-border payments in terms of speed, transparency and tracking capabilities.

By comparison, Swift Go provides banks with a similar service for the low-value cross-border payment space, and is designed to enable faster, more predictable and competitively priced low-value cross-border payments for small businesses and consumers.

> For those that do still prefer banks, the key drivers are the security and trust they offer
>
> Fabien Depasse, Global Product Lead – Swift Go & Pre-validation, Swift

"We wanted to ensure that Swift Go could build on existing investments, while also simplifying processes," says Marc Recker, Global Head of Product – Institutional Cash Management, Deutsche Bank. "I see Swift Go as a kind of economy class of payments. Swift Go has its parameters that should make it cheaper for us as banks to process, but with the same level of trust."

Swift Go is designed to provide a seamless service offering for both banks and clients, and can help improve low-value payments in three main ways:

1. An enhanced customer offering: This can be delivered through full predictability of payment conditions (time, fees, amount) and by the full payment value being delivered to end customers through Swift Go banks. This in turn will result in improved payment processing, which can even be performed instantly where available.

2. Increased harmonisation: The single format requirement will foster standardisation. A common currency guide is provided for Swift Go banks.

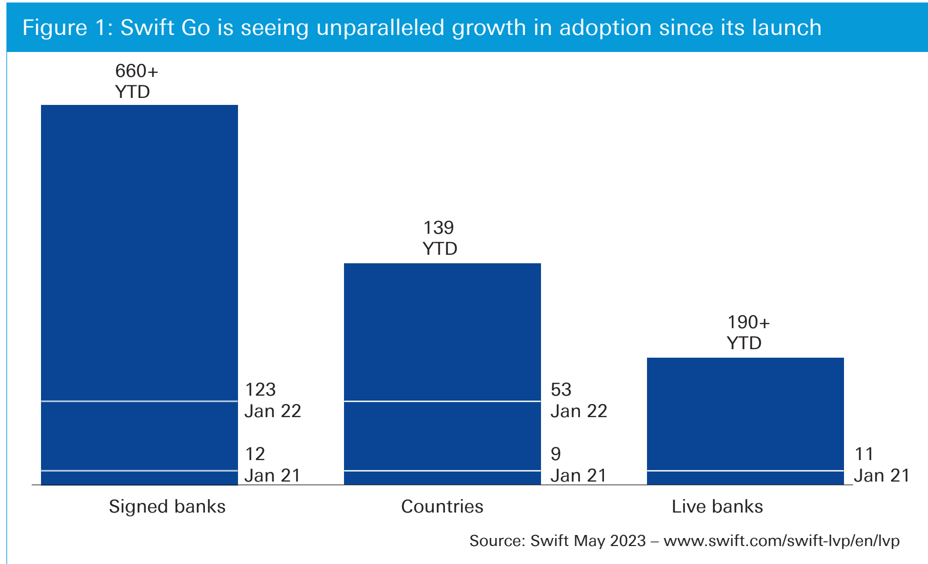
3. Cost reduction: This common currency guide, along with stricter network validation, will drive higher straight-through-processing (STP) rates between correspondents, reducing costs. There is also a roadmap to achieve full STP.

From strength to strength

The service launched at the start of 2021 with 12 signed-up banks that were headquartered across nine countries. Subsequent growth has gone from

Photography: iStock

Figure 1: Swift Go is seeing unparalleled growth in adoption since its launch



Source: Swift May 2023 – www.swift.com/swift-lvp/en/lvp

strength to strength, with over 660 banks signed up today across 139 countries, and 190 banks now live.

This strong adoption curve shows that the challenge of bank disintermediation is recognised everywhere and that banks around the world believe the responsible and viable response should be through industry-wide collaboration.

"We see the exact same pattern as we have seen with Swift gpi in the past, with banks signing up one year and going live the next year. So, we are expecting this number of live banks to grow quite significantly this year, as we are onboarding all those who signed up in 2022," says Depasse. "The momentum is there – the banking industry really wants to react to those new entrants, and not to give away those volumes, but to claim them back and to offer that customer experience that is helping the fintechs steal this away."

Deutsche Bank – one of the Swift Go pioneers – is already live as a euro intermediary and is working as an instructed bank as well, with US dollar and GBP planned towards H2 2023. The bank is also working internally and with Swift to offer its financial institution clients yet to be onboarded to the service the full business benefits: for example, by making the tracker available on client portals.

An ongoing evolution

Getting the right model behind Swift Go has proved to be an iterative process for Swift and its banking partners. The initial model for Swift Go payments relied heavily on inter-bank charges, and take-up did not materialise as hoped.

At the end of 2022, Swift and the Swift Go banks met in London to discuss progress. The talks revealed that for the 620 signed-up banks to be fully onboarded under the current rules, every single bank would need a new bilateral agreement and a new claim process with each intermediary in order for the system to be viable. Not only would this not be scalable, but it also became clear that the cost of the inter-bank charges under the current model was not leading to competitive prices.

"This precipitated a shift in mindset," explains Recker. "We knew the process was inefficient, and so if we simply recreate the status quo between banks under the umbrella of Swift Go, that does not help us. Something needed to change".

In response, the product has undergone an evolution, with participants unanimously agreeing to adapt the current model as follows to remove the main hurdles to adoption:

> It's really about the overall user experience
>
> Fabien Depasse, Global Product Lead – Swift Go & Pre-validation, Swift

- All Swift Go banks adhere to the no deduct rule to ensure full principal amount credit to beneficiary
- Beneficiary banks can charge their customers a separate fee
- Swift Go banks do not claim on each other, dramatically reducing the effort in bilaterally agreeing prices for Go payments
- Swift Go intermediary banks can charge a processing fee to their Go ordering or Go beneficiary bank customers (as per existing market practices and commercial agreements between banks)

How it works

Picture the scene: a debtor in Australia wants to transfer €100 to an end beneficiary in Europe. The instructing agent – an Australia-based bank that is a member of Swift Go – will send funds to the currency intermediary – in this case, Deutsche Bank. For its role in enabling euro flows for the Australian bank, Deutsche Bank will have a fixed transaction fee in place for this relationship, paid via a monthly invoice. In this example, the indicative transaction fee is 1.2, meaning that if the instructing agent sent 1,000 payments per month it would pay Deutsche Bank €1,200 (1,000 x 1.2).

The instructed agent, based in Europe, will then credit the end beneficiary. Previously, in this same flow, the instructed agent would have been able to make a claim against Deutsche Bank. Importantly, this means the €100 stays the same across the value chain, with not a single euro cent deduction taking place.

A way forward

If banks can no longer take fees from other banks in the chain, will they lose all their revenues? The Swift Go model addresses this possibility.

"From a bank perspective, we should not be afraid of Swift Go costing us all of our revenues, as we do not need to put all of our payments through the rails. Instead, we will all need to think about it intelligently and strategically within our own organisations," says Recker. "We could, for example, create a new product for clients that leverages Swift Go in the background, as the enabler for the solution. There are plenty of options for banks – it is just about working towards and using the right one."

The primary focus for now, however, remains on building adoption – as the widespread support of the Swift Go service will be the key to its success.

Maria de la Fuente
Head of Treasury and Banking Management, Iberdrola (Spain)

Christof Hofmann
Global Head of Corporate Cash Management, Deutsche Bank (Germany)

Craig Jeffery
Founder & Managing Partner, Strategic Treasurer (USA)

Patrick Kunz
MD, Pecunia Treasury & Finance and Treasury-as-a-service.com (Netherlands)

Kate Pohl (moderator)
Former banker and financial services consultant and broadcaster (Germany/USA)

THE BIG DEBATE

Perfect partners

What do corporate treasuries want from their banks? Apart from the obvious – everything working on time every time, and being a trusted partner in good times and tough – the relationship needs to be dynamic and enterprise-wide. In this extract from two *flow* podcasts, treasury consultant and host Kate Pohl finds out more

Kate Pohl: *There is a saying, "You never get a second chance to make a first impression." How does this apply to the way a bank interfaces with a corporate?*

Craig Jeffery: A corollary to that saying is, "It can take decades to build a relationship and seconds to lose it!" A relationship is about the whole corporate entity interacting with the entire bank, not just individual representatives. Overall cooperation is key, including the credit relationship, as well as providing good and sound advice. This will – or should – outlast any one person.

Christof Hofmann: Yes, the total relationship is important. It is a partnership based on trust over a long period of time, often decades, especially when you look at cash management. Collaboration at multiple levels

is necessary to jointly innovate, while technical connectivity to the corporate treasury – in a modern and possibly multibank fashion – is equally important.

Maria de la Fuente: The key for Iberdrola is quite straightforward: the interface should never fail! Once it is implemented, we shouldn't even have to discuss it. Payments are time-sensitive, with defined cut-off times, and those need to be met, each and every time.

Patrick Kunz: It doesn't matter so much how I technically receive information, but as Maria said, it needs to be on time and accurate. We are moving towards real-time payments and information, which some treasuries already want. The key is for financial institutions to deliver this data in a format that can be consumed easily, possibly through a bank portal or a treasury management system (TMS).

Kate Pohl: *What about the corporate treasury that wants to 'see' a high level of innovation and digitalisation from their bank even if they are not quite ready for it?*

Christof Hofmann: Things have clearly changed over the last few years. Relationships today are much less transactional (just payments or FX only) and much more strategic, especially in the area of cash management. Clients are looking to partners for end-to-end solutions. They want to solve challenges using the latest technology. In particular in request for proposals (RFPs), clients ask consistently for sophisticated and advanced solutions such as particular application programming interfaces (APIs) or FX workflow solutions. This is the case even if the company itself may not be fully ready to use them today. That makes sense, as winning an RFP means working together for many years to come.

> Cooperation and collaboration are not merely an option; they are the way forward
>
> Craig Jeffery, Founder & Managing Partner, Strategic Treasurer

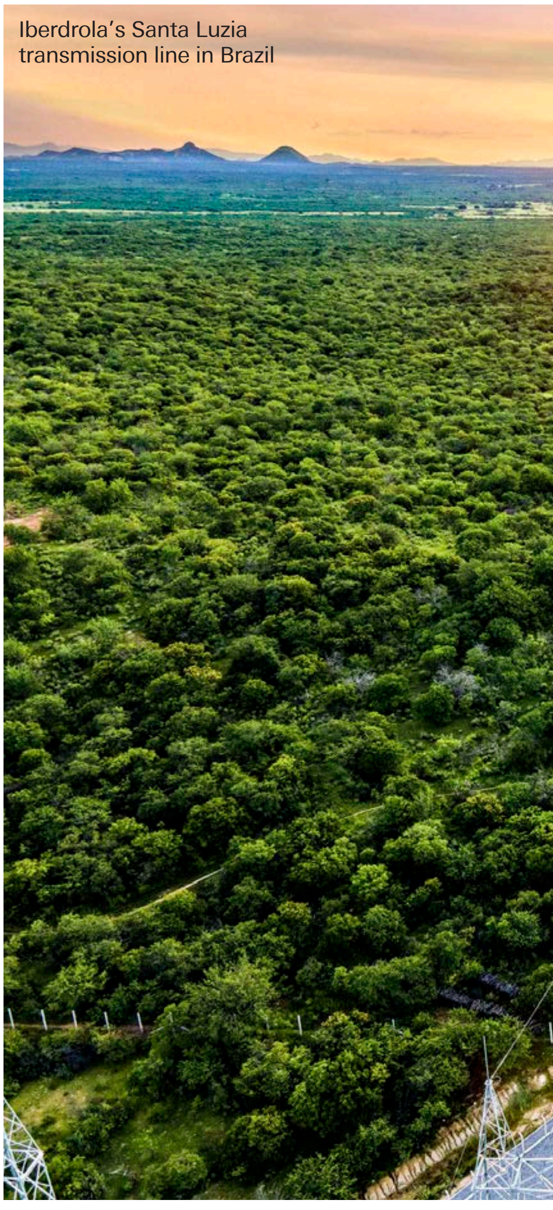
Kate Pohl: *How important is global reach?*

Craig Jeffery: A single global financial institution (FI) would make it easy to get things up and running. However, once a company reaches a certain size, it needs multiple partners worldwide for different solutions. If you optimise for efficiency, you may not have enough diversification, and if you emphasise diversification, you can have too high a level of fragmentation. Size does matter here. If a company is very small, then it makes sense to have just a few partners. Excellent services, provision of liquidity and good ideas are all important. Large companies typically have enough needs to 'feed' a variety of banks. While the default is to deal with fewer FIs, finding the right mix and balance is paramount.

Christof Hofmann: Payments are a 'multi-local' business, therefore global reach is very helpful, e.g., for companies in Europe moving into new markets in Asia, or Asian-headquartered enterprises moving to Europe. We can give clients our global expertise to support their growth and diversification while maintaining one key contact person for the entire relationship. However, this does not mean that large multinational corporations should or do have only one single bank. They want to diversify their risk, ensure flexibility through different partners and leverage the best solutions they can.

Patrick Kunz: I would love a bank to be present in every country where I do business, because it would make things so easy… and of course, my provider would be very pleased as well. This is especially true for treasuries that are global, with payments and receipts all over the world. But that is a utopia that does not really exist. As both Craig and Christof noted, too much concentration with one bank for an MNC is also a risk. In the end, treasury usually chooses one provider per region based on geography, their capabilities and the relationship. The next question is how to connect these banks to centralise the cash positions.

Kate Pohl: *Does a corporate really expect their bank to do everything, or rather*



Iberdrola's Santa Luzia transmission line in Brazil

What treasurers want from their banks

- Terrific customer interfaces
- Global footprint and reach
- One-stop shopping: also supported by third parties
- Multibank connectivity
- A culture of innovation
- Cutting-edge technology
- A trusted adviser relationship
- Balance sheet support

Photography: Iberdrola

facilitate and find the right solution? How realistic is the one-stop shop?

Maria de la Fuente: We know multiple banks and different types of FIs are necessary. Iberdrola is very international, so when we work with a global bank, we are looking for them to coordinate and open the door to the entire scope and multiplicity of their institution. Having said this, we realise there can be a need for regional or local banks as well, especially when we are entering a new country and need specific advice on regulations, laws, cultural differences, etc. However, if our global provider can do it all, then we are very lucky to have such a good and skilled companion for our journey! International FIs usually offer standardised products, services and processes such as Know Your Customer, so working with a global bank in multiple locations can make everything much easier.

Christof Hofmann: 'Everything' is a big word! Offering excellent products and services is important, but competing based on product alone is no longer viable. It is not only about FX, but about automating the FX processes within the workflows of a company. Corporates are looking for help regarding solutions to problems such as reconciliation, challenges in cash flow forecasting, opportunities in building a marketplace, or possibly creating a financial service offering for their own customers. Building value-added propositions for clients to realise efficiencies and drive innovation is vital. This also reflects the fact that the role of the treasurer and the cash manager has expanded over the past few years.

But the bank is not a one-stop shop for everything. There will always be room for technology providers, integrators and, for example, TMS offerings. However, multiple partners increase the complexity and risk for organisations. Creating integrated end-to-end solutions that include partners is something Deutsche Bank is doing to help clients.

This also brings up the topic of multi-bank capabilities, which our customers rightly want to explore. So, whenever possible, we try to offer multi-bank solutions and keep things open. Many clients want to drive innovation by building upon existing platforms. In this way, enterprises can use services that banks, as well as others, can provide. Finally, however, it is important to differentiate. Some corporations are very happy to work with the products and services (including technology) that their bank offers.

Craig Jeffery: Companies also expect their FIs to vet different providers to bring needed solutions to their customers. The latter creates significant value in addition to both credit access and the trust already established within the relationship. This does not mean, however, that large corporations always see their banks as the most innovative players. Companies often feel that FIs tend to be more stable, while fintechs can develop cutting-edge products more rapidly. The bank's

Offering excellent products and services is important, but competing based on product alone is no longer viable

Christof Hofmann, Global Head of Corporate Cash Management, Deutsche Bank

commitment that services will run smoothly and continue to be available, as Maria discussed, is vital and valued. In the end, clients do expect their banks to provide some of that one-stop shopping. They look for good tech and stability combined with an open architecture as well as multibank capabilities – and all of this without friction.

Kate Pohl: *Is collaboration and cooperation between a bank and a start-up, scale-up or fintech really possible?*

Craig Jeffery: Cooperation and collaboration are not merely an option; they are the way forward. Some banks are innovating directly, but there are far more start-ups and fintechs coming up with new solutions that need to be integrated. The question is how to work together and in what ecosystem. Fintechs can scale by leveraging the trust of banks, and FIs can consolidate these solutions while providing stability and capital.

Christof Hofmann: This is already happening. We have relationships with fintechs, partners and vendors who complement our services and may even be clients and/or competitors, all at the same time. This works very well and demonstrates that collaboration is no longer a question, it is a given. It is the way to drive innovation and offer comprehensive services for our clients, who in turn expect it. Sometimes our customers even select a specific fintech, asking us to cooperate with them to ensure a seamless integration and working relationship.

Kate Pohl: *What are the key product areas that a corporate client expects of their house or primary bank? For example, instant payments…*

Craig Jeffery: Does everyone want instant payments? The answer is no. Are payments slowing down, or does anyone want slower payments? Absolutely not! Our research shows that companies are willing to move business away from a key credit bank if they are not keeping up in the payments space. This is considered an essential area for innovation by corporates. Real-time or 'just-in-time' treasury – i.e., getting information when it is needed – is vital to support corporate decision-making.

Christof Hofmann: Real-time payments are not the same as real-time treasury. Real-time treasury is about so much more! As Craig noted, it is about having access to information when you need it, for example through APIs. It is about extending cut-off times and moving away from a total reliance on end-of-day statements. It is about having the right information, including balances and account credits, at the right time to make proper cash and treasury management decisions for an organisation. Real-time payments, on the other hand, can certainly be a part of this equation. The trend is moving towards providing greater transparency and speed. However, there are many B2B corporations who don't really care if a payment is made in three seconds or 15 minutes. The real-time element is only relevant in certain use cases. For example, an insurance company who has a client on the phone that needs a pay-out right away. Here, the customer experience is enhanced using real-time or instant payments.

A relationship is about the whole corporate entity interacting with the entire bank, not just individual representatives

Craig Jeffery, Founder & Managing Partner, Strategic Treasurer

Kate Pohl: *What about standardisation? Will ISO 20022 make all the difference?*

Patrick Kunz: It would certainly be great to have one single standard everywhere in the world. I think treasurers need to push for this, but it will also be up to the banks to adopt such a standard. This will help support the creation of a truly automated and, over time, real-time treasury. If this becomes a reality, then finance professionals can set up one format in their TMS or enterprise resource planning (ERP) system to interface with any bank. Of course, there will always be some anomalies in various geographies due to regulatory requirements, for example, but we are getting there.

Photography: iStock

Christof Hofmann: For our clients, standardisation is vital, and the lack of it is causing a large amount of frustration. APIs are a critical example. Lack of standardisation means an inconsistent value proposition. There is a greater degree of complexity to integrate providers into a company's systems and the client may need a third-party technology provider to support connectivity. Even with the attempts at standardisation, e.g. for Payment Services Directive 2 (PSD2) through the Berlin Group, the interfaces of the various banks are different. ISO 20022 will not solve all the problems around standardisation, but it is an important step towards richer and more structured data for both banks and corporates. ISO 20022 supports better compliance checks and more straight-through-processing, etc. We are moving in the right direction, but standardisation will remain a key topic for the industry in years to come.

Kate Pohl: *What about the 'standard' cash management products and services such as pooling or virtual accounts, and even in-house banking software?*

Maria de la Fuente: In today's rising rate environment, we want to know exactly how much cash we have and where it is located, on as close to a real-time basis as possible. As a large, centralised and global treasury, we use both physical and notional cash pooling. Having the right tools and capabilities to manage our liquidity is essential. We optimise the balance structure of our subsidiaries in order to create even greater value for the company. So, Iberdrola certainly expects our banks to offer superior cash management products and services.

We want to understand and focus on what will truly add value to our company

Maria de la Fuente, Head of Treasury and Banking Management, Iberdrola

Craig Jeffery: I definitely agree with Maria. Pooling in all its facets (physical, notional, cross-border, multi-currency, etc.) has long been a staple for multinational corporates to use in managing their cash positions. These are all basic, but essential, tools that help companies to function efficiently.

Christof Hofmann: These products are, and will remain, the baseline of how banks work with their clients in the cash management space. However, there is still room for innovation, and indeed differentiation. Virtual accounts (VA) are offered in different ways by various banks. There are huge deviations in their value propositions in terms of payment types, the level of flexibility and the technology employed. Pooling, VA, etc. are the foundation of what banks offer, but of course there are many innovative solutions that can be added on top.

Kate Pohl: *What about multi-bank products and services? Should the bank fill the gap, or should a vendor jump in?*

Christof Hofmann: Multi-bank has various dimensions, with banks and third-party providers both having a role to play. For example, a TMS provided by a vendor allows treasuries to operate in a multibank environment. At Deutsche Bank, whenever we bring a new solution on board, we try to ensure it is multi-bank-capable. Depending on the solution, the market infrastructure does not always support this, but our goal is to make our offerings accessible, available and open. One example of 'multibank' is Swift gpi, where the industry came together to solve a problem for the entire bank and corporate ecosystem, creating a common standard for all.

Craig Jeffery: I agree with Christof. If open banking and open finance make sense, then multibank products and services make sense as well because they are a subset.

Maria de la Fuente: We understand that multibank solutions may be necessary in some cases, however we prefer to work through our key relationship banks. These are banks that promote standardised solutions that can easily be integrated with, for example, our ERP system. Iberdrola wants to work closely with relationship banks who know us well and understand our needs.

I think treasurers need to push for a single standard, but it will also be up to the banks to adopt it

Patrick Kunz, MD, Pecunia Treasury & Finance and Treasury-as-a-service.com

Patrick Kunz: In my view, if a company uses multiple banks then it will probably want to leverage the strengths of all possible providers. An example is optimising liquidity by using different banks in a variety of regions for cash pooling. To consolidate these balances, the best solution may be to use a fintech platform for pooling, where you can integrate multiple FIs rather than leveraging one bank's pooling offering. The right software is then activated by creating seamless connectivity between the banks and the vendor. Once fully automated, you can achieve a bank-independent arrangement. This allows the client to be less dependent on any one FI in case there is a change of strategy or price, etc. Switching your cash pooling concentration bank can take up to nine months, whereas adding or deleting an FI participant on a platform is a two-week process. What makes the most sense will depend on the size of the enterprise, the cash management structure and the banking landscape.

Kate Pohl: *How important is it to a treasurer to see their bank as a leader in innovation?*

Maria de la Fuente: We feel that our banks should be up-to-date and up-to-speed on all relevant innovation. It is also a must for Iberdrola to be aware and on top of what the market has to offer. However, the reality is that our resources are limited. So even if something is 'interesting' or 'nice to have', this does not necessarily mean that we will implement it… or at least not right away. We want to understand and focus on what will truly add value to our company. Working with relationship banks, who know Iberdrola well and have the

An Iberdrola wind turbine in Chafariz, Brazil

> I feel that if banks are not innovation leaders, then their very survival is in question

Patrick Kunz, MD, Pecunia Treasury & Finance and Treasury-as-a-service.com

same philosophy as we do, is very important. They can bring us appropriate opportunities that match our needs and requirements.

Christof Hofmann: As Maria noted, innovation is indeed a must from our perspective. In RFPs and discussions with cash management professionals, the scope is much wider than just individual products or services. Companies want to discuss broader, more forward-looking solutions. They want to know what a bank can do or recommend around real-time treasury, in-house bank solutions or what the API stack looks like. Enterprises are asking banks to extend their value-added offerings, but not to make these mandatory or a 'package deal'. Treasuries want banks to provide a modular, component-based architecture to drive and achieve corporate goals and objectives. This means co-development and often innovating together.

> In a rising interest rate environment, the topic of investment has become even more important

Christof Hofmann, Global Head of Corporate Cash Management, Deutsche Bank

Patrick Kunz: I feel that if banks are not innovation leaders, then their very survival is in question. Start-ups and fintechs that focus on various parts of the value chain are coming online and some are offering very good services. Banks need to be both innovative, as well as proactive, with ideas for treasury solutions. The role of the strategic adviser and partner is key.

Kate Pohl: *Is using cutting-edge technology an essential requirement for banks?*

Craig Jeffery: It is important for banks to use cutting-edge technology to support integration, connectivity and just-in-time information on their platforms. In fact, it is essential, because corporates want to see their relationships increase in value over time. For that to happen, the offerings that banks provide their customers need to enhance value. This allows companies to scale, to better manage their risks, and to analyse and forecast more effectively. In our experience, cutting-edge technology platforms allow much faster (around 12% to 20%) development of new products and services. And that matters! Maybe not tomorrow, but over time because more development will be possible. APIs remain key, as they can provide the data to facilitate the use of technology such as artificial intelligence and machine learning.

Maria de la Fuente: Yes, cutting-edge technology is important if you want to have the best cash management set-up possible. However, it won't make a significant difference if you cannot use it in all relevant countries where your company is based. It is absolutely vital for the bank to be able to offer its solutions globally and consistently on one platform. For us, global coverage and consistency trumps cutting-edge technology, while clean and error-free delivery is a must.

Christof Hofmann: The use of cutting-edge technology for solutions and their delivery is key. Without it, a bank will struggle to develop good, consistent and innovative services for their clients. One example is moving certain infrastructure to the cloud. Another involves APIs. These provide a great opportunity to put services (which were previously only available in portals) into a more open ecosystem. Of course, it also depends on the client segment, but in cash management,

the bank is selling technology… either explicitly or implicitly.

