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What next for trade?

Navigating choppy waters in an era of geopolitical instability

Interview: Euroclear
CEO **Valérie Urbain**

Wait and see? The impact
of **US trade tariffs**

The future of the
Arctic Circle

How **HUTCHMED** became
China's biopharma leader





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Milestone: 2025 marks the 10th anniversary of *flow*.

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Towards calmer waters?

Seismic change and ongoing economic and geopolitical volatility form the backdrop to this 10th anniversary edition of *flow*, our annual publication that highlights corporate and transaction banking trends and unique insights from Deutsche Bank Corporate Bank.

Looking back over the decade, change has always been part of business as usual, and the resilience and agility of our clients shine through. This edition continues to tell their remarkable stories, which range from vital infrastructure projects in West Africa to cancer-busting medicines in China and financing Brazilian trade flows.

Indeed, we hope there's something for everyone, whether that's regional spotlights on Germany, the US and Singapore; hearing from the front lines as corporate treasurers debate the impact of geopolitical headwinds; or getting under the skin – or rather, the ice caps – of the Arctic Circle and its links to the global economy.

Turning to the capital markets, it's not plain sailing there either. With around US\$128trn of global assets under management in a climate of digital disruption, and the requirement to balance investor demand with market infrastructure safety, we hope our profile of Euroclear CEO Valérie Urbain, together with our private credit 'explainer', will provide some useful navigational aids.

As always, we thank you for your active engagement with our *flow* channels (the print magazine, our online content and, more recently, our app) over the past decade. You can rely on our dedication to continue reporting on key trends as we move into our next 10 years.

We wish you an enjoyable read, and do keep sending us your emails with ideas and feedback – these are very gratefully received. Please contact us at corporate.bank@db.com.

The *flow* team



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10 Years
flow
print, online, multimedia

Throughout this issue we are celebrating 10 years of *flow*. At the start of each section, you will find links you can follow to read stories that exemplify how *flow* has had its finger on the pulse of the key trends and developments in corporate banking over the past decade.

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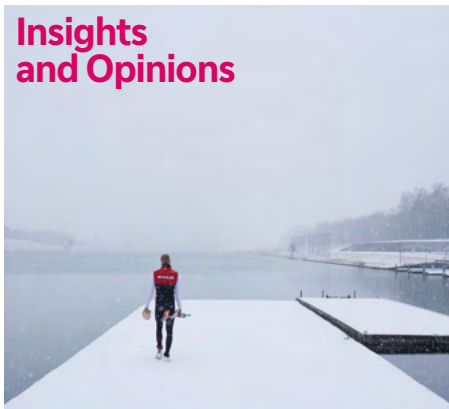
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HUTCHMED has grown organically, investing in innovation to become one of China's leading biopharmaceutical companies in just 25 years

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Images: iStock, Gary Neill, Olli Zeidler

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Raising the bar



Deutsche Bank's David Lynne gives his views on Europe's chance to step up to the plate in a new world order, the role financial institutions play in supporting this – and the convergence of financial and platform capabilities

One year ago, I observed in *flow*'s 'A different level of athlete' that the world was as complicated as it had been in 40 years. Now we see an intensification of this – the world of free trade is called into question as global power dynamics shift and multilateralism is subject to increasing strain.

While clients are taking something of a 'wait and see' approach – as nobody knows what is going to be on the table from one quarter to the next – concerns around tariffs and resource nationalism continue to redefine supply chains and trade corridors. This article re-examines

corporate and financier responses to this and the ensuing opportunity for Europe to strengthen its sovereignty as a bloc to promote growth and competitiveness. It also underlines that global banks are increasingly technology companies as they build platform partnership networks to support their regional economies.

Supply chain fluidity

Washington wants to attract manufacturing into the US and provide an environment where the country turbocharges its own economy. It has many positives, such

as energy security, deregulation and technology (Google, Apple, Facebook and Amazon are all American platforms). At the same time, supply chain logic continues to move from being just cost-driven to risk-, security- and cost-driven. Scale also plays a part. For example, the higher end of the pharma, tech and luxury car sectors do invest in the US – look at Roche, with US\$50bn of investment (22 April), and Novartis, with US\$23bn over the next five years. But for smaller companies – such as those within a supply chain of car components – the margins are just too small. The other determining factor is region.