Kate Pohl: *We have gone from negative interest rates and cheap money (funding) to inflation and rising rates. Has this affected the client/bank relationship?*

Patrick Kunz: For larger MNCs this has not caused any significant change, as they still have access to affordable credit, but for smaller companies it has made a difference. In this case, size matters. The treasurer will always prioritise risk over return and treasury remains a cost centre. The goal, in the end, is to minimise cost – given the risks. However, cash-rich enterprises are looking for more and better opportunities to invest excess liquidity in this rising rate environment.

Christof Hofmann: In a rising interest rate environment, the topic of investment has become even more important, as Patrick noted. Treasurers and cash management professionals can minimise counterparty risk while optimising yield and liquidity through centralisation and innovation. This is an area where banks can make a difference by providing access to, for example, money market funds or reverse repos through an agency model. This is in addition to the usual deposit products. Enterprises can optimise returns and still distribute their risk while working with trusted banking partners.

Maria de la Fuente: Linking this to the rest of our discussion, I would say that the importance of optimising our balances is becoming even more crucial given the current interest rate environment. We are reviewing ways to improve our technology; for example, by more sophisticated cash pooling structures and the use of APIs. The support of our key banks is critical; we see them as our partners.

Craig Jeffery: Companies want deep and long-lasting relationships, as Maria noted, based on excellent service, good advice and benchmarking information. Enterprises expect their partners to keep up on the technology front so that they can realise an increased value regardless of the macroeconomic environment.

Tune into flow *InCorporate Treasury podcasts at* corporates.db.com/multimedia/podcasts/ *to hear more from Kate, Christof, Craig, Patrick – and the corporate perspective from Maria*

Photography: iStock

Digital payments and the opportunity for treasurers

As businesses look to embrace digital payment strategies, what opportunities does this bring to the corporate treasurer? A white paper from Deutsche Bank and KPMG outlines how these strategies can improve end-to-end workflow and position organisations for growth

Digital payments have become increasingly popular in recent years, while efficient merchant solution services are established as a key priority for businesses around the world. In a 2022 KPMG survey of treasurers, 60% of respondents cited e-commerce as a business model they expect to gain significant traction over the next five years.

In this context, there is an opportunity for treasury to take a more strategic and expansive approach to 'owning' the full suite of enterprise liquidity, with digital payments being brought into their remit.

In the *flow* special white paper *Digital payments and treasury: an enabler of long-term growth*, published in June 2023, experts from Deutsche Bank Corporate Bank and KPMG consider how digital payments are impacting treasury, and map out why the topic should be high on the agenda for the strategic treasurer.

Digital payments: an enabler of growth

To avoid losing market share to new disruptors, businesses must meet increasing demand for faster, more convenient and secure payment methods. The need for a seamless and effective customer experience has moved to the forefront of decision-making, with front- to back-end operational excellence becoming a key facilitator in driving efficiencies and reducing costs. Greater business-wide integration is also helping to unlock data, which is being leveraged to improve the customer experience and create new channels and payment methods suited to today's real-time needs (see Figure 1).

> The need for a seamless customer experience has moved to the forefront of decision-making

Digital payments and treasury

Treasurers must ensure their company has sufficient liquidity, optimised working capital and a manageable risk profile at all times. Given that digital payments are a central part of liquidity planning, it would make sense for treasury to manage them. However, this is not always the case.

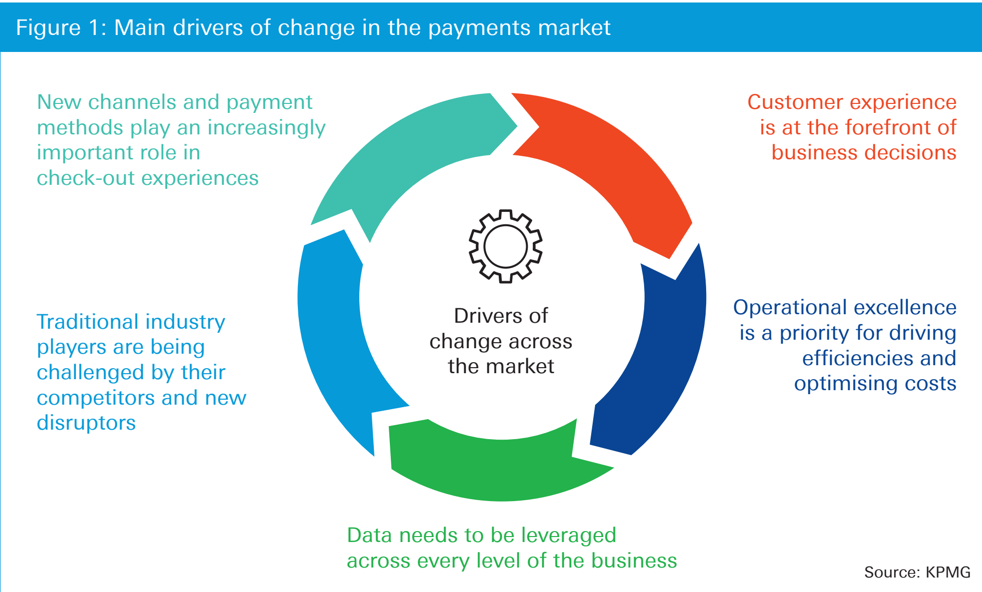
For outgoing payments, treasury departments typically work with vendors (often banks) that provide a full range of payment and cash management services. For collections, however, different vendors are often used, so the link with treasury is lost. Instead, IT or digital marketing teams are often instrumental in integrating these payment services into the company's front end. Some businesses have also carved out new teams, reporting to finance or treasury, dedicated to digital payments.

So the opportunity for treasurers is to use digital payments as an enabler to support other business functions, and this may have a lasting impact on a range of treasury tasks. The benefits are felt in the entire value chain: from introducing innovative payment methods that reach new client segments, to meeting compliance, tax and regulation, analytics and risk and reporting obligations. By having full visibility of outgoing and incoming payments, treasury can take a more holistic approach and help to improve the end-to-end payment workflow, enterprise resource planning (ERP) integration, and material and distribution management.

This can, in turn, lead to significant efficiency gains across the entire business. For example, according to research by KPMG, automated internal front-to-back processes related to the

Photography: iStock

Figure 1: Main drivers of change in the payments market



Source: KPMG

identification, authorisation and reconciliation of incoming and outgoing payments can typically reduce payment processing time by 75% and manual input by up to 50%.

New KPIs for treasury

A key objective of sales reporting is the continuous monitoring of strategic financial and business key performance indicators (KPIs) to measure turnover and market growth. A major part of the required underlying data (i.e. purchased item, geography, payment method, client group) originates at payment initiation, during checkout, and payment processing. It transforms the holistic end-to-end payment perspective, from in-take and outflow, into a valuable source of reporting.

As treasury teams look to play a greater role in their company's digital payment strategy, a new or evolving set of treasury KPIs is emerging:

- Working capital: The working capital KPI measures the company's ability to meet its short-term financial obligations and fund its day-to-day operations. This supports the core objective of cash management operations and ensures the organisation has the cash it needs, in the right place, and at the right time. From the perspective of working capital, there are not necessarily any new KPIs – the same processes are simply being expanded.
- Cost control: As companies expand their sales channels and offer various payment methods, understanding the transaction costs, channel performance and net sales becomes central. Organisations must continually analyse these metrics to identify areas of improvement, drive operational efficiency and enhance their bottom line.
- Risk acceptance: As more transactions are conducted online and through digital payment systems, the potential for fraud and security breaches has also increased. To mitigate these risks, treasurers must prioritise security and fraud prevention as key metrics for success. Setting the right balance between the level of payment fraud detection and the avoidance of false positives remains a challenge for all parties.
- ERP reconciliation: As digital payments and the number of methods offered grow, it can cause significant challenges for the back end, particularly as it relates to ERP reconciliation. Although not a new KPI – relating to traditional straight-through processing rates – it is becoming more important.
- Webshop integration: Seamless integration between webshops, payment systems and cash management tools is another fundamental enabler of digital payment success. By breaking down their internal silos and integrating these elements seamlessly, businesses can enhance cash flow visibility, optimise working capital and provide customers with a frictionless payment experience.

Opportunity ahead

The future of digital payments presents both opportunities and challenges for corporate treasurers. In the rapidly changing payment landscape, as technology continues to advance and customer expectations evolve, they must adapt their strategies to stay ahead.

To become leaders in digital payments, corporate treasurers should evaluate the importance of this payment sector for their organisation to understand how the treasury function can best support the operational business. While strategies will vary across corporations and industries, the underlying principles of leveraging digital payments to enhance efficiency and drive business growth remain consistent with the focus on a central digital payment strategy that is locally executed.

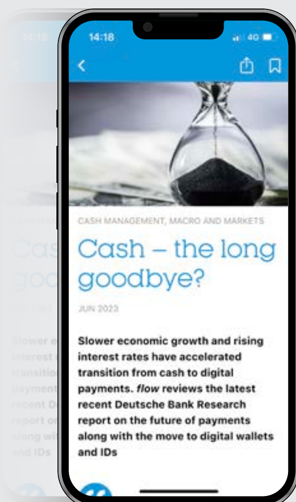
By understanding the challenges, embracing the transformation and leveraging the expertise of banks and technology providers, treasurers have a unique opportunity to position themselves as vital business enablers in the new digital payment era.

Download the full white paper

Use your smartphone to scan the QR code below and download *Digital payments and treasury: an enabler of long-term growth* here:

Editor's selection

What else is going on in cash management? We have chosen three essential reading items from our *flow* app and website as our editorial highlights



Cash – the long goodbye?

Slower economic growth and rising interest rates have accelerated the transition from cash to digital payments. This article reviews a Deutsche Bank Research report on the future of payments, along with the move to digital wallets and IDs.

Driving the shift towards digital payments is the convenience for consumers and merchants, with three contributory trends emerging:

- Digital ID: Two-factor authentication for purchases
- Mobile wallets: By 2021, mobile payments represented 66% of transactions and 59% of transaction value
- Advance in B2B lending: While 'Buy Now, Pay Later' payment plans are established, B2B embedded financing is set to gain traction

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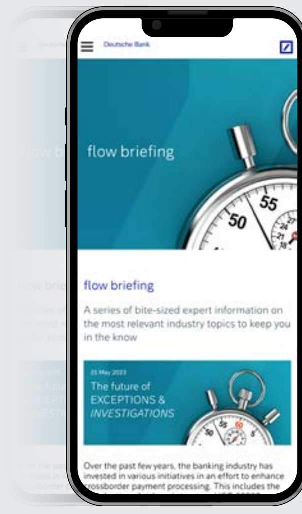

flow briefing – ISO 20022

In response to many client enquiries about ISO 20022 migration, we launched our *flow* briefing series, comprising practical factsheets from Deutsche Bank's ISO 20022 Business Product Specialist Karyna Hutarovich. Here are the first six briefings:

- 3 last-minute ISO 20022 migration tips (13 March 2023)
- 5 Essentials of Swift's Transaction Manager (23 March 2023)
- ISO 20022 migration: the lessons learnt so far (30 March 2023)
- The DON'Ts of cross-border payments (24 April 2023)
- The future of exceptions and investigations (31 May 2023)
- The future of structured addresses (31 July 2023)

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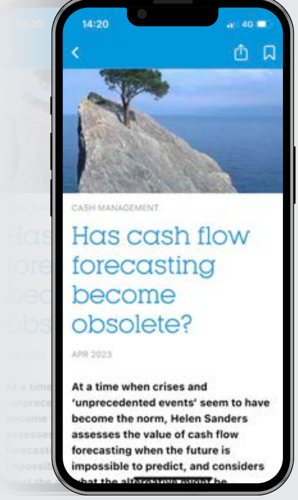

Has cash flow forecasting become obsolete?

At a time when crises and 'unprecedented events' seem to have become the norm, financial consultant Helen Sanders assesses the value of cash flow forecasting when the future is impossible to predict, and considers what the alternative might be. This article covers:

- How companies have demonstrated agility and resilience when managing crises such as the Covid-19 pandemic
- Why effective forecasting and longer-term planning are more vital than ever to deal with 'Black Swan' events (those that cannot be predicted but have a high impact) and 'Grey Rhino' events (foreseeable events where the timing and impact are unclear)
- Why treasurers that achieve this generally make better investment and liquidity management decisions in terms of the working capital facilities they need, and the types of investment they undertake

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Trade Finance and Lending

A closer look at trade finance fraud, critical commodities, sustainability-linked supply chains and hydroelectric power

Critical metals
Nearshoring in times of geopolitical volatility *44–47*

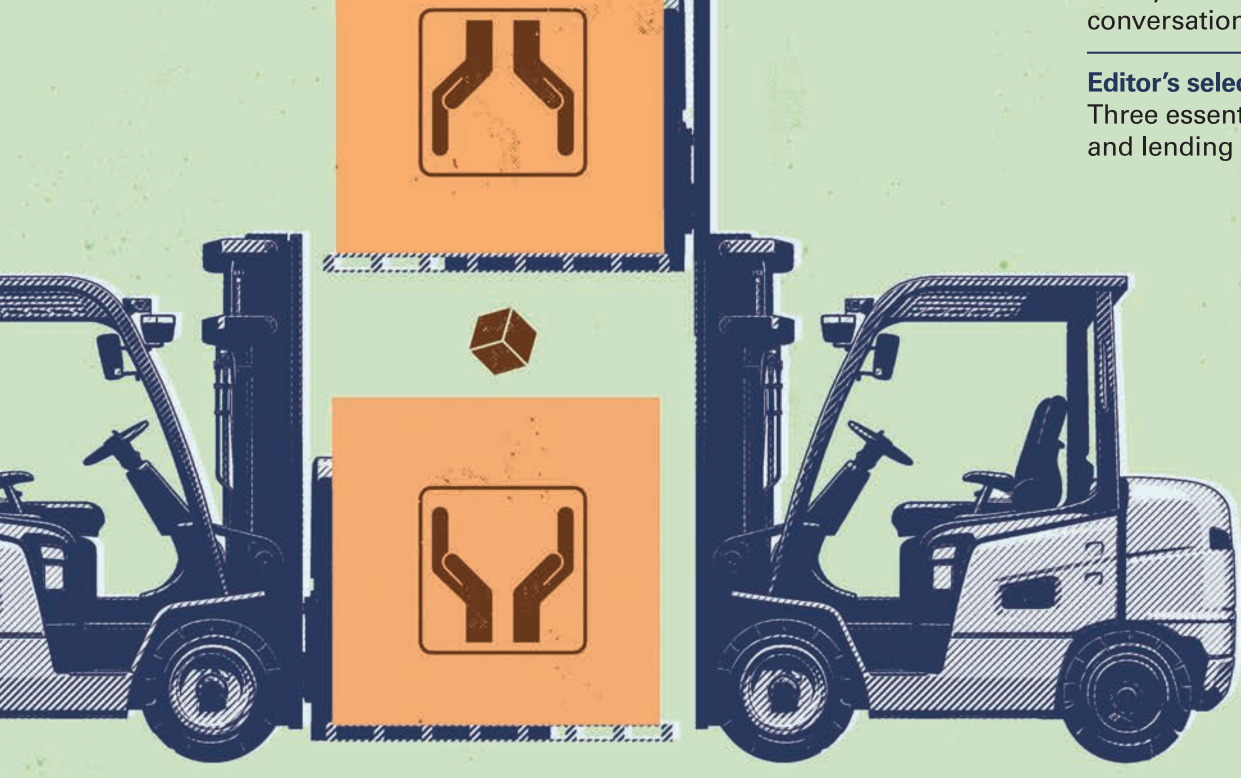
Trade fraud
Protecting trade finance from criminal activity *48–51*

Big picture
Clean energy through the power of water *52–53*

Client story
Sustainability-linked supply chain finance programmes driving change *54–55*

Trade Finance TV
Four years of expert conversations *56–57*

Editor's selection
Three essential trade finance and lending reads *58*



Supply chains rewired?

Minerals – and their shortages – can make and break supply chains. As nearshoring becomes the preferred strategy for securing essential inputs in times of geopolitical volatility, how does this impact trade flows? Trade economist Dr Rebecca Harding explains

The pandemic, subsequent supply chain shortages and the escalation of the Russia/Ukraine conflict have refocused attention on supply chain resilience. It is now commonplace to hear the phrase 'just in case' in logistics and supply chain management. Arguably, the whole concept of supply chain management has morphed into a focus on resiliency, or the capability to mitigate most supply chain disruptions and greatly limit the impact of those that occur.

Supply chain resilience

Critical supply chains, and particularly those involving rare earth metals, are broader in concept than inventory management, because they are about sourcing components in a supply chain starting from their base in raw materials. The US and UK governments and the EU have all focused on defining 'critical supply chains' since the pandemic. These supply chains are vital to national security in that they ensure food and energy supplies. They also include transition metals and rare earth elements that are core to the digital and renewable future. As tensions with both Russia and China have become more pronounced, improving supply chain resilience and self-sufficiency is becoming a prerequisite, because there are currently such significant dependencies on those two countries.

Supply chain resilience has become a matter of national security in the US, the EU and the UK, and a focus for NATO and other allies for energy transition, energy security and procurement reasons. This shift is material for corporates and for trade finance providers because, as the role of sanctions and export controls in constraining power has shown, managing supply chain resilience in practical terms means managing new trading routes and partners.

As requirements for sustainability reporting gather pace, these corporates will also be required to develop more alternative energy sources and transition to new ways of operating, if they are to

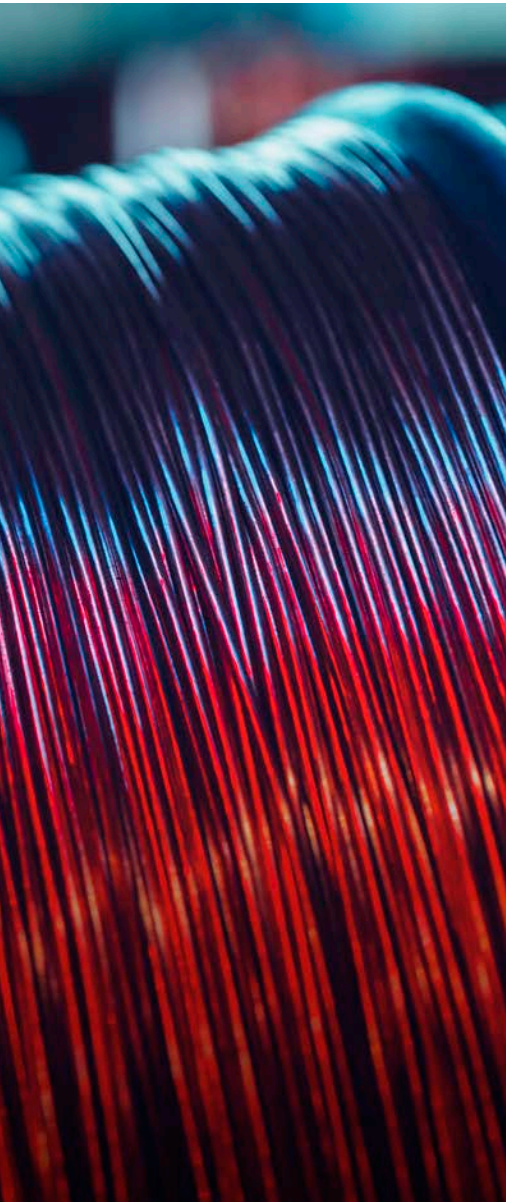
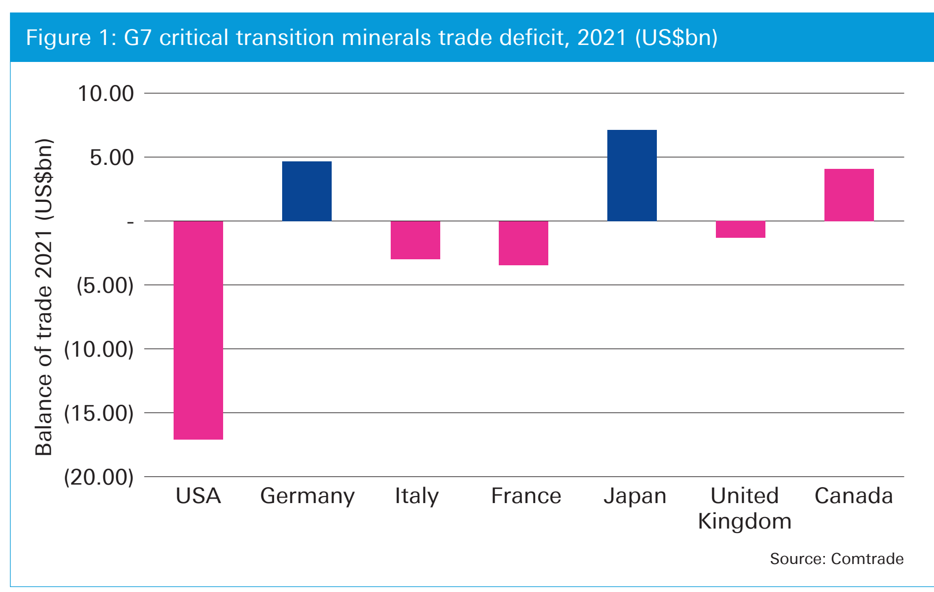
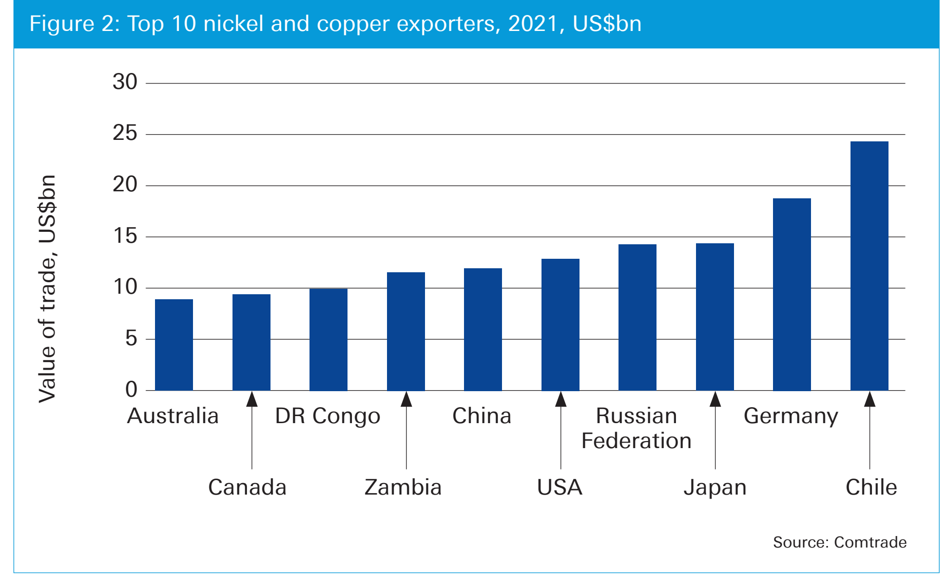


Figure 1: G7 critical transition minerals trade deficit, 2021 (US$bn)



Source: Comtrade

Figure 2: Top 10 nickel and copper exporters, 2021, US$bn



Source: Comtrade

The concept of supply chain management has morphed into a focus on resiliency

achieve the sustainability and net zero targets set by the Paris Climate Accord and by the regulators who are monitoring the sustainability financial disclosures process. In other words, supply chain resilience is also about achieving supply chain sustainability.

Towards more self-reliance

There are multiple reasons why a shift towards more self-reliance within the G7 and beyond is needed (see Figure 1), a point made in the *flow* white paper, *How to ensure commodities in a volatile world* (April 2022). In 2021, the G7 had a trade deficit in the critical transition base metals (nickel, copper, aluminium and zinc) of more than US$8bn. While Germany, Japan and Canada had surpluses, the US's deficit was particularly severe, at US$17bn.

Exports of two transition metals, nickel and copper, are heavily concentrated in the G7 countries and Australia (see Figure 2). Chile is the largest exporter, which may explain why there has been a flurry of diplomatic activity to improve relations between the US and Chile.

Concentration risk concerns

The essence of supply chain resilience is de-risking supply chains so that dependency is distributed and goods are sourced sustainably, in every sense

Photography: iStock

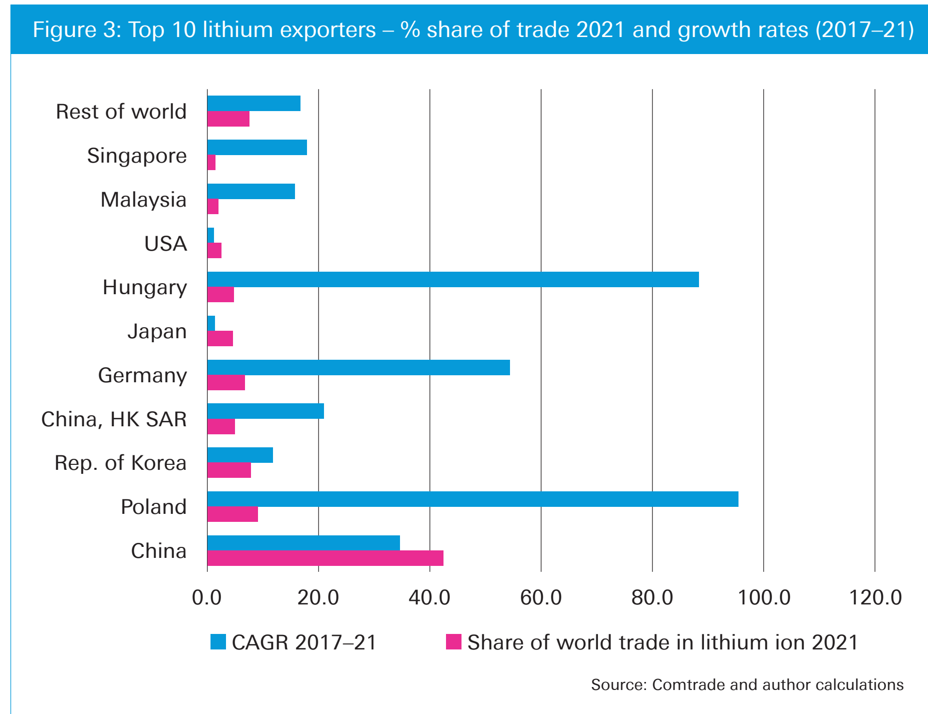


Figure 3: Top 10 lithium exporters – % share of trade 2021 and growth rates (2017–21)

Source: Comtrade and author calculations

of the word. This issue of distribution is where concerns start to emerge, because of the concentration of capacity under the control of China, even if, geographically, the production is dispersed.