Illustration: StudioM1 / iStock



Supply chain logic continues to move from being just cost-driven to risk-, security- and cost-driven

David Lynne, Deutsche Bank

A Greenwich Research study confirms that the back and forth on tariffs has had a significant effect on companies in the US and Asia, while producing a more muted impact on large companies in Europe.

Many German companies are still in strategising mode, waiting for the tariff situation to play out and thinking about whether to invest in the US. Only 10% of Germany's exports go to the US and for many small and medium-sized enterprises (SMEs), the US market is not particularly relevant. More widely, this is a world where

contingency is business as usual. As companies rethink their supply chains, the financial supply chain needs to be just as agile. Companies want to reduce their dependency on one bank or one regulatory regime; we are seeing companies that have traditionally had multiple US banking facilities now seeking to diversify their risk and better understand the opportunities in Europe.

Europe's opportunity

Europe needs to take a leaf out of the US's book by boosting its own manufacturing capabilities and defining its growth agenda. The bloc can no longer count on the US to continue its long-running security support, and decades of underinvestment have caught up with it. This is now being addressed.

Four years ago, my predecessor, Stefan Hoops, wrote in the 2021 edition of *flow*, "The completion of the European single market should be driven forward quickly with harmonisation of patent laws and data standards, and the establishment of a capital market and banking union, to name but a few structural milestones." It is good to see the EU is now grasping the nettle, stating in the January 2025 launch of its *Competitiveness Compass*: "Over

the last two decades, Europe has not kept pace with other major economies due to a persistent gap in productivity growth. The EU has what is needed to reverse this trend... provided it acts urgently to tackle longstanding barriers and structural weaknesses that hold it back."

Financial institutions such as Deutsche Bank are ideally placed to help corporate clients play their part in this growth journey. Our CEO Christian Sewing's vision of a European capital markets union could be within reach.

Leading Europe's infrastructure

In March, Germany passed legislation to exempt deterrent and security expenditure from its strict debt rules, creating a €500bn infrastructure fund. It was able to do this from a position of comparative debt to GDP ratio strength. Germany needs better-quality physical and digital infrastructure – roads and railways, and the ability to conduct business in a secure environment. This connects to the requirement for more housing and improved all-round digital technology – not only its data centres, but also its broadband. Germany also leads on bolstering defence capabilities.

All of this generates demand for structured and project finance, as well as supply chain finance and cash management support – and we are seeing an uptick in demand for this. In Europe, export credit agencies and development banks work with the private sector with different guarantees and structures to get as much bang for the euro buck as possible. In the past, Europe has relied on imports for components and equipment, but it is now looking to reduce this and increase home-grown capabilities. For example, some of our German Mittelstand clients in the mechanical engineering space are redeploying their output from internal combustion engine car components to defence equipment. This generates

demand for capex to build and change factories and for working capital to import, manufacture, store and sell what they have produced. Some have started increasing production already.

Technology enablers

With Europe stepping up as an engine of free trade, its banks need to be in pole position to support this. With only a handful of banks comprising a truly global network, scale and stability are key differentiators – not just for navigating trade corridors in shifting supply chains, but also in the core platform technology to process cross-border payments in real time, deliver instant payments, provide digital currency services and offer post-trade atomic settlement where required.

We continue to build our core technology capability. Fintechs have become clients and partners rather than competitors, and that is continuing. For example, we recently signed a platform agreement with Partior, a blockchain fintech that provides atomic settlement across a diverse range of tokenised instruments.

Thanks to the implementation of ISO 20022, where the industry and the regulator determined a rich messaging standard, there is more successful straight-through processing. But much at the input and output stage remains unstructured. This is where building the right data model – with artificial intelligence layered on – can create standardisation, personalise client interfaces and improve data analysis outcomes while delivering efficiency and interoperability.

We provide an operating platform for our clients to run their day-to-day business. In some countries, we are the only provider of cash management, working capital or custody services. That is a huge responsibility.