For example, China refines some 68% of the world's nickel, 40% of its copper, 59% of its lithium and 73% of its cobalt, according to *The Economist*. Similarly, rare metals are used in everyday life and are essential in how we transition to clean energy, adapt our economies to make them digital, and develop more efficient transport methods. But again, the facts speak for themselves: China accounts for around 25% of all rare earth exports and around 60% of all lithium production, while Russia accounts for nearly 20% of all palladium and 11% of all nickel exports.

China's control over lithium, renewables and electronics is bolstered by its control of a large proportion of the world's mining, processing and production of these commodities through the businesses it owns – estimated at 63% of mining, 85% of processing and 92% of rare earth magnet production.

Just in terms of lithium ion, essential for battery production, China and Hong Kong between them account for nearly 50% of world trade (see Figure 3).

There is rapid annualised growth in Germany, Hungary and Poland, suggesting that the EU is increasing its own self-sufficiency. Singapore and Malaysia also grew rapidly between 2017 and 2021. However, these rates of growth are from a much lower base than China, so there is little sign that Chinese dominance of global trade in the electric battery market faces imminent decline.

Vietnam's emergence as a key REE exporter

There is a further challenge with rare earth elements (REE) that the US, the EU, the UK and the QUAD countries need to consider. Rare earth elements are not 'rare' as such, but are complex and environmentally hazardous to process. While REEs accelerate efficiency in fuel consumption, make vehicles lighter and more efficient, and improve the transformation of wind, light or water into electricity, they also require vast amounts of water and sulphuric acid to mine and process. REEs traded until recently at lower values in US dollar terms, and much of the resulting US$13m trade deficit in 2021 that the G7 had with the rest of the world could arguably be attributed to the more stringent environmental regulations that surround their mining and production processes.

> The costs of transition include uncomfortable questions around mining and processing rare earth metals

Along with China, Vietnam dominates the REE export market, and this is interesting from a supply chain resilience perspective (see Figure 4).

Vietnam is the world's largest exporter of REEs in the form of ores – specifically monazite, xenotime and bastnaesite. These are used variously in renewables and construction: monazite is used in wind turbines, xenotime contains yttrium, which strengthens alloys and is used in radars and laser applications, while bastnaesite contains cerium, which is used in magnets and high-tech communications. All three ores have multiple applications across the energy transition, net zero and supply chain resilience areas of national security.

As Figure 4 shows, Vietnam controlled approximately 36% of world REE exports in 2021. However, because the exports are as ore rather than refined products, this makes the country dependent on others for the processing of ore into rare earths that can be used in production. While it accounts for such a sizable proportion of exports, its production was barely 400 metric tonnes in 2021.

At present, Australia is making significant investments in Vietnam for rare earth processing. Vietnam's attractiveness has increased as the country and its allies have shifted to a 'China Plus One' strategy. As a result of the China-Japan dispute over the Senkaku Islands, China suspended the supply of REE elements to Japan in 2010, causing prices to rise significantly. Japan also has a strong partnership with Vietnam for investment in REE production, but this has yet to yield high levels of processing. However, because Australia has strong expertise in mining and production already, there are synergies between the two countries that it is well-placed to develop.

A fresh perspective

The issue of supply chain resilience is one that will dominate trade policy for some time to come, especially as the issue has now become one of national security. 'Resilience' means ensuring that supply chains are robust and continue to deliver

energy, food and consumer products around the world. Increasingly, 'resilience' also means the capacity to withstand climate shocks such as floods or tornados. Most importantly of all in the context of critical metals and REEs, it means delivering the capability to achieve net zero goals by providing a bridge between a fossil-fuel based world and one based on renewable energies.

However, to do this, there are a few imponderables for the trade sector.

Copper ore

Trade fragmentation

First, is there a way of reducing dependency on fossil fuels generally, and on Russia in particular, without increasing dependency on China? This is the essence of so-called 'trade fragmentation', which, according to the WTO and the IMF, is "now at the heart of the economic policy debate". As the ICC articulates, it represents a "risk for business" because it alters the way in which supply chains are organised and business decisions are made. But what is it, why does it matter, and how can we bring the economics and politics of trade back together again in a way that supports supply chain resilience without, as the IMF's Chief Economist Kristalina Georgieva says, "creating a world war"?

Global infrastructures

Second, assuming that we can distribute supply chains, how are we going to build the infrastructure to make the transition effective? The global infrastructure is not built, and there is no clear agreement on who will pay for that development given current uncertainties around energy security and grid stability, geopolitics, and appropriate technologies, as batteries and hydrogen compete for dominance of the renewable future.

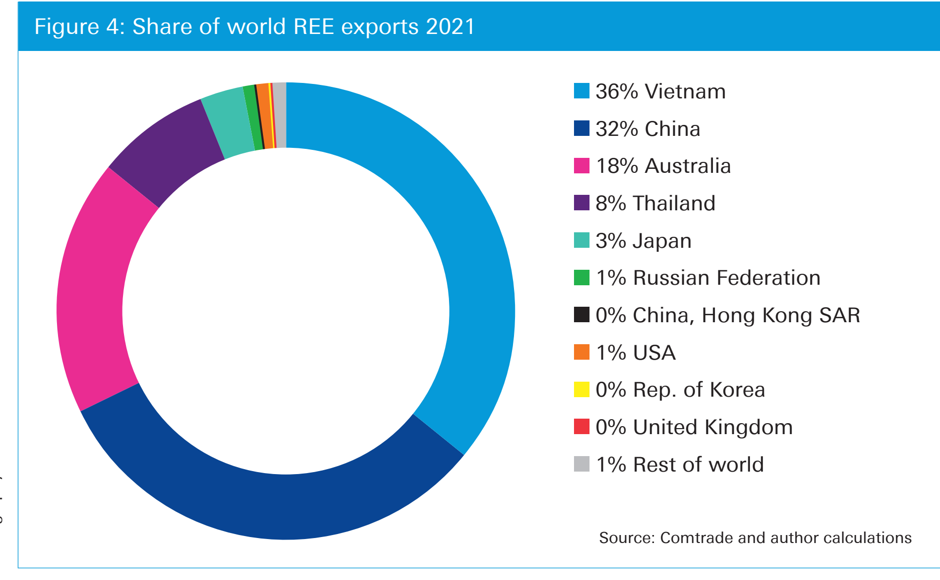
Cost of transition

Finally, perhaps the biggest imponderable of all centres around the price we are willing to pay to transition. It is here that there is a real paradox. We have already seen the impact of global inflation caused by energy shortages; prices will remain high while long-term strategies and investment are put in place to manage the transition. As a result, it seems that inflation will remain stubborn, as it is driven by transition infrastructure failures that are well outside of the domain of monetary policy. Similarly, the costs of transition include uncomfortable questions about mining and processing rare earth metals, given the environmental cost.

For the WTO, "Trade continues to be a force for resilience in the global economy." If this is genuinely to mean supply chain resilience as well, then there is a profound need to ponder the consequences of over-reliance on one country for the way we structure trade in the future, to address the funding of infrastructures that enable sustainable trade, and to accept that this will not be a cheap or easy process. These questions go to the very core of sustainable trade, and REEs and critical minerals are, as the name suggests, critical to this process.

Dr Rebecca Harding is an independent trade economist and regular flow *contributor*

Figure 4: Share of world REE exports 2021



Source: Comtrade and author calculations

> The issue of supply chain resilience is one that will dominate trade policy for some time to come, especially as the issue has now become one of national security

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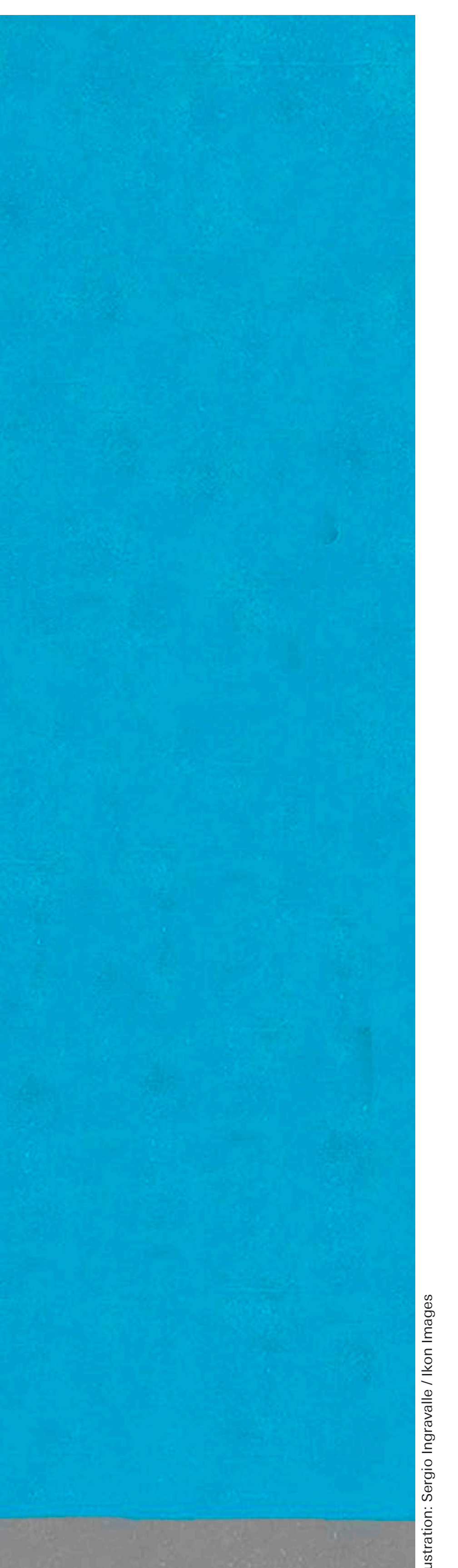


Illustration: Sergio Ingravalle / Ikon Images

Fighting trade-related fraud

With fraud fast becoming one of the biggest risks for global trade, *flow's* Clarissa Dann takes a closer look at the vulnerability of trade finance to criminals, and the protection measures being deployed

Professional fraudsters are increasingly taking advantage of the trade industry's reliance on document-based processes, using techniques such as fake invoices, fake bills of lading, collateral fraud and duplicate financing to get the better of banks and their clients. These practices are on the rise, with some of the industry's largest-ever fraud scandals having occurred over the past few years.

"Banks screen the applicant, the beneficiary, the counterparty bank, the transport company, the vessel, the ports and port owners and the goods being transported to identify any sanctions issues. This information is not static and over the course of a transaction could change multiple times, creating due diligence and record keeping challenges," reported PwC in its 2016 report, *Trade finance: Understanding the financial crime risks*. To add further complexity, it noted, the fair price of goods will often be subjective and difficult to determine, especially as prices can vary across different territories and may be driven by forward contracts.

The Association of Certified Fraud Examiners highlights the vulnerability of documents in general to fraud in its report, *Occupational Fraud 2022: A Report to the Nations*. The report, published last April, looks at the costs, methods, perpetrators and outcomes of occupational fraud schemes; it is derived from more than 2,000 real cases of fraud, affecting organisations in 133 countries and 23 industries.

For each high-profile fraud case, it is not just the company that loses out. Shockwaves are felt across the industry, impacting the many banks and third parties that are involved in trade financing transactions.

Qingdao

One example of this ripple effect was the Qingdao warehouse fraud scandal. This saw the conviction in December 2018 of Chen Jihong, founder and chair of metal warehousing firm Dezheng Resources, who was found guilty on five counts of financial crimes spanning an 18-month period from November 2012 to May 2014. "According to the court statement, his firm accumulated 12.3bn renminbi (RMB) (US$1.78bn) in funds using either fake warehouse receipts or fake certificates for aluminium ingots, alumina and refined copper at the eastern Chinese ports of Qingdao and Penglai, and also raised RMB3.6bn (US$520.8m) in loans, letters of credit and bank acceptance bills from 13 banks by repeatedly using the same cargoes as pledged collateral," reported *Global Trade Review* on 10 December 2018.

When these far-reaching effects are factored in, the true cost of fraud in trade finance becomes clearer.

Figure 1: How fraud perpetrators conceal fraud

39% Created fraudulent physical documents

32% Altered physical documents

28% Created fraudulent electronic documents or files

25% Altered electronic documents or files

23% Destroyed or withheld physical documents

Source: Association of Certified Fraud Examiners, Occupational Fraud 2022: A Report to the Nations

The International Chamber of Commerce (ICC) estimates that if even 1% of the US$5trn global trade financing market is susceptible to fraud – and assuming only 10% of those transactions will lead to losses – this still amounts to an annual cost of around US$5bn in total business disruption.

US$1.7trn

Estimated size of the trade finance gap

Source: World Economic Forum

Types of trade finance fraud

ICC Commercial Crime Services is often referred to as the anti-crime unit of the ICC. As well as providing an authentication service for trade finance documentation, it also investigates and reports on several other topics, notably documentary credit fraud, charter party fraud, cargo theft, ship deviation and ship finance fraud. Michael Howlett, CEO of ICC Commercial Crime Services and Director of its International Maritime Bureau (IMB), is well known on the trade finance conference circuit and, according to his biography, "has been instrumental in identifying systematic international fraudsters". He has been "invited to provide evidence and appear as a witness in trade-related criminal cases", and also "assisted in the investigation of the largest fraud in trade finance history".

Howlett explains that the trade finance frauds witnessed today are much more sophisticated than the traditional scams seen decades ago.

"The biggest problem remains collusion between related parties. Banks are often the targets of such fraud," says Howlett. "Deals that appear to be arms-length transactions turn out not to be. Because the IMB sees suspect transactions from across the banking industry globally, patterns of major fraud schemes become more apparent than those restricted to a single bank's transactions or from a single jurisdiction."

Whether it is a paper or an electronic bill of lading (eB/L), he points out, "ultimately it is a human that defrauds, not the system used", with the fraud seen today being in the documents. In other words, "Where there is collusion and deliberate intention to defraud from the outset, it will be extremely difficult to prevent abuse, however robust the system." He confirms that the IMB has seen "a worrying increase in cloned bills of lading".

As shipping information – such as vessel movements and cargo details – become increasingly transparent, cloned bills of lading are used by fraudsters to extract monies from the banking system. Routine checks into vessel movements and cargo operations can deliver a positive response, even when the bill of lading presented to the bank is, in fact, incorrect.

"We see this in both containerised and bulk shipments," Howlett reports. "Cloned bills of lading are used in dubious schemes such as synthetic letters of credit, money laundering and fraud in which the bank could be the ultimate victim of collusion between buyers and sellers.

"We feel this is perhaps where our efforts should be focused, to ensure that the bills of lading presented are in fact the operative documents." He is worried that, despite the improved efficiency and faster trade transactions that eB/Ls facilitate, "eB/Ls will not change the nature of fraud and, in many ways, could accelerate it".

The widening trade finance gap

One of the most visible impacts of rising fraud cases has been the reduction in the provision of trade financing from banks. In August 2020, *Global Trade Review* reported on Dutch bank ABN Amro's decision to withdraw entirely from the trade and commodity finance markets and shed 800 jobs, having sustained several heavy losses that included a fraud case involving commodities trader Agritrade. Others, including Société Générale and BNP Paribas, have scaled back or consolidated commodity finance offerings, removing more than US$20bn of liquidity from the market.

As a result, small and medium-sized enterprises (SMEs) are increasingly struggling to secure bank financing, with

the Asian Development Bank finding that this segment accounts for 40% of rejected trade finance requests.

Speaking at a Bankers Association for Finance and Trade event, Michael Hogan, Managing Director of fraud prevention tech specialist MonetaGo, summed up the situation: "When fraud scandals happen, the brakes go on, banks lose money, credit lines are reduced, and pricing goes up. But then that pain is not shared equally across the board. Generally, the SMEs take the biggest hit because they can't shop around and get the facilities elsewhere."

As banks step back and SMEs find it increasingly difficult to access financing, there are growing concerns about the widening trade finance gap, which already reached a record US$1.7trn in 2022.

Improving onboarding

Efforts have long been underway to develop standards for meeting specific industry pain points, such as those related to customer onboarding. It is, for example, a regulatory requirement for banks to perform know-your customer (KYC) checks on their correspondent banks, as well as their corporate customers, and these play a significant role in reducing the risk of onboarding customers involved with illegal activities, such as money laundering, fraud or terrorist financing. The challenge, however, is that in trade finance, much of the work involved in confirming counterparties' identities has historically been manual, time-consuming and prone to human error.

So, what is being done to improve these checks? One example is the supra-national not-for-profit Global Legal Entity Identifier Foundation project, which since 2014 has worked to significantly reduce the workload around existing KYC and anti-money laundering (AML) onboarding procedures. The project assigns each legal entity in the world a unique identifier,

> Ultimately it is a human that defrauds, not the system used
>
> Michael Howlett, CEO of ICC Commercial Crime Services and Director of its International Maritime Bureau

known as the Legal Entity Identifier (LEI). This helps to automate identity verification and can be used by banks to trace outstanding invoices and identify suspicious activity, such as multiple invoices for the same shipment. The standard is now well-established, and the focus for the industry going forward is on growing the quantity of LEIs within the global trade ecosystem.

In recent years, customer confidentiality policies, which prevent banks from sharing crucial information, have also reduced the effectiveness of KYC checks, and have led to a rise in duplicate financing cases. Without a central register, fraudsters can take documents from one bank, shop them around to multiple banks and, in return, get multiple financings.

In response, some countries are now developing blockchain-based data registries. Singapore, for example, launched its pioneering Trade Finance Registry in 2020, which allows each bank participant to validate whether another financial institution has already submitted a particular title instrument for financing purposes. Underpinned by blockchain technology, banks can share this data so that it does not violate client confidentiality and compliance rules, while still reducing risk. The registry is being built by MonetaGo.

Swift has also established its own data registry – the KYC Registry – which, since its December 2019 launch, has become the accepted standard for correspondent banking due diligence, with almost 6,000 financial institutions using it to date. The registry aggregates KYC information in a globally recognised, standardised format, and provides corporates and banks with access to a standardised Correspondent Banking Due Diligence Questionnaire produced by the Wolfsberg Group, an association of global banks aimed at promoting the development of effective AML, KYC and counter-terrorist financing standards. This enables banks to implement a reasonable standard for cross-border due diligence, and reduces additional data requirements.

"What the LEI and Swift's KYC Registry demonstrate is that the industry as a whole has successfully started – and is continuing to jointly work on – solutions that mitigate the risk of fraud," says Christian Ressel, Non-Financial Risk Center of Expertise, Deutsche Bank. "By broadening the perspective of each party participating in a certain transaction, collaboration will be the key to further

> By broadening the perspective of each party participating in a certain transaction, collaboration will be the key to further combatting financial crime
>
> Christian Ressel, Non-Financial Risk Center of Expertise, Deutsche Bank

combatting financial crime." The next step for the KYC Registry – as with LEIs – is to further drive adoption to improve the accuracy and reliability of the tool.

The human touch

Digitalisation and legislation, while important, are not necessarily the silver bullet for trade finance – and the human element remains critical.

While Deutsche Bank has innumerable automated checks and balances in place, experience still wins out when it comes to discovering and acting on unusual client patterns. "Trade Finance practitioners with decades of experience cannot currently be completely substituted with any single technology solution on the market," says Ressel. "And even for the most sophisticated system, there is always a human at the beginning of the process that is interpreting the outcomes."

Deutsche Bank, like its peers, aims to get as close as possible to the actual transactions it is financing when red flags are raised. This includes vessel tracking, whereby the bank checks where the cargo being financed is currently located, where it is coming from, and where it is going. Within the commodity space, Deutsche Bank – or a reputable third-party surveyor – also visit warehouses to confirm that the cargo is stored there.

"Ultimately, you cannot check every vessel or warehouse for every transaction," says Ressel. "That is why our strategy fights fraud on multiple fronts: our robust systems and automated processes help to detect fraud, and our experienced trade finance practitioners can help to manage the investigation."

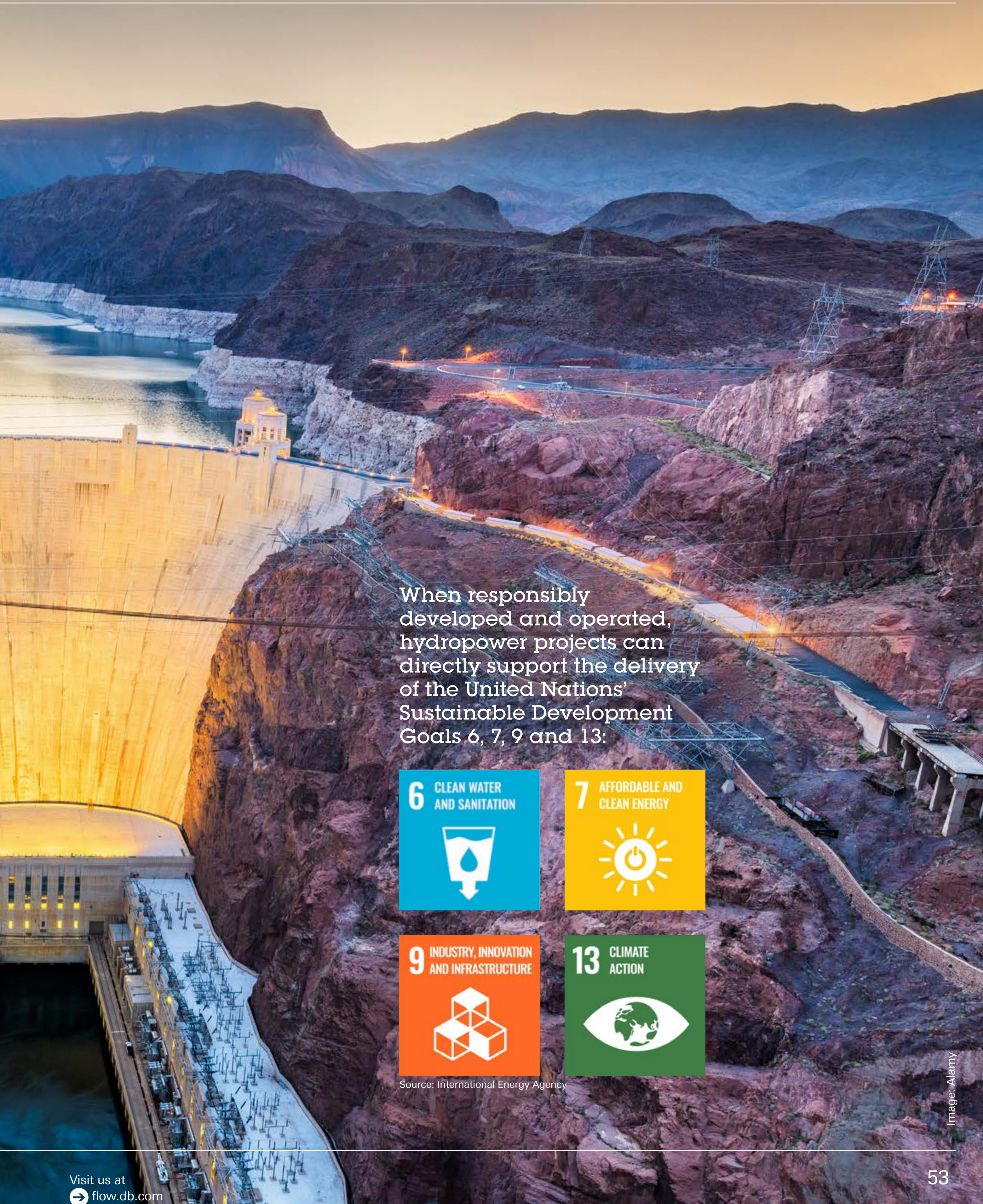
THE BIG PICTURE

Clean energy through the power of water

Hydroelectric power is one of the oldest sources of renewable energy in the world, evolving from pre-industrial watermills to megastructures like the Hoover Dam. It is now the largest global source of renewable energy, generating more than all other renewables combined. In 2022, the sector saw US$7.55bn of investment

Source: International Energy Agency

The Hoover Dam in Nevada, completed in 1936, generates power for utilities in Nevada, Arizona and California



When responsibly developed and operated, hydropower projects can directly support the delivery of the United Nations' Sustainable Development Goals 6, 7, 9 and 13:

Source: International Energy Agency

Image: Alamy

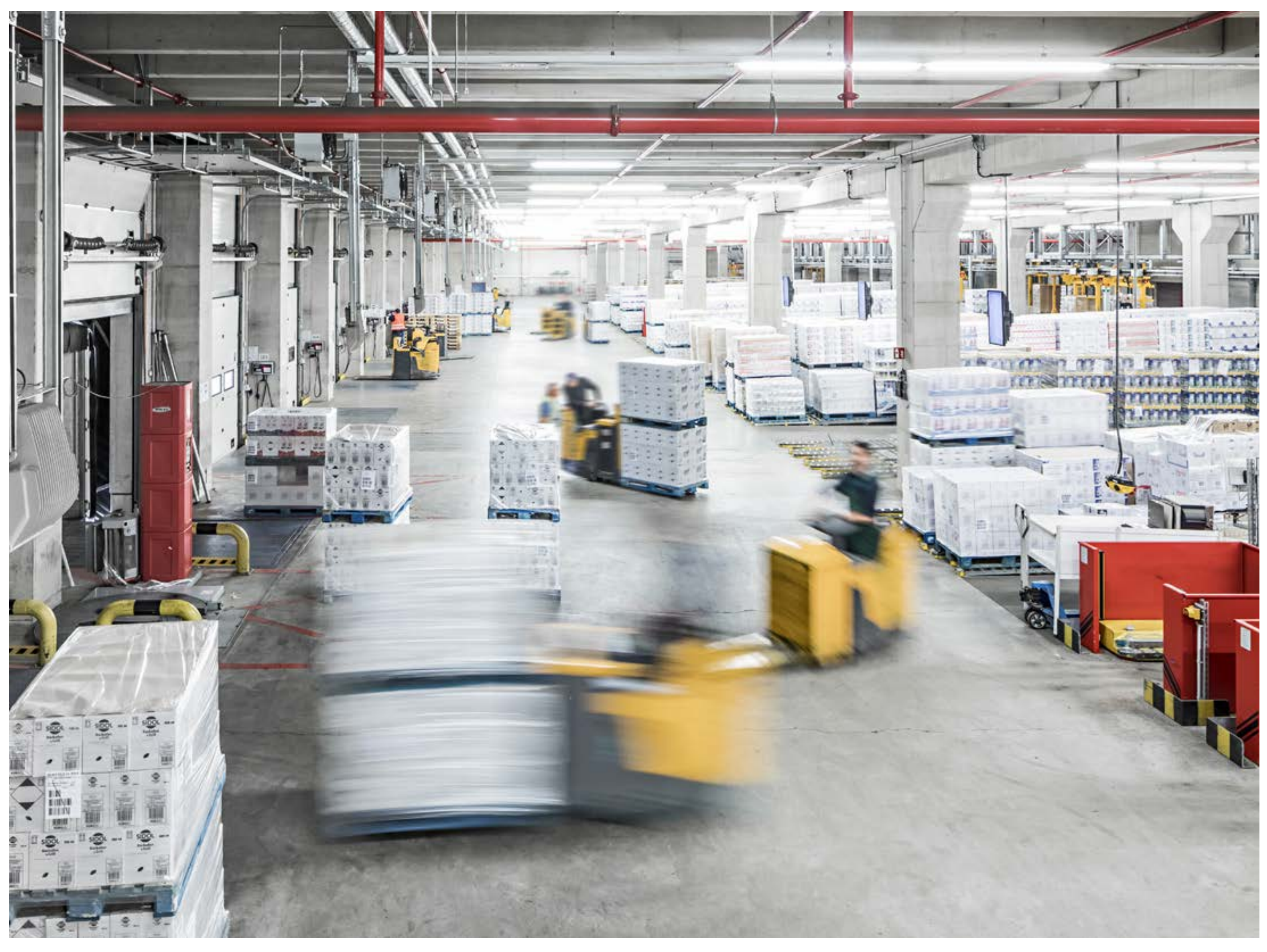


Image: ©Henkel

Greening Henkel's supply chain

Henkel is using its position as a key buyer to incentivise suppliers to pursue more sustainable practices. *flow's* Clarissa Dann explores the critical role of the company's supply chains in this transition and how sustainability-linked supply chain finance programmes are driving change

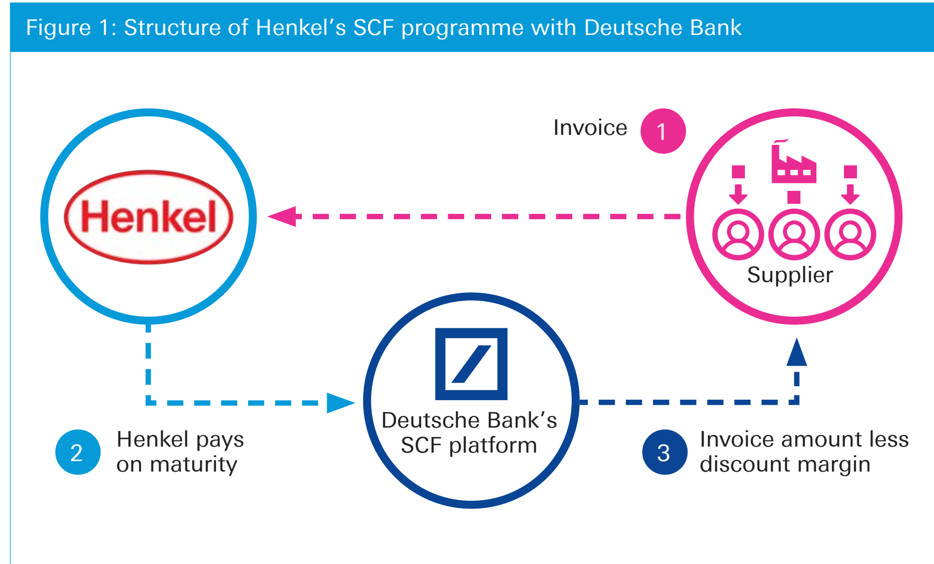
In 1876, Fritz Henkel – a 28-year-old merchant with a passion for science – began marketing a universal detergent for his newly founded company, known then as Henkel & Cie. From these humble beginnings, Henkel has evolved into a global company – employing more than 50,000 people and boasting €22.4bn in sales in 2022.

Today, the Düsseldorf-based business is not known for a single product, but for a wide array of brands. Its Adhesive Technologies business is the global leader in the adhesives market, holding together everyday objects from airplanes to sneakers. Loctite, Pritt and Pattex are among its well-known brands. Henkel Consumer Brands houses the consumer goods business, and is behind household names like Schwarzkopf, Taft and Persil. With these global brands comes a global footprint, including 166 production sites

worldwide and business partners from 115 countries. This gives Henkel a unique platform to drive positive change on a global scale – particularly relating to sustainability.

As well as embedding sustainability at the heart of its own business and operations, Henkel encourages sustainable practices with external partners. As a major buyer, for example, Henkel can influence its supply chains by demanding things like greater transparency, better sustainability performance and reduced emissions, from its suppliers. This influence is particularly profound within Henkel's supply chain finance (SCF) programmes. The company has now taken the pioneering step of tying its existing programmes in all five regions to sustainability-linked targets.

Figure 1: Structure of Henkel's SCF programme with Deutsche Bank



Pioneering sustainability-linked supply chain financing

For more than a decade, the Deutsche Bank-Henkel SCF programme has leveraged Henkel's creditworthiness to provide suppliers with reduced financing costs in Europe, India and Mexico. The programme's mechanics are summarised in Figure 1. In May 2022, Henkel decided to link EcoVadis' ESG ratings, which the company has long used to assess its suppliers, to all of its SCF programmes. Deutsche Bank designed an ESG grid on top of the existing discount margin scheme, creating financial incentives for suppliers to become more sustainable. This marks the first conversion of an existing SCF programme in Europe into a sustainability-linked supply chain finance (SSCF) programme. This did not involve any changes in the contract between Henkel and Deutsche Bank – the legal agreement between them is enhanced by a one-page 'ESG schedule'.

The SSCF programme is further evidence of Henkel's holistic approach to sustainability

Ulrich Borgstädt,
Head of Group Treasury, Henkel

"We are convinced that sustainability-linked supply chain financing can help improve sustainability along our value chain – and the SSCF programme is further evidence of Henkel's holistic approach to sustainability," says Ulrich Borgstädt, Head of Group Treasury, Henkel.

Henkel is putting its influence over suppliers to good use by incentivising them to become more sustainable and transparent in the following ESG areas – right across the company's entire supply chain:

- Environment
- Labour and human rights
- Ethics
- Sustainable procurement

"Up until now, SSCF programmes needed to be set up from scratch. As Henkel's European SCF programme is among the largest in the industry, having to replicate the onboarding processes for all existing suppliers would have been resource- and time-intensive – and could have resulted in significant supply chain disruptions," explains Anil Walia, Director, Supply Chain Finance Payables EMEA, Deutsche Bank. "The conversion is conceptually and operationally transparent and simple enough to ensure a smooth transaction – and this is reflected in the almost 100% acceptance rate among suppliers."

Henkel asks its suppliers to obtain an ESG rating from EcoVadis. Once received and kept up to date, suppliers can simply add a one-page 'plug-and-play' ESG schedule to the existing receivables purchase agreement via Deutsche Bank's Supplier Onboarding Portal.

Deutsche Bank can then access the suppliers' ESG rating directly from the EcoVadis platform and automatically adjust the discount margin they pay depending on their score, grouped into buckets. If their score improves into a higher bucket, so does their discount margin – with no intervention needed from Henkel.

The changing shape of supply chain sustainability

Henkel's simple and transparent process provides a strong financial incentive for its suppliers to improve their sustainability, leading almost 100% of Henkel's onboarded suppliers to sign up to the new programme. This underscores the genuine power of corporate buyers in influencing third-party suppliers to embed ESG principles into their operations.

"The idea of incorporating sustainability criteria into a supply chain finance programme has been around for a long time – and we have now put this into practice in Europe with Henkel," says Deutsche Bank's Walia.

Henkel's Borgstädt agrees that this SSCF programme "encourages the right incentives for all parties involved". He concludes, "The rating process creates discipline, and the financial incentive is an important instrument here to support supplier transformation – not only with regards to climate change, but also with regards to the overall environmental footprint and human rights."

Welcome to the show!

Since its launch in January 2019, Trade Finance TV has tackled energy transition, critical commodities, trade finance risk and supply chain risk, to name just a few of the core themes resonating within the industry. Presenter Clarissa Dann reflects on four years of expert conversations

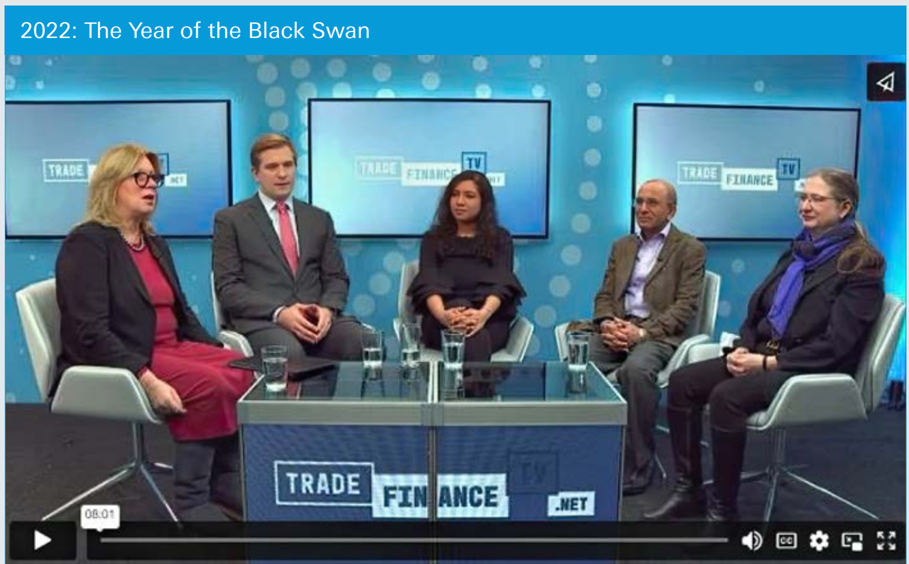
At the start of 2019, Donald Trump was halfway through his tenure at the White House and ramping up trade tariffs on China. Theresa May was clinging on tenuously to power in the UK and a TV comedian called Volodymyr Zelenskyy had just announced his candidacy in Ukraine's presidential election. Following a decade of brisk growth, helped by low-to-zero interest rates, the International Monetary Fund (IMF) forecast that the world economy would expand over the year by 3.5%, edging up to 3.6% in 2020.

When it was suggested at the time that the highly networked world of trade finance could form a dedicated television channel, not only did I welcome the opportunity, but so did my prospective guests. And so it was that Trade Finance TV was born, with the first episode featuring Dr Rebecca Harding (now a regular guest) to discuss the deglobalisation that was gathering speed.

When Covid-19 hit, we were no longer able to use the studio facilities, but managed thanks to video conferencing tools, which is why the episodes from May 2020 through to August 2021 were all recorded while we were working from home. By November 2021 it was possible to venture forth to one of our meeting rooms, bringing the cameras in while studios remained inaccessible. We heard from trade finance veterans Russell Brown, Global Head of Trade Finance Financial Institutions, Deutsche Bank, and Peter Sargent, Head of Transaction Banking CEMEA, DNB that while customer needs had not changed, the understanding of treasury functions that use trade finance is, as Sargent put it, "much better now".

Deutsche Bank's *flow* hosts the show as a gift to the industry, and it is encouraging to see the collaborative spirit alive and well, with other banks accepting invitations to participate alongside economists, lawyers and representatives of bodies such as the International Trade & Forfaiting Association, the International Chamber of Commerce and Swift.

2022: The Year of the Black Swan



Left to right: Clarissa Dann, Presenter; Peter Sidorov, Senior Europe and Russia Economist, Deutsche Bank Research; Sapna Sapra, Head of Structured Trade and Export Finance UK, Deutsche Bank; Ehsan Ul Haq, Oil Analyst at Refinitiv (part of LSEG); Katharine Morton, Head of Trade, Treasury and Risk, TXF Media Ltd

Key themes

Economic and geopolitical volatility

There has been a backdrop of constant uncertainty since our debut in early 2019. The pandemic, followed by the Russia/Ukraine crisis, made for engaging discussions, such as in December 2022's episode 'The Year of the Black Swan', where we discussed how trade flows had changed because of sanctions and the ban on Russian oil. The first episode of 2023, featuring Atul Jain, Global Co-Head, Trade Finance and Lending, Deutsche Bank, and Chris Southworth, Secretary General of ICC United Kingdom, with Dr Rebecca Harding taking the economics seat, had an optimistic outlook for trade as it 'unlocked' after years of pent-up demand.

ESG, energy transition and critical commodities

ESG frameworks, climate change and the energy transition have been at the fore, as we tackled the thorny question of how economies can keep the lights on today while they invest in clean energy technology and secure supplies of critical commodities needed for electric vehicles and renewable

Left to right: Michael Sugirin, Global Head of Open Account Trade at Standard Chartered Bank based in Singapore; Christian Hausherr, Chair, Global Supply Chain Finance Forum, and Product Manager, Supply Chain Finance EMEA Deutsche Bank; and Sean Edwards, Chair, International Trade and Forfaiting Association, Special Adviser, Trade Finance, SMBC

energy equipment. Midway through the pandemic in 2021, Jeremy Hamon, Head of Group Finance and CFO at Primetals Technologies, described his company's four-year ESG-aligned FX hedging commitment, which featured as a *flow* cover story that year.

Following the publication of Deutsche Bank's *flow* special report, *How to ensure commodities security in a volatile world*, we welcomed its author, Hauke Burkhardt, Global Co-Head, Lending and Regional Head Trade Finance & Lending, Germany, Austria and Switzerland, Deutsche Bank, together with Julian Kettle, Chair, Metals and Mining at Wood McKenzie, to take a closer look at Europe's uncomfortable dependency on Russia and China as suppliers. This show aired in May 2022, with the theme reprised in our most recent episode (May 2023), where economists Dr Rebecca Harding and Marion Laboure were joined by Peter Handley of the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs at the European Commission.

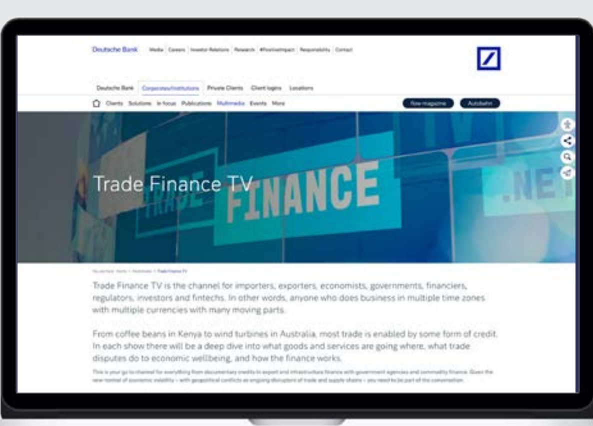
Our guests discussed the uncomfortable fact that, until relatively recently, both EU countries and the UK were relaxed in delegating the tasks of mining and processing rare earth metals – basic raw materials needed to manufacture a range of commercial and industrial products – to other parts of the world, and continuing their dependency on one or two key suppliers. Growing geopolitical tensions have underlined what was already evident: that reliance on others threatens economic security. "We now want to source elsewhere and also make greater use of our existing internal resources," said Handley.

Supply chain security

Supply chain volatility and fragility – along with the supply chain finance that provides vital liquidity – has featured several times. Our episode on the future of supply chain finance, which aired after the collapse of the supply chain financing business Greensill Capital in May 2021, was particularly popular. Our experts explained why, despite being abused, this form of working capital finance remains safe and well.

Another popular episode underlined the rising interest in trade finance funds – many of which have their roots in supply chain finance assets. 'Trade finance and investors' aired in October 2022, when guests discussed investor education, the structure of the asset and the overall outlook in a market where appetite for private debt is increasing.

Clarissa Dann is the Presenter of Trade Finance TV



Tuning in

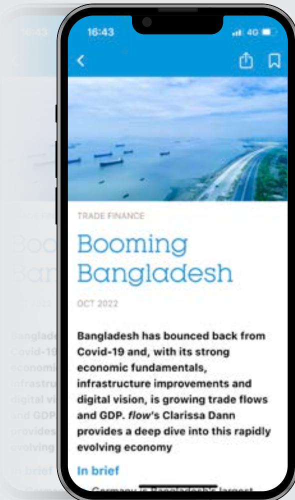
All 50 episodes are available on our website, *www.tradefinancetv.net*, or via the LinkedIn channel. If you're on the move, they work well as podcasts too. You can use the Contact Us function on the website to suggest future show themes – get in touch!

Tune in!

To view the Trade Finance TV website with all the on-demand episodes, please download QR code below

Editor's selection

What else is going on in trade finance and lending? We have chosen three essential reading items from our *flow* app and website as our editorial highlights

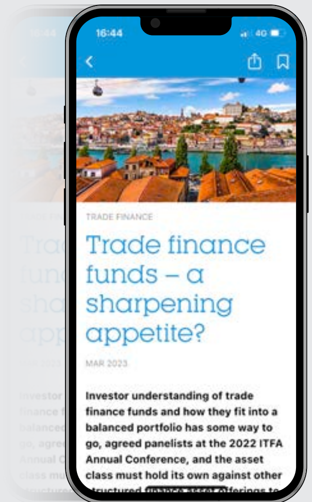


Booming Bangladesh

Bangladesh has bounced back from Covid-19 and, with its strong economic fundamentals, infrastructure improvements and digital vision, is growing trade flows and GDP. This article provides a deep dive into the country's rapidly evolving economy. Key points include:

- Germany is Bangladesh's largest European trading partner, and trade volumes between the countries hit US$9.3bn in 2021
- Bangladesh has a huge demand for investment in the infrastructure sector, renewable energy, IT and agro-based commodities, which in turn generates demand for trade finance products and services
- Financial inclusion is improving thanks to mobile phone telephony, and network/post office partnerships.
- However, while Bangladesh is situated in the world's largest river delta, it lacks sufficient potable water. Projects are underway to address this

flow.db.com/trade-finance/

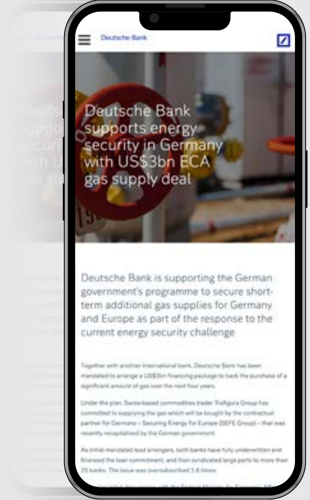


Trade finance funds – a sharpening appetite?

Investor understanding of trade finance funds and how they fit into a balanced portfolio has some way to go, agreed panelists at the 2022 International Trade & Forfaiting Association (ITFA) Annual Conference in Porto, Portugal. The asset class needs to hold its own against other structured finance asset offerings to gain momentum and traction. Track record, insurance mitigants and good structuring are all vital, they said. In summary:

- While trade finance funds have gained traction over recent years, thanks to investor demand for alternative asset classes with low volatility and consistent returns, sticking points remain in education and benchmarking
- Another worry is comparative pricing of risk and worries about fraud – additional inhibitors to this asset class going mainstream
- However, the outlook is positive, with consolidation of funds and providers looking set to overcome these problems

flow.db.com/trade-finance/



Trafigura €3bn ECA gas supply financing

Together with another international bank, Deutsche Bank was mandated to arrange a US$3bn financing package to back the purchase of a significant amount of gas over the next four years, destined for the European gas grid.

Under the plan, Swiss-based commodities trader Trafigura Group has committed to supplying the gas, which will be bought by the contractual partner for Germany – Securing Energy for Europe (SEFE Group) – recapitalised by the German government.

As initial mandated lead arrangers, both banks have fully underwritten and financed the loan commitment, and then syndicated large parts to more than 25 banks. The issue was oversubscribed 1.6 times. The four-year loan was partly guaranteed by Euler Hermes Aktiengesellschaft, the German export credit agency.

The transaction was announced in December 2022 and won a number of industry trade finance deal awards.

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Securities Services

A deeper dive into what's changing in securities services, from regulatory reform to cloud technology

Custody in the cloud
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Regulation and reform driving change in Europe, Asia and across the world *63–65*

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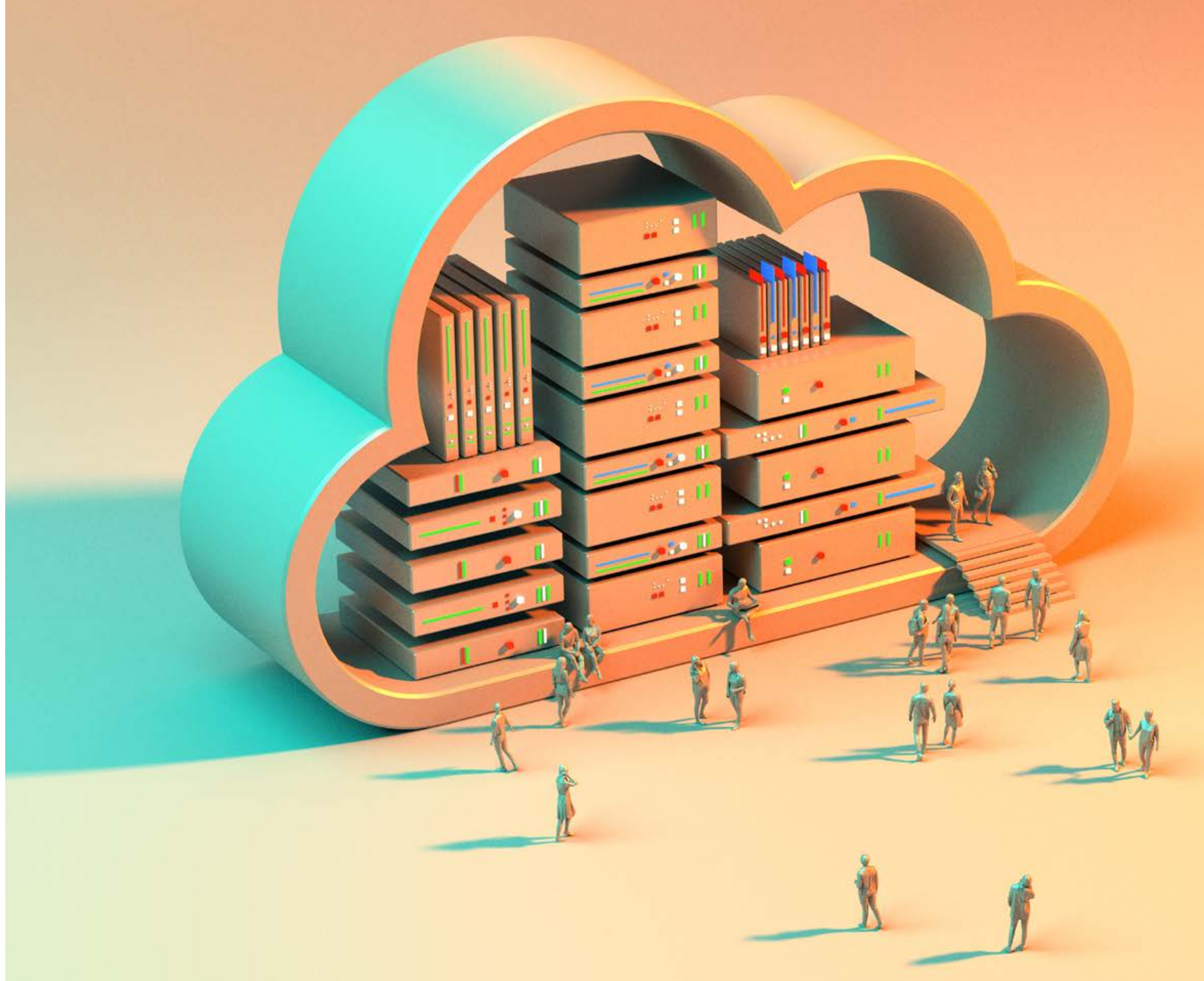
Three essential securities services articles *70*

Cloud of transparency

Cloud technology is embedded in our daily lives, from storing photos and files from personal devices to sharing files at work. *flow* reports on how custody in the cloud brings a wealth of self-service and real-time data analytics benefits to both client and custodian – once regulatory frameworks and legacy systems are navigated



Photography: iStock

Countless industries are now using cloud-based technology in their operations. Unlike a traditional IT system, which is managed on-site, cloud solutions, which offer users access to things like data storage and development tools, are hosted at remote data centres. Not only does the cloud help businesses reduce their overall IT spend, but it enables them to become more scalable and agile.