David Lynne is Head of the Corporate Bank at Deutsche Bank

Germany: the road to growth



With a GDP of €4.66trn, Germany remains the third-largest economy in the world behind the US and China – but the country is facing secular stagnation. *flow's* Desirée Buchholz explores the most pressing tasks for the new government and how corporates could benefit from the public investment package

For years, Germany has prided itself on being the *Exportweltmeister* (German for global export champion). Driven by small and medium-sized companies that are world market leaders in a particular niche – often in the automotive or mechanical engineering sectors – global demand for products 'Made in Germany' boomed. But in the light of geopolitical and technological changes, this export-led growth model is increasingly being challenged.

Since Donald Trump took office as US President for the second time in early 2025, it has become clear that Germany must focus more on itself and Europe. The paradigm of free and rule-based global trade is being openly abandoned by the US – Germany's most important trading partner in 2024 – and more subtly challenged by China, now the second most important. (For more information on how US tariffs are impacting global trade flows and what this means for European corporates, read the regional update on the US on pages 18–20.)

"The golden years of globalisation are over, and increasingly rough winds in global trade are exposing Germany's structural weaknesses," write David Folkerts-Landau, Group Chief Economist, and Robin Winkler, Chief German Economist, in their report for the Deutsche Bank Research Institute on *What Germany's economy needs now*, published on 13 March 2025. "Germany stands at a crossroads in its post-war history," they continue, concluding that "the next legislative term is decisive for Germany's future. It is perhaps the last chance to set the course for growth again."

Finally, the country needs to put more emphasis on "competitiveness and on the deepening of the EU single market

and less on the Green deal," said Sigmar Gabriel, Germany's former Federal Minister for Foreign Affairs and Vice-Chancellor, in a Deutsche Bank client webinar on 26 February – three days after the federal elections in Germany. "We have to come back to our leading role in Europe – and that was never a role Germany had on its own, but always in partnership with France and Poland." This is why he felt the new government needs to "build trust again with France and Poland" and ultimately "to hold the European Union together".

Fiscal spending to boost growth

Dramatic calls like these have not gone unnoticed by the new federal government. Even before Friedrich Merz was elected German Chancellor on 6 May 2025, the parliament voted for a massive investment package that could be worth at least €1trn over the next decade. It includes a €500bn fund to restore the country's infrastructure (most importantly roads, bridges and schools), out of which €100bn is dedicated to climate-related projects and an open-ended borrowing leeway for defence.

This vote was regarded as a historic move – not only among Germans but also by the international public, since the country is known for its very rigid fiscal policy. Following this reform of the country's debt brake, Deutsche Bank Research now expects real GDP growth to accelerate to 1.5% in 2026 and 2.0% in 2027 (see Figure 1).



Germany stands at a crossroads in its post-war history

David Folkerts-Landau and Robin Winkler, Deutsche Bank Research

Figure 1: Key growth and fiscal forecasts, 2025–2029

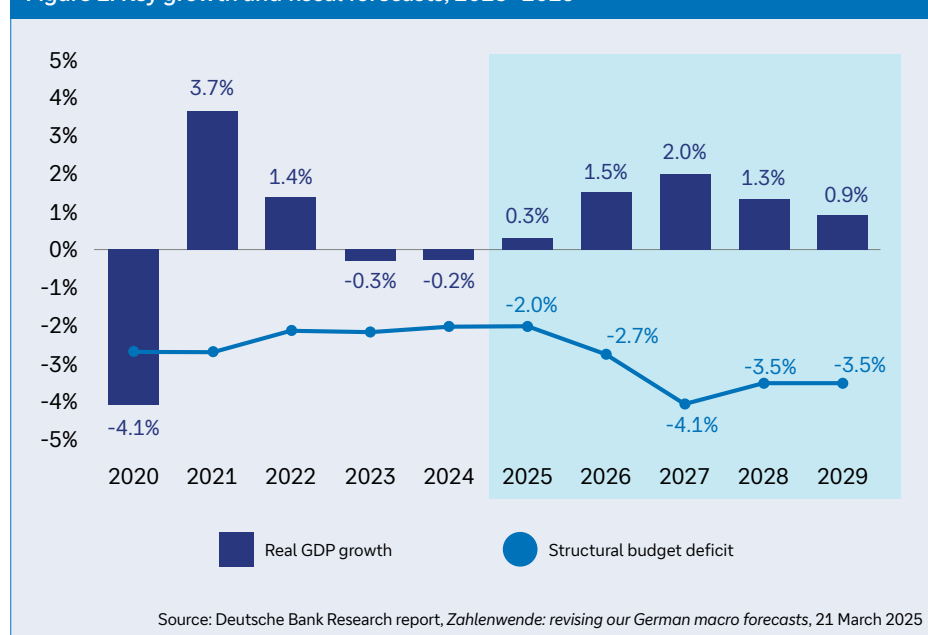
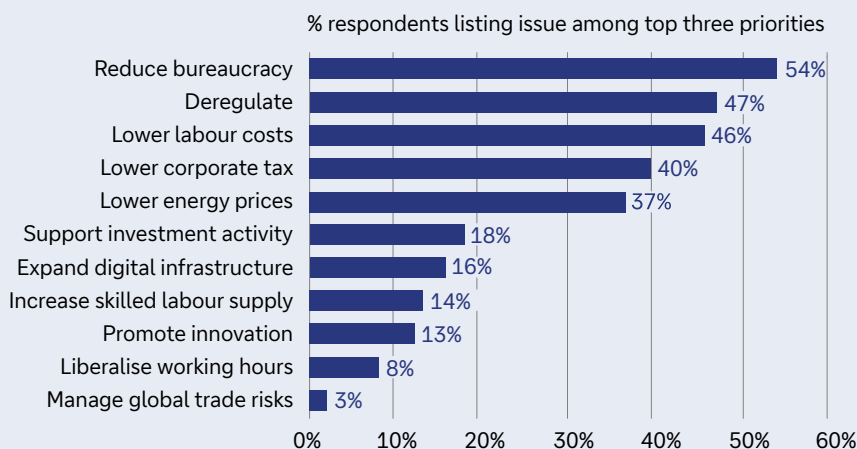


Figure 2: Measures that could boost innovation, investment and competitiveness



Source: IW-Zukunftspanel winter/spring 2025, Deutsche Bank Research

But, while there is no doubt that a fiscal package of this size will boost growth over the next couple of years, deep structural reforms are needed to ensure this growth is sustainable. In their report, Folkerts-Landau and Winkler identify three areas most in need of change:

1. Reducing bureaucracy: Companies increasingly cite regulation and bureaucracy as the primary obstacles to innovation, investment and competitiveness (see Figure 2). The National Regulatory Control Council estimates annual compliance costs – the direct costs of bureaucracy – at €65bn, or approximately 1.5% of GDP. The actual economic costs are probably twice as high, write Folkerts-Landau and Winkler, citing examples of overregulation from areas such as consumer protection, environmental and climate policy, and labour law: “While quantifying the impact on growth is challenging, significant deregulation could increase potential growth by at least one percentage point.”

2. Strengthening innovation: The authors emphasise the importance of ramping up the country’s digital infrastructure to increase the competitiveness of the German economy: “Comprehensive broadband and 5G networks are essential for the continued development of the Internet of Things, a key growth opportunity for German industry.” According to the report, Amazon and Microsoft combined spend about as much on research and development

(R&D) as the entire German private sector. “Europe has missed out on a large part of the productivity gains that accompanied the digital revolution in the US. Today, Europe and Germany risk missing the artificial intelligence (AI) revolution,” the report says. Therefore, the new government should reduce corporate tax rates to allow for higher private investment, encourage technological spillover effects from the defence industry to civilian R&D and promote the deepening of the German capital market within the context of European integration: “Germany needs to mobilise additional private capital for innovative startups, which traditional banks often find challenging to finance.”

3. Improving work incentives: Germany’s labour volume is shrinking due to an ageing population and shorter working

hours. This is why the authors call on the government to enhance work incentives for part-time employees, liberalise the labour market and remove bureaucratic obstacles to skilled immigration.