Appetite for cloud technology is growing among financial institutions. Although just 13% of financial firms have more than half of their IT footprint in the cloud today, a McKinsey study revealed that 54% intend to move at least half of their operations to the public cloud within the next five years. It suggested that adoption of the cloud could result in Fortune 500 financial institutions generating cost savings of between US$60bn to US$80bn in run-rate EBITDA (earnings before interest, tax, depreciation, amortisation) by 2030.

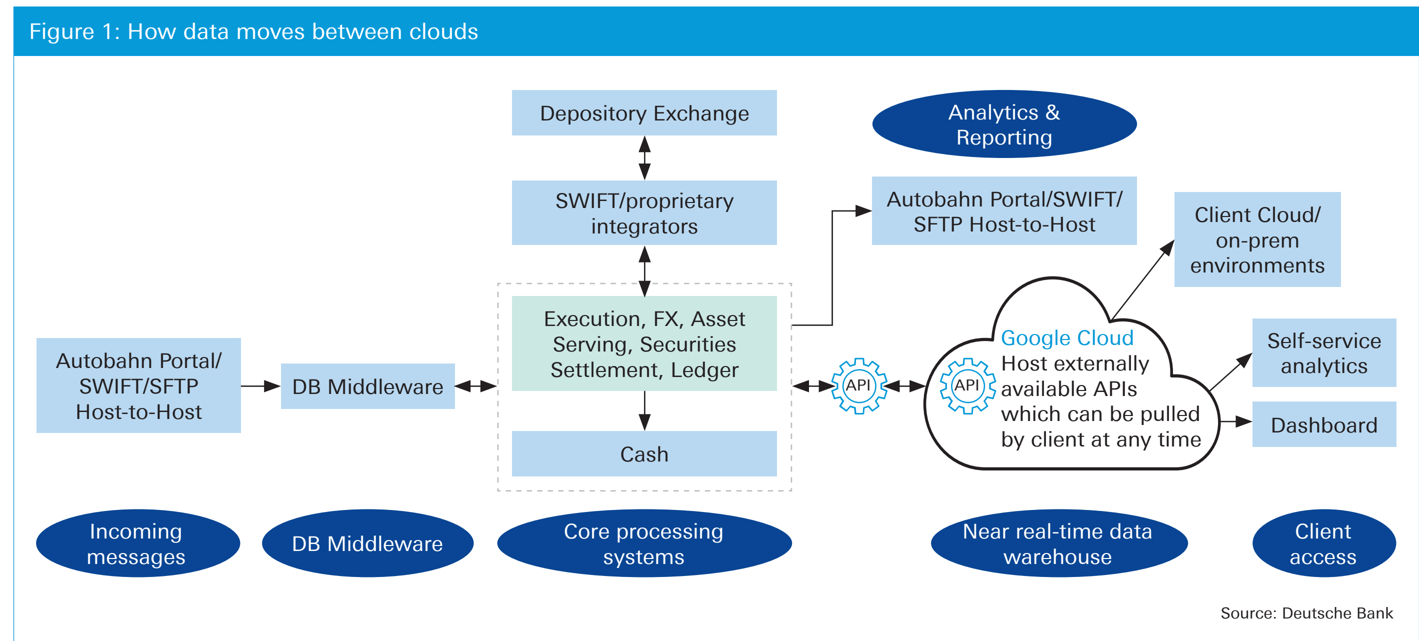
Custodians turn to the cloud

Conscious of the transformational impact the cloud is having elsewhere, custodians are taking note and are incorporating the technology into their core operations with the following outcomes:

- Real time: Before, it was not uncommon for clients to receive reports about their transactions at the end of the day after batch processing, but cloud technology now means custodians can give them instant access to post-trade data in real time. "Custody in the cloud helps us provide a client service, which is highly data-centric. It's about pushing data into an environment where settlement instructions, client holdings and information about asset servicing are all accessible to the client in a cloud environment. This means clients see the same information we are operating from in real time," explains Mike Clarke, Global Head of Product Management and Head of UK&I Region, Securities Services at Deutsche Bank.
- Analytics: By hosting huge volumes of data, the cloud allows users to conduct deep-dive analytics. By extracting meaningful insights from large pools of data, clients will be able to improve their decision-making processes. "At the heart of the cloud is data – enabling the transfer of data across our clients and ourselves – and the post-trade life cycle we are in," adds Mathew Kathayanat, Head of Securities Services Product Management, APAC at Deutsche Bank. In other words, cloud users can access a bigger set of data, and can transpose that data at a more granular level.
- Enabling new technology: Importantly, says Kathayanat, "the cloud brings to life the new technology around us, and is the enabler for consuming large data sets – complemented by artificial intelligence (AI), machine learning (ML), robotic process automation (RPA), and the ever-present application programming interfaces (APIs). You couldn't do it before because you had to query a legacy platform and mainframe, which meant building non-standard solutions. Today, the same datasets reside with both custodian and client, so everyone can automate the flow – so we can all do more with the same data".
- Self-service: The cloud gives clients greater flexibility to run their own queries. Instead of having to phone up their custodians to ask them for an update about the status of a trade, the cloud allows clients to monitor their transactions in real time. This self-service model allows for resources at both the client and the custodian to be freed up, enabling people to focus on more pressing or revenue generating activities. "It lets our people concentrate more on value-add and highly complex queries, as opposed to simple queries about trade status updates," reflects Clarke.
- Risk mitigation: The cloud is an effective risk mitigation tool, as it provides customers with robust information security and disaster recovery facilities, a point made by the European Securities and Markets Authority (ESMA). Following on from the pandemic and with cyber-crime becoming an increasingly ubiquitous threat, cloud-based solutions are now highly sought after by risk-conscious financial institutions, as firms look to strengthen their cyber-hygiene and IT resilience.

> "The cloud will allow us – over time – to layer on service enhancements
>
> Mathew Kathayanat, Head of Securities Services Product Management, APAC at Deutsche Bank

Figure 1: How data moves between clouds



Source: Deutsche Bank

Innovating through the cloud

Longer-term, the cloud will unlock a number of strategic opportunities for custodians and their clients. As Kathayanat notes, the industry is still heavily reliant on legacy systems and infrastructure. In the cloud, however, technology development is more straightforward, with enterprise up and running within minutes.

"The cloud will allow us (over time) to layer on service enhancements, such as the provision of data insights using AI. Such tools include treasury management solutions, where users receive analytics about their cash balances. The technology can also be used to predict whether or not a trade will settle successfully. There are a lot of tools available in the cloud, which make it easier for providers to develop these sorts of technologies, versus doing it in-house," according to Clarke.

Cloud solutions are also creating an environment ripe for multi-party workflows to flourish. Once there is trust in the data, and that data is seen as information that can be acted on. "You can start to build servicing calls from that data back into the processing flow. If a client sees something is wrong in the data, they have the ability to take action and correct it in our processing flow without it having to pass through every stage of messaging. They can update their system and our system simultaneously," explains Clarke.

Overcoming the hurdles

Although the cloud offers extraordinary potential, navigating access is less than straightforward.

One of the biggest obstacles is regulation, as different markets will often adopt their own rules around how data is used and stored. For example, China requires companies to conduct thorough security assessments before transferring data overseas, while others ban the export of data altogether. "There are regulatory frameworks in place that we need to follow in all the markets where we offer our services. We operate in 32 different jurisdictions, each of which has their own unique rules and regulations governing cloud and data. It is vitally important that custodians make sure they comply with all of these different guardrails," says Kathayanat.

Another difficulty is the walled gardens that result from there being multiple cloud service providers (CSPs), and the difficulty in transferring data between each of them. This is where APIs can be leveraged to enable cloud-to-cloud data transfers. For example, Deutsche Bank has a cloud partnership with Google, but not everyone will use Google as their cloud provider, so a level of interaction is required. While the bank builds new custody solutions within its Google cloud, the data shared with clients is held in a separate space within that Google cloud, with bank and client feeds going in each direction – in real time (see Figure 1).

"Google has built a lot of services as add-on bits of technology that can then operate on the cloud infrastructure this database sits on," says Clarke. One example is Google BigQuery, part of Google Cloud's data analytics toolkit. "We can build tailored solutions using BigQuery – and being on the cloud provides access to common code bases that can be linked to on top of the data," he adds.

The first stage of this data sharing journey is putting the custody API structure into the cloud, ensuring the different channels of data provision – albeit from legacy systems. "We are sharing data with clients on a fully cloud-based push and pull basis," says Clarke.

This is the start of an exciting journey after all, as Kathayanat concludes: "the cloud is here to stay."

> Custody in the cloud helps us provide a client service which is highly data-centric

Mike Clarke, Global Head of Product Management and Head of UK&I Region, Securities Services at Deutsche Bank

Regulatory update

Regulation continues to have a transformational impact on post-trade. Deutsche Bank's Boon-Hiong Chan and Britta Woernle provide an update on what areas of the industry this is shaping

Global

In recent years, there has been a global trend towards accelerated settlement cycles, in what is likely to bring about balance sheet savings and improved market resiliency.

Asia is a market with accelerated settlement cycles. The China Interbank Market (CIBM) has government bonds with settlement cycles of T+0, T+1 and T+2. Additionally, there is a special service for settlement on the trade date plus four or more days (T+n, where n >= 4). This allows enough time for global investors to secure funding. The minimum requirement is four days.

Photography: iStock

As we reported in the 2022 edition of *flow*, India announced in 2021 that it would introduce a T+1 settlement cycle for listed equities, a process that was completed in early 2023. Although no other Asian markets have any formal plans to move to T+1, the Philippines is expected to migrate from T+3 to T+2 in the near future.

The US and Canada will introduce T+1 in May 2024, and these regions could be followed by several markets in South America, which are currently consulting on whether to adopt T+1. Meanwhile, the UK has launched an accelerated settlement taskforce, which will publish its findings later this year. The Association for Financial Markets in Europe has also established its own T+1 taskforce to explore the pros and cons of shorter settlements in the EU.

Transitioning to T+1 in the US will cause challenges, however. There is a 12–13-hour timezone difference between Asian markets and the US, meaning that Asian investors trading US securities will need to issue no-error settlement instructions in time for T+1 9pm US EST settlement (9am T+1 Singapore/Hong Kong).

Europe

Efforts to harmonise the EU's capital markets are ongoing, while regulators are also looking to amend a number of existing rules.

The Eurosystem Collateral Management System (ECMS)

A European Central Bank (ECB)-led initiative, the ECMS aims to harmonise collateral management processes in the euro area. The ECMS will replace 19 different collateral management systems with a single system capable of managing the assets used as collateral in the Eurosystem credit operations for all jurisdictions. The scheme, which is due to go live in April 2024, will help increase efficiency in the management of collateral and level the playing field among Eurosystem counterparties.

To facilitate the ECMS, the ECB Advisory Group on Market Infrastructures for Securities and Collateral (AMI-SeCo) endorsed standards for a Single Collateral Management Rulebook for Europe (SCoRE). SCoRE standards apply to debt instruments, equities and investment funds issued via European (I)CSDs, and should be implemented by all relevant actors in the AMI-SeCo markets (the EU, the UK and Switzerland).

The compliance date of corporate action standards is April 2024, with the exception of those events that are only relevant to equities and investment funds, for which the implementation deadline is November 2025 (although CSDs may indicate an earlier deadline).

Harmonisation and updating of existing regulations

The Capital Markets Union is an all-encompassing framework aimed at facilitating deeper integration of EU capital markets so as to increase competitive investment and financing opportunities. As part of this, regulators are reviewing and potentially amending a number of existing rules, including the European Long-term Investment Funds regulation, the Alternative Investment Fund Managers Directive, the Markets in Financial Instruments Regulation, and the Shareholder Rights Directive II.

A proposal for a directive on Faster and Safer Relief of Excess Withholding Taxes, which requires unanimity at the Council, was published on 19 June, application on 1 January 2027. Proposed solutions are a common digital tax certificate and a common reporting standard combined with a quick refund system within a set time frame and/or relief at source procedure.

On the Central Securities Depositories Regulation (CSDR) Refit the Council has reached a provisional agreement with the European Parliament on 27 June which still needs to be formally approved by the EU's member state ambassadors. It will then be adopted by the Council at a forthcoming meeting following legal and linguistic revision of the text. The CSDR Refit will enter into force 20 days after its publication in the EU Official Journal with an applicability of certain provisions 24 months after entry into force, i.e. approximately in Q3/ 2025. Mandatory buy-ins will only be introduced as a measure of last resort, where the rate of settlement fails in the EU is not improving and is presenting a threat to financial stability.

Digitalisation and digital assets

Regulatory scrutiny of digital asset classes is intensifying, especially following the failure of several cryptocurrency exchanges, most notably FTX.

In May 2023, the International Organisation of Securities Commissions (IOSCO) published a consultation report containing policy recommendations for crypto and digital asset markets, in areas including custody and client asset protection, market manipulation and conflicts of interests. The proposals could have significant implications, with one being that crypto-asset service providers – including bank-operated crypto custodians – will have to place client assets in trust, in segregated bankruptcy remote accounts, or equivalent – unless the provider expressly takes legal or beneficial title to the client's assets.

On 9 June, the EU Markets in Crypto-Assets Regulation (MiCAR) was published in the EU Official Journal, entering into force 20 days later. MiCAR will then apply as of 30 December 2024, except for the electronic money tokens (EMT) and asset-referenced tokens (ART) titles which become effective already on 30 June 2024. MiCAR aims to create a holistic regulatory framework for crypto-assets markets that preserves financial stability and protects investors. Among others, MiCAR defines:

- Categories of crypto-assets
- The scope and type of crypto-assets that are regulated under existing frameworks
- A licensing and authorisation regime
- Roles and responsibilities of crypto-assets issuers and service providers
- A supervisory framework for the crypto-asset ecosystem.

The EU's DLT Pilot Regime, which lets financial market infrastructures (FMIs) test DLT in the issuance, trading and settlement of tokenised securities, has been live since 23 March 2023. Elsewhere, the European Council is updating its rules to extend tax reporting requirements to cover crypto-assets, while the UK Treasury has recommended that unbacked crypto trading be regulated as if it were gambling.

The US is also pushing ahead with its own rules on digital assets. On 15 February 2023, the Securities and Exchange Commission (SEC) issued

a 'Safeguarding Rule' proposal that broadens the application of its existing rules governing custody services provided by investment advisers. The rule, which is expected to come into force next year, seeks to restructure the way that qualified custodians provide custody services, as well as the nature and scope of advisers' responsibilities with respect to custody. The 'Custody Rule' will also be extended beyond client funds and securities to include any client assets – including digital assets. Major concerns for foreign financial institutions (FFIs) are the cash segregation requirement for bank custodians and the strict liability of custodians for losses at the sub-custodian or securities depository, i.e. qualified custodians would be liable not only for their own negligence, but also for any contingency down the chain (similar to AIFMD).

In Asia, regulators are focusing their attention on decentralised finance (De-Fi). Hong Kong's Securities & Futures Commission (SFC) released its regulatory requirements for virtual asset trading platform operations, which became effective in June 2023. Similarly, the Monetary Authority of Singapore launched two consultations tackling regulation of decentralised exchanges and decentralised finance platforms, new consumer protections, and technology risk management for digital asset service providers. Finally, Thailand's Securities and Exchange Commission issued regulations governing digital token offerings (ICO Portals).

This all comes as the industry is expecting IOSCO to issue a regulatory consultation on De-Fi in H2 2023.

Regulatory scrutiny of digital asset classes is intensifying

Client asset safety

The SEC's 'Safeguarding Rule' modifies the current Rule 206(4)-2 'Custody Rule' under the Investment Advisers Act of 1940. This follows a number of client asset safety issues. As the proposal currently stands, it would change the concept of liquidity and banking structure from its requirements for client cash to be segregated and kept in a bankruptcy-remote manner by qualified custodians. It also extends the safekeeping obligations by custodians to include other assets, like derivatives, which cannot be held in custody for practical reasons.

The rules impose more requirements on FFIs before they can become qualified custodians – including in jurisdictions where the SEC can enforce judgement on them.

Boon-Hiong Chan (Asia) and Britta Woernle (Europe) lead the Securities Market & Technology Advocacy team at Deutsche Bank's Securities Services

Asia

Having bounced back from Covid-19, a number of Asian markets are pushing ahead with exciting market reforms.

Sustainability and responsibility

The ASEAN Capital Markets Forum has developed the ASEAN Sustainable and Responsible Fund Standards (ASEAN SRFS) to support the growth of sustainable asset classes. SRFS introduces a template and minimum disclosure requirements around sustainability for collective investment schemes in ASEAN markets. So far, the Philippines and Thailand have imposed regulations which are broadly aligned with the SRFS's provisions.

Elsewhere, the Hong Kong Monetary Authority has published a discussion framework outlining a potential green classification framework that would enable financial products and investments to be labelled based on their sustainability credentials. The framework is based on the Common Ground Taxonomy, a joint initiative established by the People's Bank of China and the European Commission, which aims to map out activities that can be designated as being green in both China and the EU.

Finally, the Securities and Exchange Board of India (SEBI) has launched a new Business Responsibility and Sustainability report targeting the top 1,000 listed companies. The rules introduce mandatory ESG disclosure obligations and should help bring about greater transparency. In 2023, SEBI announced additional disclosure requirements for the issuers of transition bonds.

Connect and modernise

Connectivity schemes between the capital markets of Hong Kong and China continue to be an area of focus. Recent initiatives include Hong Kong Exchanges and Clearing Limited's launch of the Hong Kong Dollar-Renminbi Dual Counter Model for listed equities, and the Dual Counter Market Making Programme in its securities market. Similarly, the northbound leg of Swap Connect went live in May 2023, enabling global investors to access mainland interest rate swaps, which will help generate a number of risk management benefits.

In another drive to modernise the Hong Kong market, the SFC consulted the industry on the operational and technical aspects of an uncertificated securities market (USM), which will allow investors to hold securities in their own name and without paper, as well as on the regulation of share registrars. A USM market will help usher in better legal protections and market-wide efficiencies.

Market connectivity programmes are not limited to Hong Kong and China. Thailand and Singapore have launched a Depository Receipt Linkage programme, making key listed companies available to investors in their respective markets.

Singapore has also launched the National Stock Exchange (NSE) IFSC-SGX Connect. Under this, SGX will link up with NSE IFSC to allow trading in NIFTY derivatives listed on NSE IFSC. In addition, SGX announced a memorandum of understanding with the Shanghai Stock Exchange to launch an ETF link through a master-feeder fund model, building on its success with the Shenzhen Stock Exchange.

Finally, infrastructure enhancements are being made in Vietnam. For example, the Vietnam Securities Depository & Clearing Corporation aims to launch a new CCP by January 2024, as the market continues to adopt industry best practices.

China's post-zero-Covid investment boom

Now that China has dropped its 'zero-Covid' policy, foreign financial institutions and asset managers have renewed their appetite for Chinese securities. At the same time, the Middle Kingdom's financial institutions are looking offshore in search of diversification beyond their domestic markets. *flow* explains the advantages of working with banks that hold fund custody licences in China

Since it loosened its stringent pandemic-era restrictions, foreign institutions are once again scoping out investment and fundraising opportunities in mainland China, attracted by the country's strong growth prospects.

According to Tony Chao, Head of Securities Services, Greater China at Deutsche Bank, the main channels currently being used by foreign investors include:

- Stock Connect
- The consolidated Qualified Foreign Institutional Investor (QFII)/Renminbi Qualified Foreign Institutional Investor (RQFII) regime
- Bond Connect
- The China Interbank Bond Market

Chinese equities have been the biggest beneficiaries of foreign investor flows, but the country's US$21trn bond market has suffered sizeable outflows. However, experts believe flows into RMB bonds could resume later in 2023 if yields rise off the back of inflation and economic growth. China's regulator has also given its approval to Swap Connect – a scheme that will offer offshore investors access to the US$51trn onshore interest rate swaps market – which could help counteract the RMB debt outflows.

There has also been a surge in Chinese institutions investing overseas through the Qualified Domestic Institutional Investor (QDII) scheme, as they look to diversify their revenue streams outside of the local market. The number of QDII quotas issued by the State Administration of Foreign Exchange (SAFE) now totals US$162.7bn (at March 2023) spread across 38 banks, 71 securities companies, 47 insurers and 23 trusts. This is a notable increase from 2020, when SAFE issued US$116.7bn in QDII quotas.

New mainland investors

Following the introduction of the Wholly Owned Foreign Enterprise (WFOE) Private Fund Management (PFM) programme, the Qualified Domestic Limited Partnership and Wealth Management Connect, foreign fund managers can now distribute their products to a select number of Chinese investors. As of May 2023, eight foreign managers have been given approval by the China Securities Regulatory Commission (CSRC) to operate onshore mutual fund businesses.

> The Chinese regulators want greater diversification in the fund management space
>
> Ben Li, Head of Securities Services for China at Deutsche Bank

"The investment style adopted by most Chinese managers is broadly similar. Introducing global asset managers with different investment philosophies, governance, risk controls and products will help bring about diversification," according to Ben Li, Head of Securities Services for China at Deutsche Bank. For global asset managers, he explains, "the Chinese investor market is largely untapped, making it a very attractive proposition for them."

He continues, "A number of the major Chinese insurance companies have worked with global fund managers for some time now. Those asset managers are now looking to offer their services to more domestic institutions, including the fast-growing pensions industry."

China's domestic funds industry is also undergoing significant growth. The assets under management (AUM) controlled by the members of the Asset Management Association of China were estimated to be RMB66.7trn (US$9.68trn) at year-end 2022, versus RMB56.17trn in 2020. "Chinese asset managers are increasingly looking to raise money from investors based outside of the mainland in Asia, Western Europe and North America," highlights Chao.

Lingering concerns

Although Chinese regulators have made it easier for foreign institutions to operate in the domestic market, Chao says there are still some lingering issues. "A number of global asset managers – especially those in the US – are concerned about

RMB66.7trn (US$9.68trn)
AUM controlled by Asset Management Association of China year-end 2022

the geopolitical risks and the potential for exchange controls being introduced. Operating in multiple locations in China can be complicated from a tax and regulatory perspective, as different provinces will often adopt their own tax rates and regulations."

In a country where local institutions have a distinct domestic bias when investing, global asset managers can sometimes find China a difficult market to penetrate. "Chinese funds typically compete with each other on price. Unless a foreign manager offers higher returns and a lower risk profile than local providers, it can be challenging for firms to differentiate themselves," Chao reflects.

Another barrier is that global asset managers – even the high-profile ones – often do not have brand recognition in China. "In order to overcome this, foreign asset managers need to use the right type of distribution partners, and demonstrate to local clients that they are committed to the market," says Li. As such, successful fundraising in China requires patience, a local presence and major investment by global asset managers.

Advantages of a Chinese fund custody licence

In 2020, Deutsche Bank received a fund custody licence from CSRC enabling it to provide an array of post-trade solutions for funds established within China, including WFOEs and the domestic asset management industry, but also foreign institutions looking to trade in China.

Previously, local fund managers had to appoint a local custodian bank, who would select an international custodian offshore to support them with settlement activities. Deutsche Bank can now offer a one-stop shop solution for clients. "With the local fund custody licence, we can work with domestic managers, while the offshore branch helps them invest overseas by supporting them with clearing and settlement," explains Li.

The licence also provides fund managers operating in China with a solution that adheres to a global standard. "We comply not just with local regulatory requirements, but global standards on KYC, onboarding, risk, operations and governance," says Li. In addition, it enables Deutsche Bank to supplement its custody offering with other product suites. "We can leverage on custody as a platform to connect other core businesses and functions, especially treasury, cash management, FX and markets, so that we can provide holistic capital market solutions to clients," he adds.

With around 40 new custody accounts opened by May 2023 with Deutsche Bank China, it's clear that the post-Covid investor momentum is well underway.

Photography: iStock

Breaking the settlement failure chain

Trade settlement fails create added costs and risks for financial institutions. While the biggest reason is insufficient securities being available for settlement and liquidity issues, the overall settlement landscape is more nuanced. *flow* provides a summary of the Deutsche Bank white paper examining failure triggers and potential solutions

Although the overwhelming majority of equity and bond trades settle on time, fails do still occur periodically. Data from the European Securities and Markets Authority (ESMA) shows that equity settlement fails in Europe stood at 6% as of December 2022, with a one-year moving average of around 8%. While settlement fail rates are lower for government and corporate bonds, these numbers have edged upwards slightly over the same period.

Why trades fail to settle

Trades fail to settle for several reasons. By far the biggest reason for failure is insufficient securities being available. An inability to access securities (i.e. because they are out on loan and cannot be recalled, or due to a lack of liquidity in the market) can also contribute to fails. Poor-quality data is a significant impediment to seamless trade settlements, with inaccurate or incomplete standing settlement instructions (SSIs) being a major factor in trade settlement fails.