Financing the energy transition

The paper also mentions the importance of reliable and affordable energy supply, to ensure local companies can compete with their international peers. Germany was an early leader in offshore wind and solar power and phased out nuclear power in 2023. By 2030, 80% of the country’s electricity supply is due to come from renewable energy sources. Despite the country’s progress in delivering on its *Energiewende* (energy transition – more than 50% of gross electricity was generated from renewable sources in 2023), the country still relies heavily on fossil fuels. In 2023, coal and natural gas accounted for approximately 40% of the energy mix.

Financing the energy transition is a challenge, in particular for the small and medium-sized companies that form the backbone of the German economy. This is why, in September 2023, Deutsche Bank and the European Investment Bank (EIB) launched a €400m loan portfolio to help firms with between 250 and 3,000 employees invest in renewable energy and energy efficiency. Under the programme, the EIB provides guarantees covering up to 50% of the loan sum. So far, the bank has arranged several financing transactions, encompassing for example the installation of solar power as well as an upstream raw slag processing plant to separate and reprocess combustion slag from waste incineration, which increases the recycling rate to more than 50%.

“Sustainable transition has to be economically sensible, and increasing



energy efficiency most clearly is, as it allows us to bring down costs and improve resilience,” says Hauke Burkhardt, Head of Trade Finance and Lending for Germany, Austria and Switzerland at Deutsche Bank. “Providing the necessary financial resources is key to enable a successful transition.”

In addition, in April 2025, the bank, together with the European Investment Fund (EIF), set up a €250m guarantee portfolio where the EIF covers between 50% and 70% of the loan sum. This makes it possible to grant loans up to a total amount of €500m. The guarantee is designed to support small companies with up to 500 employees that want to invest in projects around innovation, digital transformation and sustainable transition.

Moreover, to ensure a cost-effective electricity supply from renewable energy sources, grid expansion needs to pick up significantly in the years to come, to avoid energy shortages at times when there is little wind or sunlight. Financing private investment in network infrastructure is therefore a key task going forward (see pages 82–84 for more on this topic).

In March 2025, German transmission system operator 50Hertz announced plans to quintuple its investment in grid infrastructure between 2024 and 2028 to €23bn. Energy provider E.ON plans to invest €35bn in infrastructure in the same timeframe. Yet the company's CEO, Leonhard Birnbaum, also stressed the importance of the new government setting a clear regulatory framework: “The prerequisite for this in Germany is a return on our network investments that's competitive by international standards. Whether this will be the case for the new electricity regulatory period starting in 2029 is not foreseeable for us today.”

From automotive to defence

Provided the new German government delivers on the structural reforms discussed above, the country is well positioned to regain trust among investors and thus attract more foreign direct investment. With a GDP of €4.66trn in 2024, Germany is the third biggest economy in the world, and it is of course also part of the European Union – whose single market, with a GDP of €16trn, is the largest in the world. “The level of education in Germany is high, we have strong research and science institutes as well as the ‘Mittelstand’ that thinks innovatively and entrepreneurially,” says Burkhardt.



That is why the fiscal investment package offers great opportunities for German companies, but also for international corporates – most obviously for those in the defence sector, which hope to benefit from public orders to ramp up Germany's defence capabilities and military production.

Germany boasts a solid defence industrial base, with existing military capabilities in radar (Hensoldt), air defence systems (Diehl, Hensoldt, Rheinmetall) and military engines (MTU Aero Engines). Yet, as pointed out by a team writing for the Deutsche Bank Research Institute, the German defence industry is conspicuously small relative to the country's economy, its industrial sector and other countries: “Data for the top 100 defence companies globally suggest that the German defence industry is the eighth largest in proportion to the national economy, with arms sales by German companies amounting to only 0.2% of German GDP.”

Therefore, the open-ended borrowing for defence also offers unique business opportunities for the ailing German and European automotive sector. German automotive production in 2024 was down 31% versus its peak in 2011. However, as very little capacity has been reduced, this has led to severe overcapacity across the automotive original equipment manufacturers and parts suppliers. As a result, “moving capacity to defence

could materially cut the price tag for restructuring the auto industry,” write Adrian Cox and team in their report *German defence: Germany's shrinking auto industry may be key to defence ramp up*. “The auto industry brings personnel, facilities and expertise to ramp up production and deploy unused capacity.”

Indeed, there are signs of a transfer from automotive to defence capacity. In June 2024, Rheinmetall signed an agreement with Continental to employ ex-automotive staff. According to media reports, Hensoldt has similar plans, and Rheinmetall may even consider taking over entire production facilities from automotive companies.

Another sector that hopes to benefit from the fiscal spending package is the construction industry – given that €500m of the package is linked to public infrastructure such as bridges, schools and hospitals.

“German companies are now back in an investment mindset,” observes David Lynne, Head of Corporate Bank, Deutsche Bank. While investments do not happen overnight and companies are waiting for public infrastructure orders to hit the ground, as he emphasises, business sentiment has improved significantly in the construction space. “As companies ramp up their investments, this will require financing, and we are prepared to provide this financing to our clients.”

Poland powers on

Following the Polish Presidency of the Council of the European Union for the first half of 2025, *flow* reports on the country's meteoric economic growth over the past three decades, its attractiveness to investors and its diversified merchandise and services trade position

Since its transformation into a market economy in 1989, Poland has emerged as an exporting beacon of Central Europe. Sharing a border with seven countries – including Germany, Russia and Ukraine – and with several major seaports along its Baltic Sea coastline, it is highly integrated into global supply chains, with its strong distribution networks making it one of the most popular destinations in Europe for foreign direct investment (FDI).

Now a parliamentary republic with a population of more than 38 million, Poland is the sixth-largest economy in the EU, with GDP of US\$908bn and 2.9% GDP growth recorded in 2024 (see Figure 1).

Having joined the EU on 1 May 2004, Poland has experienced dynamic economic growth, bringing its level of development significantly closer to the EU average, and has positioned itself as an ideal base for companies looking to establish themselves in Europe, enabling efficient trade and logistics across the continent. Private consumption is the key driver of the Polish economy, supported by wage growth, falling inflation and increased social transfers. Investments, both public and private, also contribute to this growth, including those implemented under the National Recovery and Resilience Plan. Long-term challenges for Poland include a shrinking working-age population, relatively low innovation in the economy, and the need for green and digital transformation. The effective use of EU funds and increased spending on research and development (R&D) remain very important.

CEO Tomasz Kowalski heads Deutsche Bank Polska, and makes the point that the Polish Presidency of the Council of the European Union (Poland held the office for the first six months of 2025) “took steps to strengthen the competitiveness of



The Old Town in
Krakow, Poland

Image: iStock

the EU economy, focusing on integration of the internal market, simplification of regulation and support for geopolitical stability in the region". He adds, "The Polish Presidency constantly emphasised the importance of – and fought for – support for Ukraine. Accordingly, the topic of Ukraine was on the agenda of every Economic and Financial Affairs Council meeting." Poland has significant trading ties with Ukraine and is its second-largest trading partner after China.

Investor attraction

Poland offers an open and investor-friendly environment with a fast, transparent and fully digitalised company registration process that is also accessible to non-residents. Competitive corporate tax rates, R&D incentives, the IP Box regime (a tax regime where profits from innovative activities are taxed at reduced rates) and preferential conditions for startups enhance its attractiveness, while special economic zones provide additional tax exemptions.

The Polish banking sector, adds Kowalski, "remains one of the foundations of the country's economic stability and is one of the most technologically advanced in Europe; recognised for its innovation and adoption of cutting-edge technologies". It is also the second most popular destination for companies to establish service centres, behind only India.

Trade and exports

While Poland's direct exposure to US trade is limited, given the low share of direct exports to the US, it remains a relatively open economy with high exposure to global trade in general. This, say Deutsche Bank Research analysts Twisha Roy and Christian Wietoska in their *Insight CEEMEA* reports, makes it particularly vulnerable to a trade shock from a global tariff war. They reflect, "The magnitude and scope of tariffs globally have exceeded most expectations and represent a significant shock to global trade." The smaller, open economies of the CE3, whose GDP is heavily dependent on exports (more so in the case of the Czech Republic and Hungary) "will be left particularly vulnerable to the global trade shock that is unfolding". However, they point out that Poland has a more diversified economy and a lower exposure to the auto sector in its export basket, and lower beta to European growth, which provides some resilience. Figure 2 compares the share of Poland's exports in GDP (a measure of