Figure 1 demonstrates how a failure 'circle' arises whereby Party A cannot deliver to Party B, who then cannot deliver to Party C, who needs those shares to deliver to Party A. When this happens, one of the impacted parties will borrow the shares from a separate Party D to get the settlement chain moving.

Another common trigger for trade fails is when there are spikes in transaction volumes, often caused by market volatility. This increases transaction volumes, causing strain on market infrastructures. Markets have remained highly volatile since March 2020, due to the pandemic and then the outbreak of war in Ukraine. These two 'black swan' events have precipitated a sharp jump in trading volumes and trade fails. There was also a notable increase in the number of fails in the immediate aftermath of the UK's mini budget in September 2022.

> Integration of innovative technologies such as AI and blockchain could also drive down settlement fail rates

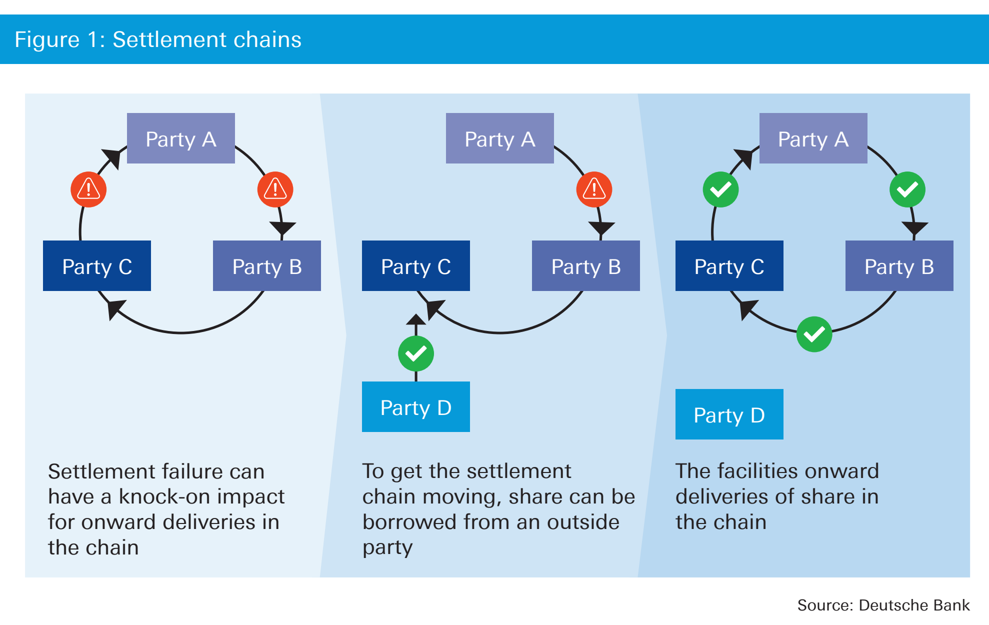
All of these problems are exacerbated by the antiquated technologies employed in the back offices at both trading firms and their intermediaries. This ongoing reliance on manual processes during trade matching, confirmations and instructions certainly increases the likelihood of transactions not settling on time. In marked contrast to front office systems, there has been limited investment in post-trade technology since the financial crisis of 2008, although this imbalance is slowly starting to improve.

Cost and risk

Settlement fails can have various adverse impacts on capital markets, and these all come down to cost and risk.

- Cost: The rollout of the Settlement Discipline Regime (SDR) under the EU's Central Securities Depositories Regulation (CSDR), which came into effect in February 2022, imposes cash penalties on counterparties responsible for trade fails. As well as cash penalties, settlement fails can result in interest payments being accrued, eroding margins.
- Risk: If a participant expecting to receive securities or cash on a particular date is not receiving them because of a settlement fail at its counterparty, then there is a risk that the affected participant will be unable to meet their obligations with other counterparties on the same date. This could result in a potential 'domino effect' that could eventually contribute to some sort of systemic risk. Late settlement also carries reputational risk. For example, any financial institution which routinely fails to settle its trades on time may struggle to find counterparties willing to trade with it in the future, due to the operational risks and costs associated with the relationship.

Figure 1: Settlement chains



Source: Deutsche Bank

Reforms spark a race to reform

Regulation and market reforms designed to strengthen post-trade processes are expected to prompt financial institutions into addressing settlement discipline with more urgency.

Although EU regulators opted to defer SDR's Mandatory Buy Ins (MBIs) until November 2025, a CSDR Refit was proposed in March 2022 by the European Commission (EC). As part of this plan, the EC recommended the introduction of MBIs if it becomes clear that cash penalties are not having their intended effect. If settlement rates do not improve or meet a certain measurable threshold set by regulators, then the EC and ESMA could be inclined to introduce MBIs.

The decision by major markets to adopt T+1 will mean there is less time available to complete settlements, which will put pressure on operational processes and technology systems. This, in turn, will increase the chances of trades failing.

Solutions

One way to minimise settlement fails would be to obtain better transparency into the trading lifecycle. Market participants would then be able to procure more accurate insights into what is happening during the entire transaction process and implement tools that allow for multiparty workflows to take place.

Visibility of both sides of the instruction makes it simpler to identify which party needs to act to resolve the issue. There are several ways to achieve this, one of which is the adoption of Swift's Unique Transaction Identifier (UTI). A UTI is a unique alphanumeric code that is assigned to a securities trade, enabling the trade to be tracked from end to end throughout the settlement lifecycle. By incorporating the UTI into the settlement process, trading counterparties will be able to identify operational risks during the transaction lifecycle, helping them to avert potential fails.

A useful tool for improving settlement liquidity and reducing penalty values is partial settlement. Within a settlement instruction, each party can indicate that they are open to allowing a partial delivery to take place, whereby the seller delivers the shares available in their inventory to the buyer in return for proportionate cash proceeds. This reduces the outstanding amount that is failing and therefore the size of any penalty.

Integration of innovative technologies such as artificial intelligence, blockchain or distributed ledger technology into existing processes could also potentially drive down settlement fail rates, especially if 'atomic settlements' (which happen instantly) become a reality.

Download the full white paper

Use your smartphone to scan the QR code below and download *Breaking the settlement failure chain*

Editor’s selection

What else is going on in securities services? We have chosen three essential reading items from our *flow* app and websites as our editorial highlights

Digital currencies: the ultimate soft power?

Central bank digital currencies (CBDCs) are the vehicle for central banks to develop their own digital payment alternatives. Not only are emerging market economies ahead of developed ones in launching them, but CBDCs are also emerging as a soft power tool at a time of geopolitical volatility. This article provides an overview based on Deutsche Bank Research. In brief:

- Geopolitics are possibly the biggest single driver in accelerating CBDC development and have prompted a re-evaluation of the current international financial system
- Emerging economies are leading the pack of developing CBDCs with developed ones playing catch-up
- In particular, the CBDC could be used as a soft power to internationalise China’s RMB

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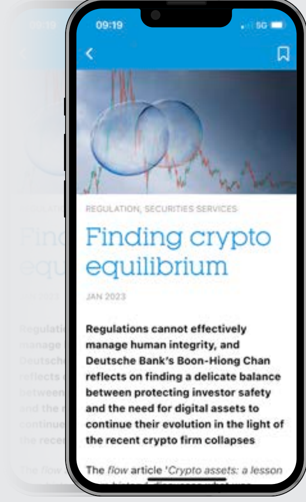

Finding crypto equilibrium

Regulations cannot effectively manage human integrity, and rules can and should be used to deter intentional fraud.

The collapse of cryptocurrency exchange FTX and cryptocurrency lender Genesis have led to calls for more regulation and legal protection for investors. However, there is a delicate balance to be found between having the appropriate frameworks in place, and the need for digital assets to continue their evolution.

In this opinion piece, Deutsche Bank’s Head of Market Advocacy Asia Securities & Technology, Boon-Hiong Chan, reflects on the learning points in the aftermath of the collapses and what a transition to safety could look like.

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New frontiers for China’s big spenders

High net worth individuals (HNWIs) and mass-affluent investors in China want to invest more of their wealth outside of the country. This article explores some of the options currently available to them. In brief:

- China has more HNWIs – i.e. those with more than US$1m in liquid investible assets – than anywhere else in Asia
- These investors seek diversification by investing into overseas securities and global money managers
- Instead of investing directly into overseas equities and bonds, a number of HNWIs and affluent investors are gaining international exposure with the assistance of local fund managers
- Global banks with a licence to operate in China (such as Deutsche Bank) are facilitating these inbound and outbound flows

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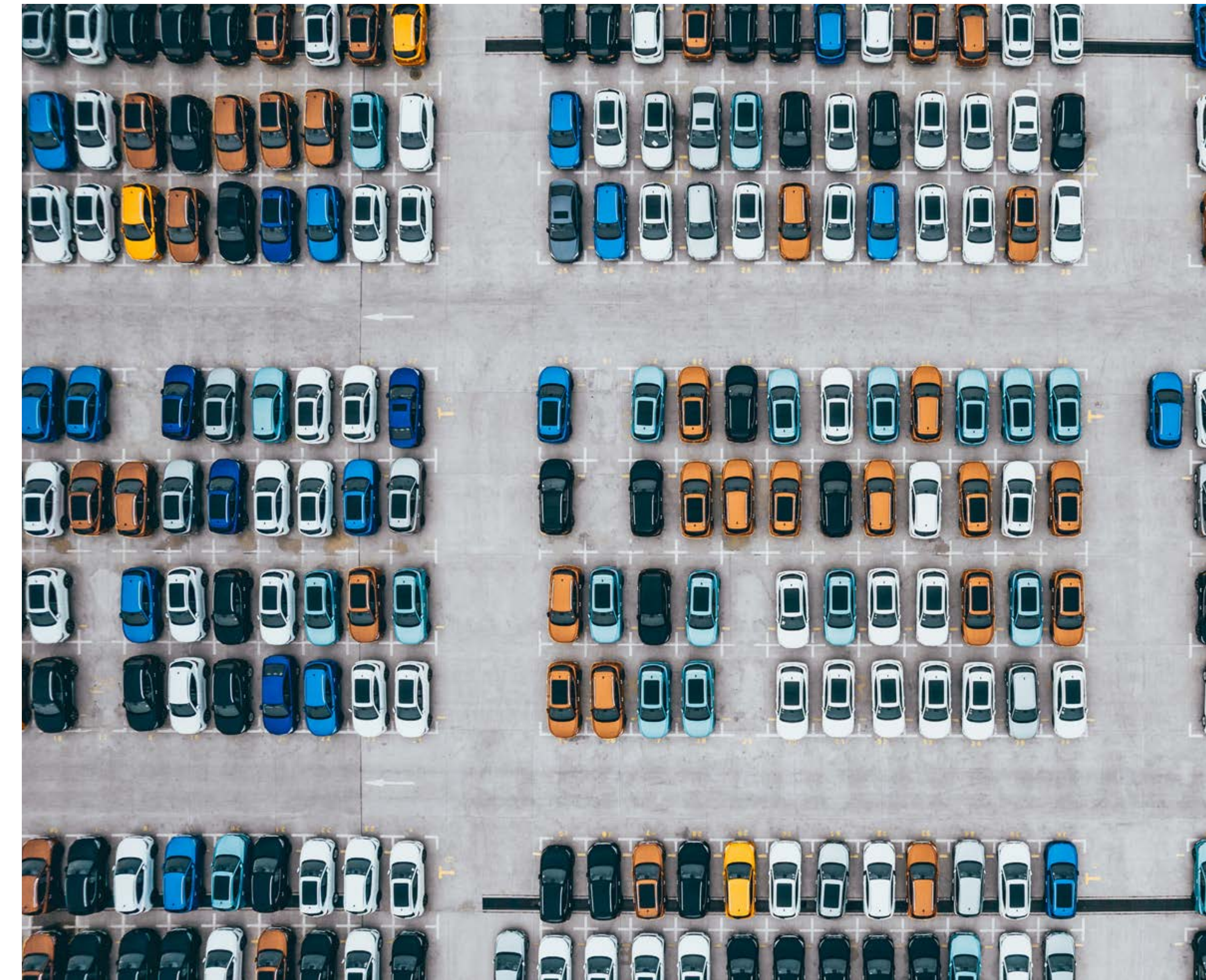
Trust and Agency Services

Trust and Agency Services (TAS) touch most areas of Deutsche Bank's businesses. Here, we share two pivotal examples

Autohome
How the online marketplace has enhanced its worldwide investor base through its American Depositary Receipt programme *72–75*

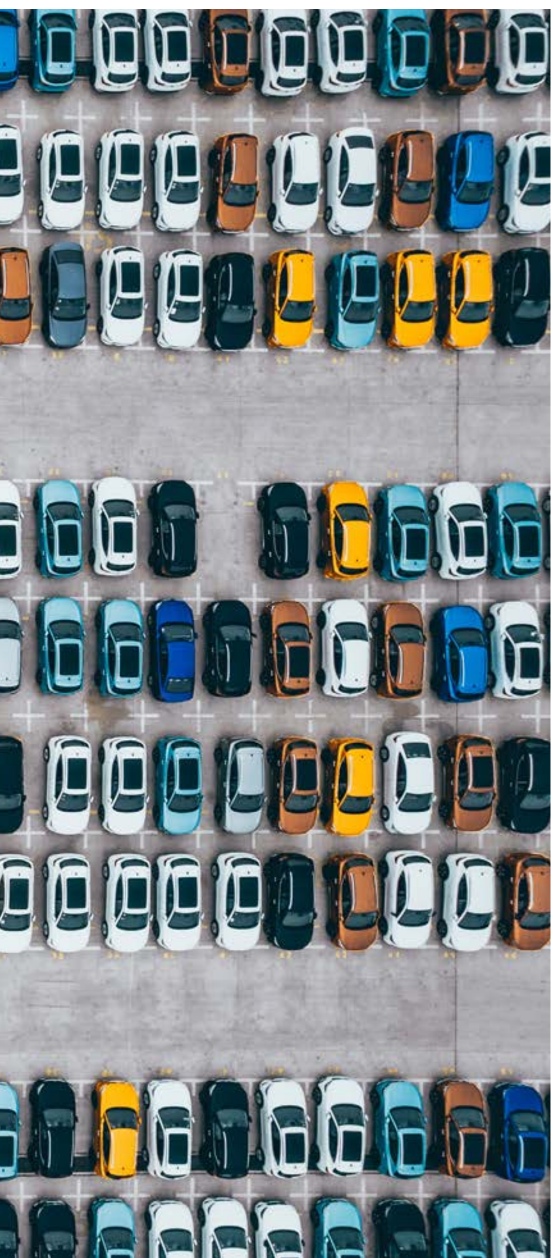
Escrow accounts explained
How digitisation has made escrow arrangements seamless for clients *76–77*

Editor's selection
An update on collateralised loan obligations, and a dedicated news channel *78*



Autohome: in the driving seat

Autohome is a dynamic online marketplace and information portal for passenger vehicles in China, the world's largest automobile market. *flow*'s Clarissa Dann provides a summary of the mileage so far, and reports on how its American Depositary Receipt programme has helped the company broaden and enhance its investor base worldwide



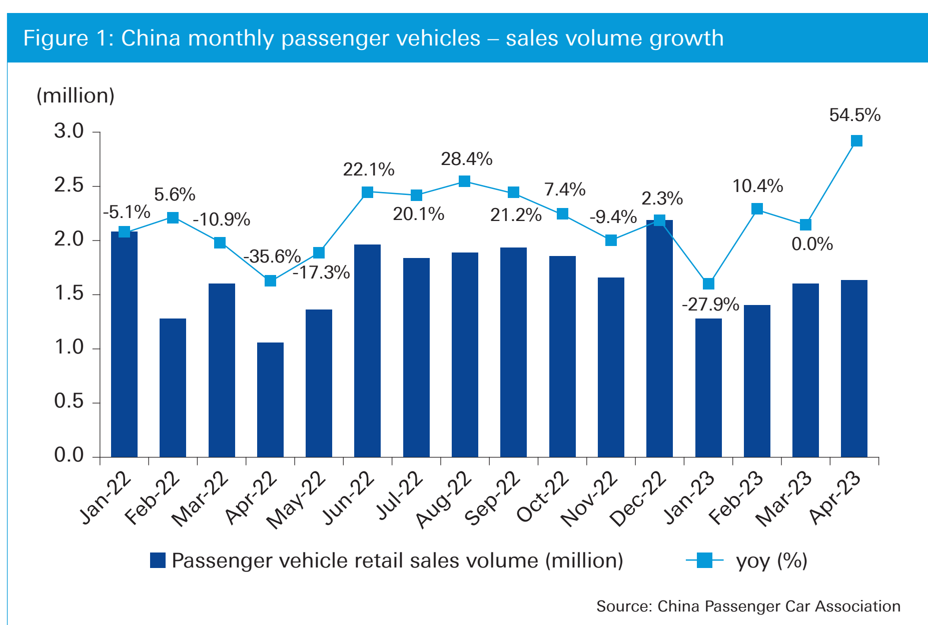


Figure 1: China monthly passenger vehicles – sales volume growth

On every reading of the dashboard, the Chinese car market is remarkable. China leads the world in both annual sales and number of cars produced, according to data gathered by the US Department of Commerce's International Trade Administration. China also leads in the electric car race: the International Energy Agency found that China accounts for 60% of global electric car sales, and that more than half of the world's electric cars currently on the road are in China.

Since the restrictive 'zero-Covid' policy was dropped in December 2022, China's passenger car sales have been steadily increasing – see Figure 1.

Photography: iStock

Driving vehicle sales

Autohome has been very much part of China's car growth story. Its stated mission is to "relentlessly reduce auto industry decision-making and transaction costs driven by advanced technology". It does this by providing "occupationally-generated, professionally-generated, and user-generated content; AI-generated content; a comprehensive automobile library; and extensive automobile listing information for automobile consumers, covering the entire car purchase and ownership cycle."

From its beginnings in 2004, Autohome has launched and grown new consumer offerings. Its che168.com and autohome.com.cn websites were launched in 2004 and 2005, and the Autohome forum and app launched in 2007 and 2010 respectively. Its commercial lines have evolved too: che168 was reorganised as a used car website in 2011, Autohome Mall was launched in 2014, and a full-blown '818 Global Super Auto Show' was launched in 2019. Sitting at the nexus of such valuable information flows led to the launch of Autohome's first data product 'Che Zhi Yun' in 2017, followed the next year by Autohome's transformation from a '4+1' auto platform into an 'intelligent auto ecosystem'.

Original equipment manufacturers (OEMs) typically use Autohome's online advertising services to boost their brand and promote sales and new model releases; dealers meanwhile use the sites to market their inventory and services; both parties appreciate the chance to reach potentially millions of customers via the portal's visitors. That strong value proposition for advertisers, dealers and customers together with the sites' high-quality content (featuring Autohome's large in-house editorial team) has created a virtuous traffic cycle for its stable of sites and products.

Hong Kong-based Deutsche Bank Research analyst Leo Chiang observed in his 16 and 17 May 2023 updates that Autohome is optimistic about China's auto market for 2023, given the potential launch of new government incentive programmes to stimulate auto sales, and the gradual recovery of consumption sentiment. "The company expects NEVs (new energy vehicles) to continue to outperform, while traditional ICE (internal combustion engine) vehicles may remain soft due to stricter vehicle emissions standards such as National VI B, which will start to be implemented from 1 July, with certain models having the deadline extended to the end of 2023," he said.

Chiang explains how Autohome launched the first new electric vehicle (NEV) offline experience store in Shanghai in September 2022, allowing users to experience various NEV models at the same time via augmented and virtual reality (AR/VR) technology. "Initial feedback is encouraging, and the new initiative has been recognised by both

consumers and OEMs," he reflects. More new stores with a franchising model are planned for 2023. NEVs are a growing business for Autohome – the company currently has partnerships with more than 30 NEV brands.

Global reach

Autohome's vision is "to become the world's premier 'content ecosystem + tool service + trading platform' one-stop auto lifecycle service provider geared to B and C-end users".

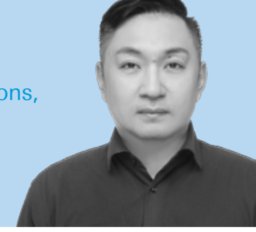
The company's global capital markets footprint began with its IPO on the New York Stock Exchange (NYSE) in 2013 through a sponsored Level III American Depositary Receipt (ADR) programme run by Deutsche Bank, and its secondary listing in Hong Kong in 2021.

The role of Chinese companies in transforming global capital markets can be seen in their impact on the depositary receipt (DR) market. Deutsche Bank research found that 18% of all DR programmes today originate from China and Hong Kong, up from low single-digit figures 20 years ago. DR programmes for Chinese companies today account for 41% of the value of all DRs traded in 2022, and 38% of the volume traded. In 2022 alone, Chinese DR programmes constituted around two-thirds of the capital raised through DR programmes globally.

Despite thriving domestic exchanges, in particular in Shanghai and Shenzhen, Chinese companies have long sought access to international capital, and to diversify their investor base through using DR programmes, whether ADR (American) or GDR (Global). Depositary banks issue investors with DRs representing equivalent shares in the underlying Chinese company's stock. DR programmes connect issuers based in China with investors from all over the world, and Autohome has (with support from Deutsche Bank) seized the opportunity to offer this to its investors.

Sterling Song heads Autohome's investor relations team, and his own career has developed in step with China's economy opening up. He started out 20 years ago at a biotech/healthcare products company, at the early stages of China's foray into the capital markets. Song notes that the market then viewed the investor relations (IR) profession as something relatively novel. However, the value added by IR professionals soon became apparent to his first employer, which had just completed a reverse take-

> The IR team touches base with senior management all the time



Sterling Song,
Head of
Investor Relations,
Autohome Inc

over and had graduated to the American Stock Exchange mainboard from the now defunct FINRA-regulated OTCBB (Over-the-Counter Bulletin Board) quotation medium for foreign companies.

This marked the start of Song's experiences of communicating with US investors, which constituted not so much a 'random walk down Wall Street' as rather a 'closed loop', taking in IPOs, secondary offerings, and then back full circle to take privates, encompassing sectors ranging from e-commerce and

Sterling Song's tips for a successful IR meeting:

- Preparation is key: be well organised and collect all the information you need to thoroughly understand the buy side investor (AUM, investment style and strategy etc., whether current or potential)
- Understand the buy side's background, their interest in the company, and their shareholding information (again, whether current or potential)
- Being frank should be the basis for all your communication; develop a relationship via continuous contact and candid discussions
- The quality of your investor meeting is ultimately evidenced when the buy side investor begins to build a position in your company

online education through to food and live-streaming in the process.

Banks play a key part in bridging the needs gap between capital and clients for companies such as Autohome. Since its listing on the NYSE in December 2013, Deutsche Bank has, says Song, "been a long-term value partner".

Building the investor community

Such experience has been brought to bear on Autohome's extensive shareholder base. Song notes that "as of Q1 2023, the top 20 institutional investors hold more than 30% of total shares outstanding, featuring the names of European and US long-only value investors such as Fidelity, Invesco, Lazard, abrdn and Mondrian".

Ping An Group, one of the largest financial groups in China, became the controlling shareholder of the company in 2016, and accounts for more than 40% of Autohome's total shares. The tie-in was a savvy move, given natural synergies with motor and related insurance products; that move into the aftersales market naturally led to the move into the investments in TTP Car Inc. and the used car market generally.

Autohome's capital market innovations, particularly in the US, Hong Kong and with its ADR programme, have done much to expand and enhance the investor pool.

These investors are serviced by Song's IR team. Four-strong, the team's daily IR tasks are divided between them, from fielding investors' enquiries and preparing for earnings reporting and meetings, through to communications with sell-side analysts and buy-side investors across the world.

Song's team is based in Beijing, and reports to Autohome's CFO Craig Yan Zeng, who also oversees the financial, capital markets, business development and legal teams. Song and Autohome's IR team also have close communications with senior management, especially the CEO Quan Long and the business operation teams.

Each morning, Song's team prepares a Capital Markets Bulletin for senior management. Key points include capital market updates (US, Hong Kong, and China's A-shares); sell side analyst reports and consensus; and auto industry overviews and peer information.

In addition, he explains, the team "touches base with senior management all the time on feedback and suggestions from investors, capital markets

Autohome Energy Space Station, Shanghai

movements and any changes in government policies".

Half the IR team's time is spent communicating with external stakeholders. For example, in 2022 alone, the team held over 300 investor meetings – in person and virtually – with nearly 400 funds. In addition, each quarter the team holds regular meetings with Autohome's top institutional investors, and the team is "extremely occupied during earnings seasons".

Pre-pandemic, it was the norm for IR team members to fly to regional hubs (the US, London, Hong Kong, Singapore etc.) for both investor conferences and non-deal roadshows (NDRs). The pandemic put an end to physical meetings for a while, but Song notes that, "as there are no more restrictions on domestic and international travel, Autohome plans to conduct more US and European NDRs in 2023", adding that the team had already attended five large investor conferences in Hong Kong by the end of March 2023 and will meet many investors in Europe in Q2 2023.

ESG

Autohome has "continuously paid a lot of attention" to environmental, social and governance (ESG) matters over the years, as interest in ESG from both investors and governments has increased.

Since its secondary listing in Hong Kong, Autohome has produced bilingual ESG reporting for investors, culminating in its first 'ESG Report 2022', released in Q1 2023. That report "objectively and fairly presents Autohome's understanding, specific practices and key achievements in ESG matters," adds Song.

Given Autohome is a leading Chinese company, it is worth noting China's national goal of "carbon peak and carbon neutrality", and the carbon emission reduction targets set with respect to the automotive industry. Autohome shares these goals, to better address the challenges posed by climate change. Specifically, Autohome is "committed to achieving carbon neutrality in operations by 2030, ahead of the country and the automotive industry". Drilling down, Song shares that Autohome's 'eco strategy' centres upon "new energy vehicles, and combining used car transactions with our data products to help with the digitalisation and carbon emissions transformations of the auto industry".

Despite thriving domestic exchanges, Chinese companies have long sought access to international capital

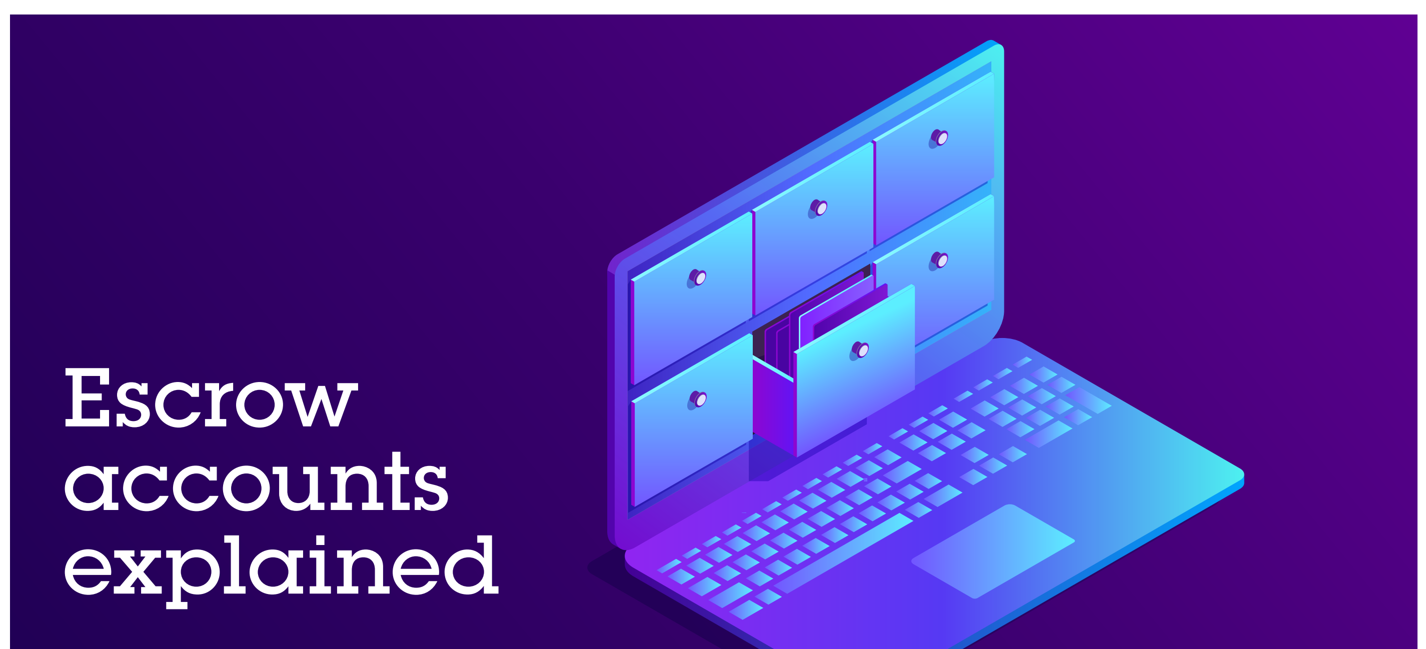
The road ahead

Autohome's IR team is a well-oiled machine, helping investors continue on their Autohome journey. This is part of a larger narrative of growth in China's auto segment.

China's electric car market, a significant economic pillar, has vast untapped potential in rural areas. To leverage this, the government is extending charging station coverage and urging car makers to diversify their product offerings to appeal to rural markets. The objective is to boost rural car ownership to 160 cars per thousand people by 2030, underlining the promising prospects for Autohome's expansion.

With even more alluring milestones on the horizon, Autohome has benefitted from partnering with those enabling its access to capital, finding that such parties (such as Deutsche Bank) are not 'back seat drivers' but rather trusted navigators, guiding and fuelling the company's international expansion.

Photography: Alamy



Escrow accounts explained

How can you promote trust that a transaction can go ahead, and that the parties are in receipt of funds? One solution is escrow accounts. *flow* explains how they work and how digitalisation has made escrow arrangements seamless for clients

The etymology of the term 'escrow agreement' can be traced back to the old French word 'escroue', which meant a scrap or roll of parchment. These documents were used as a written instrument that could be given to a third party until a certain condition was fulfilled. While the underlying processes involved have seen many changes, the overarching concept is the same.

Today, an escrow is an account designed to hold funds, securities or other assets pending the completion (or fulfilment) of certain conditions to release or distribute the escrow property.

These are laid out under the escrow agreement – from real estate, insurance trusts, capital raisings and M&A to project financing, litigation and bankruptcy proceedings. They are typically managed through a tripartite agreement between a depositor, a beneficiary and an independent third-party provider – or escrow agent.

When used correctly, escrow accounts are a powerful asset for businesses looking to ensure the security and compliance of their transactions. By taking time at the outset to understand clear milestones, businesses can trust that their assets are held securely and their transactions are conducted with speed and efficiency.

How it works

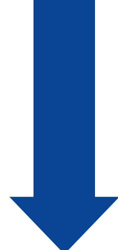
By using an escrow agreement for a corporate acquisition, for example, both parties can be assured that the transaction terms will be honoured and their assets will be protected. The escrow agent will hold on to the funds until the ownership is transferred and all other conditions of the purchase are fulfilled.

Absolute clarity regarding any milestones (the 'conditions to release') that may trigger a transfer or settlement is a must and no divergent interpretation should be possible. Such actions must be amenable to being carried out instantly, or at least within a pre-determined time frame. Moreover, the counterparties to the underlying contract and the escrow agent should agree on the consequences of a missed milestone.

"An escrow agent is a neutral, independent third-party provider. It has no discretion as to what is done with the assets being held and takes instruction from the escrow parties," explains David

Figure 1: Escrow execution/closing process

1–5 business days



Request for Proposal (RfP) and full legal names of escrow parties sent to Deutsche Bank

Escrow template agreement and KYC documentation request sent to escrow parties

Once KYC is complete and Escrow Agreement finalised, the account is opened

Source: Deutsche Bank

Photography: iStock

Contino, Head of Escrow – EMEA, Trust and Agency Services, Deutsche Bank.

Once the conditions are satisfied, the escrow agent will release the funds to the seller and confirm the successful completion of the transaction.

Setting up an escrow

There are several ways to establish the successful execution of a business transaction, including insurance instruments and good old-fashioned faith. The most common by far, however, is the use of an escrow agreement. These are widely known, accepted, and regarded by many as the most efficient and economical way of closing a transaction. An escrow agent should be:

- Streamlined and flexible. The provider needs to perform the required checks quickly and establish the account by making sure all documentation is in order and correct, and that all conditions to release are agreed.
- Experienced and committed. The agent needs the capability to open accounts across the world and accommodate multiple currencies.
- In it for the long haul. Escrow arrangements may be set up today and run for a year or two – even longer, in some cases. The escrow agent needs to guarantee optimal client service throughout the transaction lifecycle.

As a first step, the escrow agent is mandated and sends the escrow template agreement to the two parties. Then, the Know Your Customer (KYC) documentation is sent to the escrow agent for onboarding. When the KYC is complete, the escrow account is opened and the agreement is finalised and signed by all parties (see Figure 1).

Digitalising escrow

Significant investments are being made to digitalise the set-up and management of escrow accounts. "We hear from many of our clients how they seek an efficient bank partner that has invested in technology," says Annie Koutsavgousti, Director of Escrow Sales, Deutsche Bank, Americas. "We understand these requirements and have created a digital portal to assist clients' needs in all aspects of the escrow process."

For instance, Deutsche Bank's Escrow Direct portal provides buyers, selling shareholders and attorneys with a digitised, centralised and simplified process that allows for the management of shareholder information, creation of Letters of Transmittal (LOT) and fast-tracked payments to shareholders. This digital channel replaces the paper-based process for LOT collection; this, in turn, mitigates execution risk and enables faster, frictionless payments to shareholders (also known as beneficiaries). The process is as follows:

- Upload beneficiary details. Users upload a centralised register of beneficiary information to view and confirm data. Deutsche Bank then validates the content of completed LOT against this register for accurate payment transmission.
- Electronic documentation execution. Using the law firm's LOT template, clients can easily create LOTs and incorporate customised terms and conditions. Escrow Direct then embeds beneficiary information and tax documents for frictionless email transmission to beneficiaries, who can securely populate, review and submit tax information and execute the documentation electronically.
- Track LOTs online. Clients can track the status of LOTs sent and signed to beneficiaries in real time on a dashboard with individual details and aggregated status charts and graphs.
- View payment transmission status. The Escrow Direct payment dashboard tracks the status of payments with payment initiation, distribution amount, payment reference details and confirmation details.

"Our expertise and experience in multiple asset classes allow us to support a variety of escrow scenarios," says Deutsche Bank's Kisha Holder, Director, Head of Escrow and Specialised Agency, Americas.

Figure 2: Examples of escrows facilitated by Deutsche Bank's TAS team

Capital raising via HY market
€745m escrow
Automotive
2021

M&A
US$584m escrow
Entertainment
2021

M&A
US$3bn escrow
Technology
2021

Cash confirmation
US$900m escrow
Infrastructure
2022

M&A
€84m escrow
Digital investment platform
2022

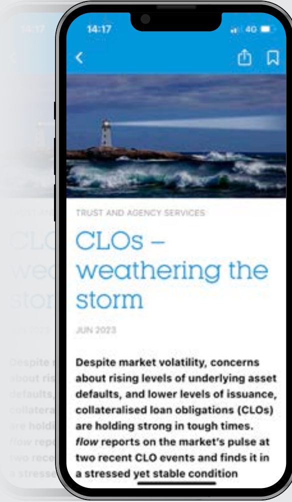
Hold back
US$1bn escrow
Oil and gas
2023

Source: Deutsche Bank

> An escrow agent is a neutral, independent third-party provider. It has no discretion as to what is done with the assets being held and takes instruction from the escrow parties
>
> David Contino, Head of Escrow – EMEA, Trust and Agency Services, Deutsche Bank

Editor's selection

What else is going on trust and agency services? We have shared one key feature on collateralised loan obligations and an example of our dedicated Corporate Trust news channel

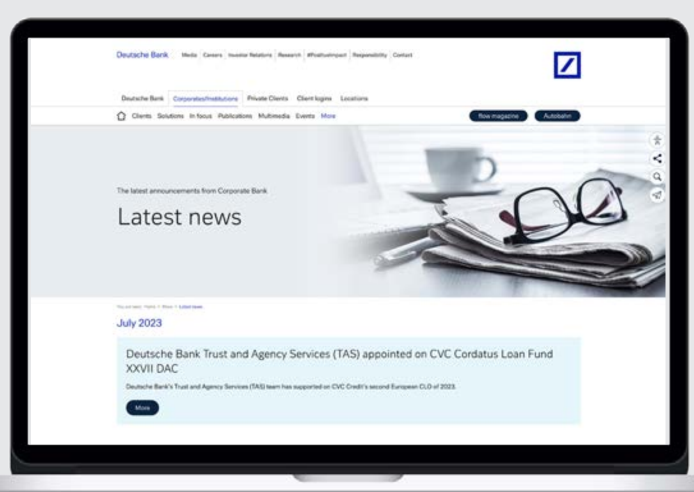


CLOs – weathering the storm

Despite market volatility, concerns about rising levels of underlying asset defaults and lower levels of issuance, collateralised loan obligations (CLOs) are holding strong in tough times. *flow* reports on the market's pulse at two 2023 CLO events and with additional insights from Deutsche Bank Research, finds it in a stressed yet stable condition. In brief:

- Market volatility has driven lower collateralised loan obligation asset issuances in both EUR and US$ over the past year
- However, as private equity houses seek to deploy their dry powder, volumes should increase towards the end of 2023 as the market stablises
- Despite all of this, CLO performance has held up and been commendably stable

https://flow.db.com/trust-and-agency-services/



Latest news

Visit the TAS news channel for latest news of TAS transactions

Deutsche Bank Trust and Agency Services (TAS) appointed on CVC Cordatus Loan Fund XXVII DAC

Deutsche Bank Trust and Agency Services facilitates £500m UK Auto ABS issuance

Deutsche Bank Trust and Agency Services (TAS) appointed on Canyon's debut European collateralised loan obligation

Arevon Energy chooses Deutsche Bank Trust and Agency Services for its largest solar and storage project

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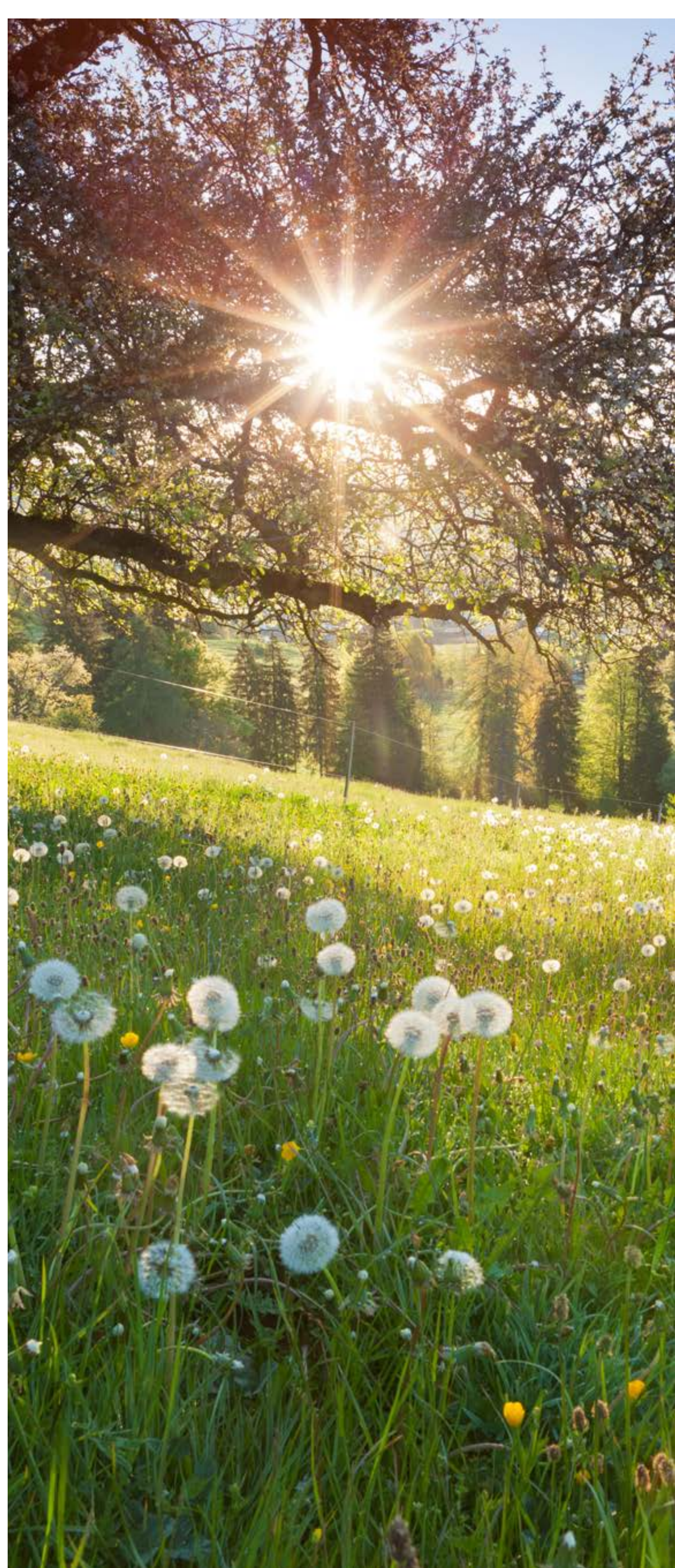


Decarbonising tomorrow

With energy transition and net zero pathway objectives now embedded into many corporate strategy and operational plans, the role of the bank is evolving into one of partnership and support as companies seek to decarbonise. Deutsche Bank's Lavinia Bauerochse shares her perspective on the journey

The global energy sector is racing to shift from fossil-based systems of energy production and consumption — including oil, natural gas and coal — to renewable energy sources such as wind and solar, as well as lithium-ion batteries. However, as more investors and companies factor long-term physical climate and transition risks into their strategic planning and statutory reporting, a raft of challenges are emerging in the face of accelerated global energy demand and geopolitical volatility.

With supply chain disruptions (particularly those involving essential minerals and metals needed for clean energy production), financial investment requirements and changing global regulations to contend with, implementing the energy transition has been described as "perhaps the greatest challenge humankind has ever faced" by Fatih Birol, Executive Director at the International Energy Agency (IEA). It was this transition to net zero that was the main focus of 2022's lead *flow* article, *How to manage the transition to net zero*. A year on, this article provides further insights into how net zero commitments and regulatory momentum shape the operations of companies and the financial community that supports them.

Photography: iStock

US$370bn

Amount committed to renewable energy infrastructure investment under the US Inflation Reduction Act

Source: The White House

Narrow but achievable?

In 2021, to support the fundamental changes that are needed to avoid the most severe impacts of climate change, the IEA set out the world's first comprehensive study of how to transition to a net zero energy system by 2050. The path to net zero requires accelerating the shift to non-emitting sources of energy (such as wind and solar), increasing energy efficiency and electrifying transport, industry and buildings, while expanding the use of clean hydrogen and other low-emission fuels – all at significant scale and speed. Two years later, the IEA stands by this study as "a narrow but achievable pathway to net zero emissions – a trajectory consistent with limiting global temperature rise to 1.5˚C", in accordance with the 2015 Paris Agreement.

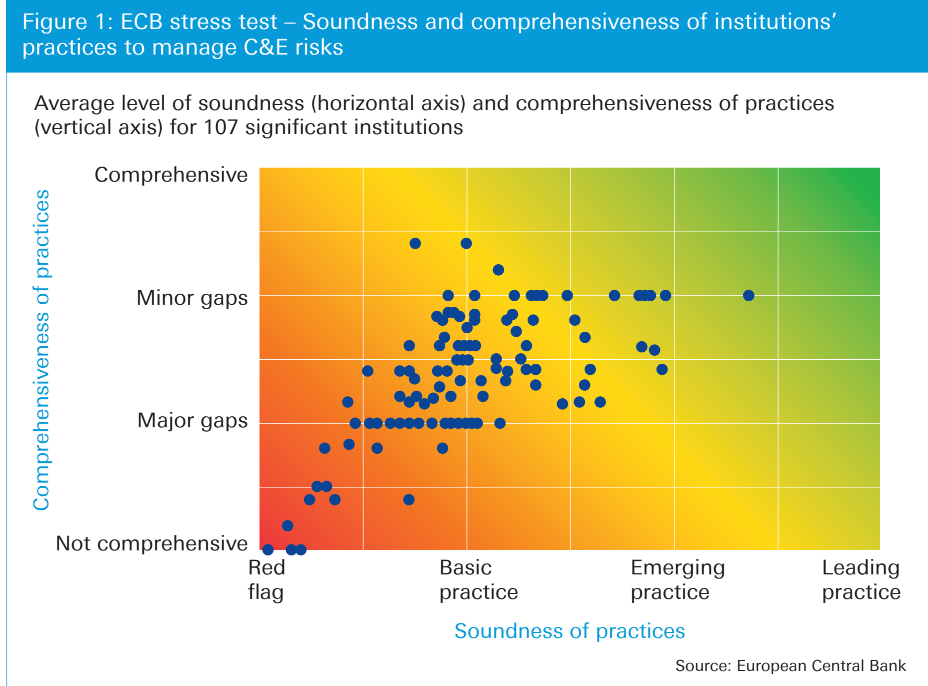
But how can this systemic change be achieved by 2050? According to a 2023 report by the Intergovernmental Panel on Climate Change (IPCC), finance, technology and international cooperation are critical enablers for this accelerated climate action. The ground-breaking paper indicates (with a rating of 'high confidence') that if climate goals are to be achieved, both adaptation and mitigation financing will need to increase substantially, because while there is adequate global cash to bridge the global investment gaps, there are hurdles to diverting wealth for climate action.

Regulation driving banking response

Increasingly, regulatory frameworks and stimulus packages are shaping the industry response to the climate transition. In 2022, the US unveiled the Inflation Reduction Act (IRA) – the first major climate legislation by the country's federal government since the Clean Air Act was amended in 1990. It allocates around US$370bn (or 1.4% of 2022 US GDP) to carbon-free energy,

Regulatory frameworks and stimulus packages are shaping the industry response to the climate transition

Figure 1: ECB stress test – Soundness and comprehensiveness of institutions' practices to manage C&E risks



Source: European Central Bank

transportation, clean tech and financing for new industrial plants over the next 10 years. In Asia-Pacific, India's National Action Plan on Climate Change (NAPCC) outlines eight "national missions" on climate change, renewable energy and environmental issues, and allocates two-thirds of its most recent stimulus package to a "green recovery".

But to date, Europe has played the most significant role in driving the environmental, social and governance (ESG) agenda, pioneering wide-reaching regulatory initiatives. In 2020, the European Central Bank (ECB) published a guide on climate-related and environmental (C&E) risks, explaining how banks are expected to manage and transparently disclose such risks.

More recently, in November 2022, the ECB released the results of a thematic assessment of the extent to which 186 banks – with total combined assets of €25trn – were aligned with these expectations. The ECB's findings shine a light on the current state of the financial services industry. While there is broad acknowledgement within the banking sector of the materiality of physical and transition C&E risks, the majority of institutions in scope need to further build soundness and comprehensiveness of their practices in managing climate risks. In fact, blind spots in the identification of C&E risks in key sectors, geographies and risk drivers were identified in 96% of institutions and, of these, 60% were considered to show major gaps (as demonstrated in Figure 1).

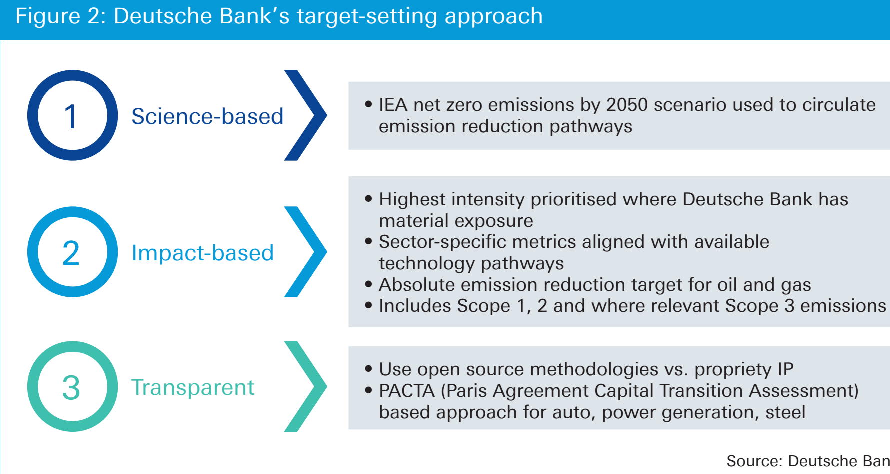
The ECB's climate stress test underlines that the current state of the financial services industry is still a long way from what the regulator expects. There need to be far-reaching and enduring efforts to develop consequential, granular and forward-looking approaches to managing C&E risks. It also demonstrates that the regulators will continue to push financial institutions towards energy transition, and that those not up to speed will need to do their homework to keep up – emphasising the message that energy transition is not just a voluntary contribution, but something enforceable by regulation.

Going forward, banks will be expected to engage more intensively on environmental and climate-related risks with their corporate clients. This could involve the banks requesting sustainability data from corporates, for example, through specific questionnaires to identify risks that are insufficiently captured by traditional credit risk analysis. In future, there also could be capital implications that would see risk premiums and pricing affected by environmental and climate-related risk factors. There is also likely to be heightened engagement on decarbonisation where bank appetite for corporates unaligned with decarbonisation targets is limited, depending on prevailing regulatory guidelines.

Exposure to financed emissions

For Deutsche Bank, a deep dive into its corporate loan portfolio found that the total exposure of financed emissions totalled 30.8 million tonnes of CO_2 equivalent (Scope 1 and 2). It also highlighted that the three most carbon-intensive sectors – oil and gas, utilities, steel, metals and mining – account for 68% of total exposure compared to their 16% share of corporate lending. As the sectoral exposures are managed under the industry risk framework, which includes assessment of an industry's vulnerability to climate and wider ESG risks, the automotive sector was

Figure 2: Deutsche Bank's target-setting approach



Source: Deutsche Bank

Figure 3: Sector-specific metrics for Deutsche Bank's net zero journey

	Loan exposure €bn FY 2021	Scope	Metric	2030 reduction target	2050 reduction target
Oil & Gas (upstream)	5.2	Scope 3	Absolute financed emission ($MtCO_2$)	-23%	-90%
Power generation	3.1	Scope 1	Physical emission intensity ($KgCO_2e/MWh$)	-69%	-100%
Automotive (light duty vehicles)	3.0	Scope 3	Tailpipe (tank-to-wheel) emission intensity (gCO_2/vehicle km)	-59%	-100%
Steel	1.3	Scope 1 & 2	Physical emission intensity ($KgCO_2e$/t steel)	-33%	-90%

Source: Deutsche Bank

also highlighted due to its high Scope 3 emissions in downstream activities.

With the most carbon-intensive areas identified, the next step is developing a methodical, credible and robust approach to net zero alignment, which supports a progressive and orderly phase-out of fossil fuel usage while incentivising the financing of lower carbon-intensive technologies and clients with credible transition plans. Deutsche Bank's target-setting approach is aligned with key principles outlined by United Nations Environmental Programme Finance Initiative (UNEP FI) and Glasgow Financial Alliance for Net Zero (GFANZ), and is shaped by a set of science-based, impact-based and transparent principles (see Figure 2).

Galvanised by the ECB's call to "walk the talk", Deutsche Bank set the following respective 2030 and 2050 group-wide reduction targets for the bank's four most carbon-intensive sectors, in line with the IEA's net zero emission scenario, which limits global warming to no more than 1.5°C above pre-industrial levels by 2100 (as shown in Figure 3):

- Oil and gas (upstream): 23% reduction in Scope 3 upstream financed emissions by 2030, and 90% reduction by 2050, in millions of tonnes of CO_2.
- Power generation: 69% reduction in Scope 1 physical emission intensity by 2030 and 100% reduction by 2050, in kilogrammes of CO_2 equivalent per megawatt hour.
- Automotive (light duty vehicles): 59% reduction in tailpipe emission intensity by 2030 and 100% reduction by 2050, in grammes of CO_2 per vehicle kilometre.
- Steel: 33% reduction in Scope 1 and 2 physical emission intensity by 2030 and 90% reduction by 2050, in kilogrammes of CO_2 equivalent per tonne.

To pursue these targets, Deutsche Bank is deploying three principal levers:

1) Providing transition financing to clients to facilitate their transition;
2) Rebalancing its loan portfolio towards clients with greater focus on developing decarbonisation plans; and
3) Reducing exposure to clients with limited capacity or willingness to decarbonise.

> Decarbonisation has become another catalyst for moving process digitisation forward

Deutsche Bank CEO Christian Sewing said in the bank's Sustainability Deep Dive, held in March 2023: "We have published our net zero pathways for the most carbon-intensive sectors. From 2026 onwards, at least 90% of the high-emitting clients in these sectors that engage in new corporate lending transactions with us shall have a net zero commitment in place." He added, "We at Deutsche Bank are convinced that parting with a client should only be a last resort, but we would not be shy of taking this step if we cannot see the willingness of our client to start a credible transition. In principle: we can only support our clients and have the necessary impact if they are still with us."

Decarbonising supply chains

During the Covid-19 pandemic, we saw how companies – and indeed financial institutions – enhanced their digital technologies and workflows to digitise processes that had, in the past, been manual. The pandemic highlighted concentration risks and alarming fracture points. As corporates sought to inject more resilience into their supply chains, some started to identify opportunities for decarbonisation, along with reductions not only in Scope 1 and 2 emissions, but also Scope 3 emissions (those that business is indirectly responsible for, as a result of its supply chains).

We're now seeing that decarbonisation has become another catalyst for moving process digitisation forward. Three years ago, at the start of the pandemic, KPMG published a report, *Digitisation and Decarbonisation in the new reality* (2020), which made the somewhat prophetic point: "We believe that the acceleration of digitisation and integration of digital trust practices in a post-Covid-19 world will provide the tools and solutions necessary for decarbonisation to gain a robust foothold in corporate operations."

In a climate where a pandemic has been followed by geopolitical shocks such as the Russia/Ukraine conflict and tensions between the US and China, the resilience of supply chains has shifted into focus more than ever before. This has presented a perfect opportunity to think about how to integrate ESG criteria into the decision matrix, using digital tools to assess the carbon impact of operations and shipping, as well as the traceability and transparency of products and inputs.

The race has begun for countries to establish a secure, independent supply of renewable energy commodoties in a sustainable manner

As the global economy begins its clean energy transition, rare earth metals will become increasingly important. They are essential raw inputs used to manufacture wind turbines, photovoltaic solar panels and batteries. Around 95% of electric vehicles still use rare earth permanent magnet motors. In 2020, the World Bank found that the production of critical minerals, including rare earths, could increase by nearly 500% by 2050 if demand for clean energy technology continues to accelerate. However, primary supply and production is often geographically concentrated.

"Green and digital technologies currently depend on a number of scarce materials. We import lithium for electric cars, platinum to produce clean hydrogen and silicon metal for solar panels. 98% of the rare earth elements we need come from a single supplier: China. This is not sustainable. So, we must diversify our supply chains," said Ursula von der Leyen, European Commission President, in 2021.

The race has begun for countries to establish a secure, independent supply of renewable energy commodities in a sustainable manner. This is hardly a straightforward task, given that processing can consume huge amounts of acid and water, with radioactive by-products of rare earths processing being another key concern.

Partnership functions

In summary, financial partnership in the clean energy transition era means not only allocating balance sheet to renewable energy projects that will add precious kilowatts to national grids, but also providing financial support to finance the transition and decarbonise the real economy and supply chains.

Lavinia Bauerochse is Global Head of ESG at Deutsche Bank Corporate Bank

Photography: iStock

Getting ISO 20022 over the line

The ISO 20022 'migration weekend' of 18–19 March came and went with minimal disruption for clients. Behind the scenes, however, a major internal project was in progress. *flow* reports on how Deutsche Bank tackled the Herculean task, and the lessons learnt along the way

Over the past five years, banks, corporates and other major financial stakeholders have been hard at work preparing for the migration to ISO 20022 – the new global messaging standard for high-value and cross-border payments. The project, which provides the foundation for enhanced customer experience, streamlined compliance procedures and a host of innovative services, has been billed as the most impactful payments industry undertaking since the introduction of the Single Euro Payments Area (SEPA) more than a decade ago.

The enormity of this change cannot be overstated; the entire payments industry, including 11,000 banks worldwide, is being rewired so that valuable payment data can be captured in the new fields within the ISO 20022 standard and serve multinational corporate clients and payment services providers – and their customers – with improved speed, information, security and financial crime prevention.

Following various delays along the way, the ISO 20022 era has now successfully begun.

The journey begins

Over the 'migration weekend' of 18–19 March 2023, the global banking community started the process of moving to the new standard. This date marked a significant milestone not only for the correspondent banking space, but also for communities in Australia (RITS), Canada (LYNX), Europe (EURO 1 and T2) and New Zealand (ESAS), whose Payment Market Infrastructures also migrated to the new standard for high-value payments.

As part of this transition, the European Central Bank's Target 2 market infrastructure took a step forward in its consolidation journey (RTGS, TIPS and Securities) and introduced central liquidity management, resulting in a completely new account structure being needed for Deutsche Bank AG Frankfurt and all EUR-currency branches.

11,000:
Approximate number of banks on the Swift network migrating to ISO 20022

Migration activities continued on 19 June 2023, when the Bank of England (BoE) began its transition process. From this date, all direct participants of CHAPS – the BoE's high-value payment system – needed the ability to receive enhanced ISO 20022 payment messages using only the enhanced XML message schemas. The BoE is also working on a new RTGS core settlement engine, which is set to go live in summer 2024.

Further migrations, such as those in the US, lie ahead, as well as the end of the coexistence period in the cross-border space in November 2025, but now is an opportune moment to reflect on what has gone well so far, and to identify lessons for the future.

A Herculean task

"The introduction of ISO 20022 has been a massive change for Deutsche Bank, not least because we took this opportunity to architecturally transform internal payment processing front-to-back, to add business value and set up the bank for the future,"

Photography: iStock

says Antonios Tzouvaras, the bank's ISO 20022 Business Tribe Lead.

"As with any project of such magnitude, the post-migration days have been no walk in the park, with teams continuing to work around the clock to limit the risk for negative cash management and client implications," adds Christopher Gardner, ISO 20022 Technical Tribe Lead, Deutsche Bank.

The project involved hundreds of colleagues across numerous locations and functions, including technology, business, operations, treasury, AFC, country managers and more. For the migration weekend, Deutsche Bank established its #OneTeam onsite command centre with operations, technology, data and innovation (TDI), product and treasury in Eschborn, Germany, working borderless with strong collaboration front-to-back across all functions and a proactive flow of information between local cash operations and the central hub.

In summary, Deutsche Bank accomplished the following:

- Introduced changes to more than 100 impacted applications within the bank
- Performed high-volume testing with more than 20 industry partners before the migration start
- Implemented the new standard ahead of the official start date as part of the 'early adoption phase'
- Trained more than 3,000 colleagues and implemented external communication channels, including a series of guides, dedicated website, video tutorials, webinars, blogs, etc.
- Migrated 36 Deutsche Bank countries to the new Swift ISO 20022 messaging standard.

Post-migration learning points

"Looking back to 2019, when the project was first conceived, to where we are now, having processed millions of client transactions in the new standard, it is fair to say that the industry migration to ISO 20022 has been a success," says Gardner. "That is, however, not to say that it was without a few teething issues in the early days."

He explains that although the switch-over was smoother than anyone in the industry might have expected, the remaining issues have become lessons for the future:

1) Unexpected data received: Incorrect formatting of incoming payment instructions hindered straight-through processing of transactions, although quick diagnosis of the problem and recapturing of such payments has proved helpful.

> The industry migration to ISO 20022 has been a success
>
> Christopher Gardner, ISO 20022 Technical Tribe Lead, Deutsche Bank

2) Interoperability concerns: Given that ISO 20022 will be used alongside the legacy messaging standard until November 2025, the bank can handle both standards. However, the procedures for these two standards are not interchangeable, leading to various issues in payments processing. Industry alignment and collaboration on this topic has been important for the creation of workarounds.

3) Internal processing issues: Complexity of infrastructure has created several challenges in payments processing, but the end-to-end view of a transaction across the systems has proved invaluable in this exercise.

Looking forward, further migrations need to be addressed, such as the migration of The Clearing House's (TCH) high-value payment system CHIPs in April 2024. Further focus is also needed on the implementation of the additional message types and processes to complete the transition, which will be tackled on the SWIFT network later this year or in 2024.

"After the huge initial implementation effort, now is the time for institutions and market participants to continue to pick up the pace by adopting enhanced data requirements and implementing new capabilities," Tzouvaras concludes. "Only then can the full promise of ISO 20022 be unlocked."

Deutsche Bank's #OneTeam Target 2 celebrate the successful ISO 20022 migration in Bonn: (left to right) Sabine Kunz, Antonios Tzouvaras, Wolfgang Happe, Jutta Rosar, Swapnil Wipat, Aranka Kruse, Thibault Stouten

Photography: Deutsche Bank

Creative enterprise

Now in its 30th year, the Deutsche Bank Awards for Creative Entrepreneurs programme crowned five new winners in July 2023. *flow* takes a closer look at this remarkable enterprise programme

On 6 July 2023, at a special ceremony at The Royal Society of Arts, five outstanding entrepreneurs stepped up to receive a coveted Deutsche Bank Award for Creative Entrepreneurs (DBACE). The event was hosted by arts, culture and entertainment correspondent Brenda Emmanus OBE, with a keynote speech from Farooq Chaudhry OBE, co-founder of the Akram Khan Dance Company.

Celebrating its 30th anniversary during Deutsche Bank UK's own 150th anniversary, DBACE sits within Deutsche Bank's global Corporate Social Responsibility enterprise programme, *Made for Good*, which aims to support entrepreneurial ventures driven to create wider social good. The bank has a long-standing commitment to encouraging creative talents, including through DBACE, which is now in partnership with not-for-profit incubator MeWe360.

Commenting on the awards, Amy Harris, Head of Corporate Social Responsibility UK at Deutsche Bank, said that this year marks "a significant milestone for the programme" and that supporting entrepreneurial ventures committed to creating social good is a natural extension of what the bank does for businesses of all sizes, all over the world. DBACE is not only one of the UK's longest-running creative enterprise programmes, but its highly creative winners have gone on to make a real difference to society.

Our 2023 winners

Awarded a collective prize fund of £60,000, our 2023 winners were also pledged £100,000 of tailored business support and leadership development from MeWe360's roster of top industry mentors, consultants and creatives.

As part of DBACE, an extra five bursary memberships with MeWe360 are provided to suitable shortlisted entrants who do not make the final five. The 12-month membership provides tailored business support, to develop the entrepreneur and help them achieve their venture's next milestones.

This year's winners, selected for their exceptional commitment to driving positive societal change through creative enterprise, are:

- Artistry Youth Dance – a London-based dance company that supports young people of African and Caribbean heritage, dedicated to empowering and developing the next generation of black dance artists and cultivating a more culturally diverse UK dance community. Awarded £12,000.
- LEVILE – a casting and media agency that specialises in providing opportunities for diverse and underrepresented creative talent in the TV and film industries, both in front of and behind the camera. Awarded £15,000.

- Rehema Cultural Arts – an arts organisation that partners with cultural institutions to decolonise their collections relating to African history, ensuring African stories are told from an African perspective and widening access to black communities. Awarded £10,000.
- The Bitten Peach – the UK's first queer pan-Asian cabaret casting agency and production company, on a mission to diversify Asian representation on stage. Cabaret art forms include drag, burlesque, dance, circus, comedy, music and spoken word. Awarded £13,000.
- United in Design – founded in 2020, this charity tackles the lack of equality and diversity in the interior design industry, focusing on those from ethnic minorities and lower socio-economic backgrounds. Awarded £10,000.

About DBACE

When it was first established in 1993, DBACE celebrated final year undergraduate or postgraduate university students, providing financial and business support to help launch creative careers.

Over the years, the awards have evolved in response to the changing landscape of the UK's creative sector, which has seen not just extraordinary economic growth, but also a deepening association with meeting society's most pressing needs. To meet the shifting needs of entrepreneurs, the programme continues to reflect the dynamic business environments entrepreneurs work in and their passion for delivering a positive societal impact.

DBACE has celebrated more than 400 entrepreneurs to date, who have all received start-up capital, guidance from the bank and business mentoring from its partners. Thousands more applicants have gained knowledge and skills that can assist them in business and in life.

Making a difference

Chamiah Dewey with her 2022 DBACE award

One of the 2022 winners whose company was catapulted into growth after receiving the award was Chamiah Dewey Fashion, the UK's first clothing brand for people under 4'11". With a BA in Fashion Design and Development, Chamiah Dewey was on a mission: to disrupt the fashion industry, encouraging positive representations of short stature people in mainstream media, changing societal perceptions and, in her words, "showing the fashion industry that small people are just as beautiful and deserving of stylish clothing and a place in the industry".

Conditions such as dwarfism, spina bifida, rheumatoid arthritis and brittle bone disease have often meant that children's clothes were the only options available to shorter individuals. Dewey's company, launched in 2021, set about changing this. She won £15,000 as part of her DBACE success.

How to apply

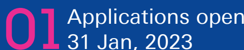
To be eligible for DBACE, applicants must:

- Demonstrate that a key driver for the business is to create positive social impact – this can be a not-for-profit entity, a commercial idea or an enterprise
- Own a material share in the business and be responsible for the direction and leadership of the organisation. This would normally include holding the title of CEO, Founder or Co-Founder. If applying as a group, then at least one applicant must hold one of those three roles
- Demonstrate that the enterprise is within the creative industries, or will create a clear service in support of the sector
- Be applying with an enterprise they wish to grow, rather than seeking support for a one-off project
- Commit a minimum of 20 hours a week to the business in the 12 months after receiving the award, and to engaging with the Incubator programme, including the wider group sessions, events and training
- Legally reside in the UK within each programme year. If applying as a group, all the applicants must legally reside in the UK during this time.

Once eligibility is confirmed, applicants then undergo the process set out below.

If you know of an enterprise that could be put forward for DBACE 2024, keep an eye on the website at https://dbace.org/ for details of how to apply. Applications open in mid-January and close at the end of March each year.

DBACE application timeline 2023



01 Applications open 31 Jan, 2023
Submit a short online application form and 1-minute video pitch

02 Support sessions Jan–Mar 2023
Online sessions designed to help applicants strengthen their business idea and application

03 Application deadline 31 Mar, 2023
Online application closes at midnight

04 Longlist announced 24 May, 2023
First round longlist announced

05 Pitching workshop 30 May–6 Jun, 2023
Pitching masterclass and pitch practice, plus feedback session for longlisted applicants

06 Finalists announced 12–16 Jun, 2023
Virtual pitches to judging panel followed by finalist announcement

07 Final pitch 20 Jun, 2023
2023 final live pitch presentations at Deutsche Bank UKI head office

08 DBACE Final 6 Jul, 2023
Awards event celebrating winners and finalists

Supporting affordable home ownership

Home ownership in the United States has a long history of being inaccessible and unequitable for low- and moderate-income communities. *flow* reports on how Deutsche Bank's Community Development Finance Group is supporting Blackstar Stability's efforts to address the challenges

Owning a home may be a hallmark of the American Dream, but this dream has not been realised equally by all. While 74.6% of white families own homes, the rate for Black Americans is just 45.2%. One reason for this is discriminatory lending practices that were prevalent in the country for decades. The structural barriers these practices created have been a significant contributor to the racial wealth gap in the US.

One of the financial instruments preventing equitable home ownership is known as a Contract for Deed (CFD). An alternative to traditional mortgages, CFDs are private real estate contracts between a buyer and a seller, in which the buyer sends payment directly to the seller, who holds title to the property until the last payment is made. These are primarily used by communities that cannot get access to traditional mortgages – particularly Black and low- and moderate-income (LMI) homeowners – and have proven to be extremely exploitative.

Efforts to address these challenges are under way. Blackstar Stability Distressed Debt Fund LLC (Blackstar Stability) — a social impact private equity fund based in Washington, D.C. – is helping by replacing existing CFDs with financial instruments that provide fairer credit terms and help preserve affordable home ownership.

What are CFDs?

CFD transactions are significantly less regulated than traditional bank-financed mortgages, and almost always include predatory interest rates and valuations that are higher than the actual value of the home. Moreover, unlike traditional mortgages, CFDs are regulated by a patchwork of laws and protections that vary significantly from state to state. This often means that the CFD is unduly risky for the buyer, who builds no equity and has a higher risk of being forced out of their residence.

"The yields or rates on CFDs tend to be extremely predatory in nature," says George Scott, Principal – Capital Markets/Investor Relations at Blackstar Stability. "LMI households are often preyed on by those who see this as an opportunity to capitalise on those they perceive to have very limited options to secure home ownership."

Forfeiture clauses are a common element of these contracts, allowing the CFD financer to swiftly take the property after a breach of contract. For example, missing a single payment can be a breach that results in the contract being cancelled and the resident being evicted almost immediately. The buyer is also responsible for all property maintenance, taxes and insurance, but they cannot sell or borrow against the property, nor can they deduct interest from taxes as with traditional mortgages. Individuals and families signing CFDs are frequently unaware that they do not own their homes, and typically enter these contracts because they have a low credit score, insufficient cash for a down payment, and/or insufficient income to qualify for a traditional mortgage.

Figure 1: Traditional mortgages vs Contract for Deeds

Traditional mortgage	Contract for Deed
Traditional mortgages are highly regulated on the federal and state level	CFDs are far less regulated
Buyer must pass a credit check	Buyer does not have to pass a credit check
Buyer owns the property	Buyer does not own the property
Buyer can borrow or sell against the property	Buyer cannot borrow or sell against the property
Mortgage lender cannot easily take back the property after a breach of contract	In the case of default, the buyer can be evicted and any equity obtained is forfeited
Buyer can deduct interest from taxes	Buyer cannot deduct interest from taxes

A way forward for those subject to predatory CFDs

The popularity of CFDs – a market totalling more than US$200bn – has seen a resurgence in recent years, prompting increased political scrutiny. In response, the enhancement and enforcement of consumer protections have begun, with some federal and state regulators seeking to legislate against particularly egregious CFD abuse by improving consumer protections. Members of the Blackstar Stability management team are working with legislators at both the state and

federal level to advocate these changes, but this will take time. In the meantime, Blackstar Stability is also providing Black and LMI communities impacted by CFDs with a much-needed lifeline.

In August 2022, Deutsche Bank's Community Development Finance Group closed an equity investment of up to US$5m in Blackstar Stability. The Fund is providing families with predatory CFD financing with a pathway to access traditional forms of credit – giving them greater security and control over the ownership of their homes, along with real opportunities for wealth creation.

"Owning a home is the primary way that Americans create wealth and build opportunity in the United States," says Cheryl Gladstone, Head of the Community Development Finance Group at Deutsche Bank. "Through this investment in Blackstar Stability, Deutsche Bank is supporting the opportunity for wealth creation for communities who have otherwise been marginalised from home ownership."

Deutsche Bank's equity investment goes towards the Fund, which has raised US$100m and is projected to help more than 10,000 LMI families, while providing risk-adjusted returns to investors. This, coupled with the desire of some CFD issuers to liquidate their holdings in a buyers' market, has presented a new opportunity to create tangible solutions for Black and LMI families.

"We're helping to create a more equitable home ownership market in the US by providing the most vulnerable communities with a fair shot at owning a home. And we mean true home ownership, not the smoke and mirrors or the illusion you get with CFDs. Investors such as Deutsche Bank are patient and understand what this means in practice – both from an institutional investment perspective and a social impact perspective," adds Scott.

The principals of Blackstar Stability have extensive experience crafting and leading housing policy reform, as well as innovative investment strategies that support Black and LMI home ownership. Following the success of its leaders' previous platforms at the State of Oregon and Further Opportunity LLC, the Fund was created to help Black and LMI communities subjected to predatory lending practices.

By converting CFDs into traditional mortgages, Blackstar Stability will create affordable home ownership and wealth creation opportunities in Black and LMI communities. The bank's equity investment will help bring Blackstar Stability closer to achieving this goal.

We're helping to create a more equitable homeownership market in the US

George Scott, Principal – Capital Markets/ Investor Relations, Blackstar Stability

Photography: Towfiqu barbhuiya

The digital economy demands a state-of-the-art payments infrastructure

David Watson, President and CEO of The Clearing House, on how payments systems are meeting demands from businesses and consumers alike for increased speed and efficiency

The world's payments infrastructure moves trillions of dollars through the global economy every day, and for decades, security, efficiency and resiliency have stood as the most essential criteria. In recent years those core criteria have expanded to include the requirement for payments systems to not just be safe and reliable, but also to deliver an array of new capabilities, including speed, enriched data, and new levels of flexibility and scalability. Coupled with competition from new market entrants, the demand for these new capabilities is driving dramatic upgrades and a step change in global payments infrastructure. Now well underway, this process is resulting in improved offerings for financial institutions and their customers.

The digital economy

As with practically every segment of the economy, the digital revolution has been the impetus behind the major upgrades to payments infrastructure now underway, with customers expecting immediate and easy access to goods and services. Just as with online shopping, streaming entertainment platforms and media consumption, among many other areas, consumers and businesses alike increasingly have the same requirements for the movement of money: simple, fast and efficient.

In the consumer realm, for instance, many digitally native workers – the fastest-growing segment of the workforce – can't fathom the idea of a traditional two-week pay cycle. As a result, instant payroll and earned wage access is exploding in popularity and businesses and payroll providers are rapidly adjusting to meet these expectations. Concurrently, businesses are seeing increased demands from their customers and employees for simple and fast payments capabilities for transacting business with partners, suppliers and clients.

Speed, data, flexibility and scalability

Payments infrastructures are responding to today's accelerated demands by delivering new levels of speed and data capabilities, as well as enhanced scalability and flexibility. There are now more than 70 real-time payments systems operating around the world, where traditional multi-day settlement has been replaced with immediate payment capabilities. In 2017, The Clearing House launched the real-time payments (RTP) network, the first new payments structure in the US in over 40 years, to deliver 24/7 real-time clearing and settlement of payments and immediate funds availability, while also providing for the transmittal of large amounts of data, enabling the sending of invoices and the instant confirmation of receipt so customers know that a payment was successful. Today, the RTP network has universal technical access to US financial institutions, with usage growing rapidly.

> Consumers and businesses alike increasingly have the same requirements for the movement of money: simple, fast and efficient

The adoption of the ISO 20022 message format standard is another area where payments infrastructure is being upgraded. Rolling out over the next 18 months with the major payment networks around the globe, this standard allows banks and, most importantly, their customers to benefit from enriched data content and structured message formats, and to support innovation around a common message suite.

Flexibility and scalability are being incorporated into payments infrastructure not only to handle today's demands, but also to scale and adjust for changing priorities in the future. For instance, the maturation of cloud technology is poised to provide payments systems with the opportunity to meet customer demands while also accommodating the market's continued growth in a more cost-effective way. Cloud technology has matured, and its benefit is more than just cost reduction. Cloud will also be a key accelerant for related technologies, such as the recent breakthroughs in generative AI and its impact on banking and payments.

Meeting demand

Delivering efficient payments capabilities has always been about providing customers with a highly reliable way to make payments and to increase customer satisfaction by improving the movement of money. The pace of change driven by customer expectations and the rapid development of new technologies has, however, created an environment in which payments infrastructure providers are now required to continually deliver the innovation, flexibility, scalability and operating efficiencies needed for the marketplace. When effectively delivered, these capabilities enable banks to meet customer expectations and control costs, while simultaneously being able to scale to meet tomorrow's growing demand.

Deutsche Bank

Find out more at db.com

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Deutsche Bank
Wealth Management

12 board meetings

Six grandchildren

Wealth to transfer

3,000 miles
between them

15 properties
to manage

A donation
for now

Two businesses
going public

A complex life
to enjoy

A nature reserve
for tomorrow

Memories
to cherish

A legacy
that endures

One daughter
stepping up

Every family has its story

For over 150 years, we've been helping entrepreneurial families and their businesses to flourish around the world, with solutions and strategies built around each client's unique circumstances. Wherever you are in your story, we can help shape the next chapter around what matters most to you.

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