Figure 1: Poland's GDP growth

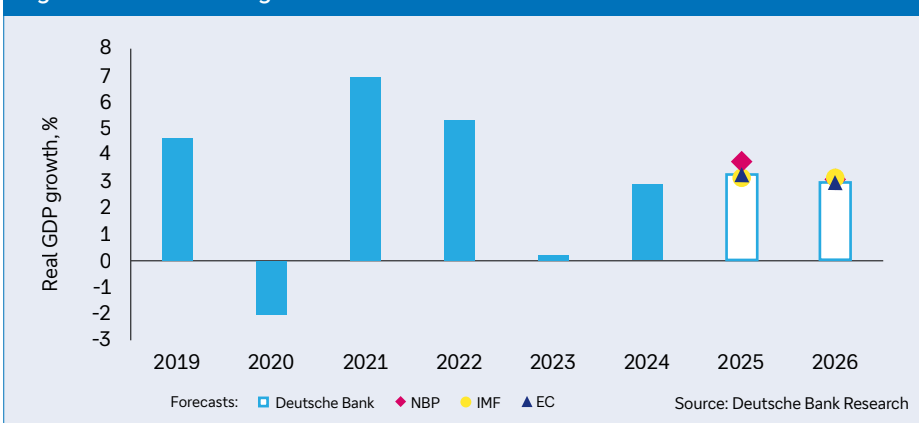
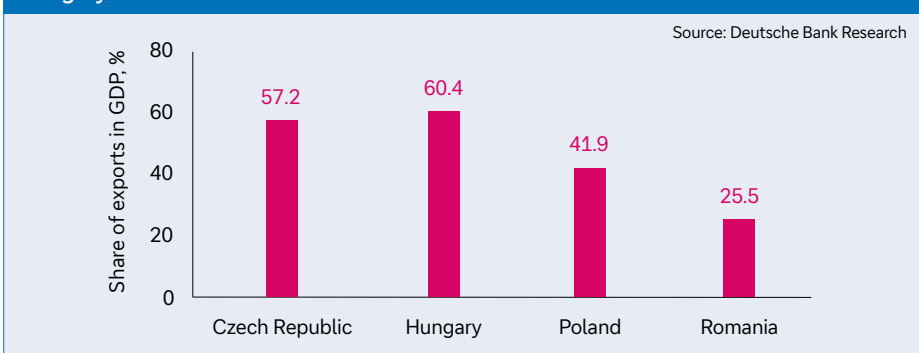


Figure 2: Share of Poland's exports in GDP compared with the Czech Republic, Hungary and Romania



exposure to global trade shock) compared with that of the Czech Republic, Hungary and Romania.

In recent years, Polish-German cooperation has developed dynamically, covering key areas of the economy, energy, innovation and infrastructure. Germany remains Poland's largest trading partner, accounting for approximately 25% of the country's trade, and at 16% of FDI (2023) is the country's largest European investor.

Innovation and strength

Magdalena Rogalska, Head of Corporate Bank and Deputy CEO at Deutsche Bank Polska, notes that the country is "witnessing rapid growth in modern payment services, including instant transfers such as Express Elixir (an interbank clearing system) and BLIK (a payments network), open banking systems aligned with PSD2, as well as innovative tools for automating bulk and cross-border settlements".

Regarding the current climate of geopolitical uncertainty, she adds, "I believe globalisation is now entering

a new phase – its scope is being redefined. To maintain a high level of resilience, economic stability and security, countries must become stronger and more self-sufficient. Achieving this requires a robust and stable banking system."

Kowalski develops Rogalska's point on financial stability: "As part of a strong European financial group, we have great potential both in Poland and abroad in terms of financing innovation, which is known to drive growth. A strong European banking sector also ensures financial stability and adequate risk management." Part of this innovation drive can be seen in the increasing emphasis Deutsche Bank Polska places on financing renewable energy and sustainability projects. He says, "We are supporting the energy transition, reducing emissions and helping our clients achieve their targets in this area."

A good example of this was the bank's mandated lead arranger role in the non-recourse 25-year project financing for Polska Grupa Energetyczna (PGE), Poland's largest energy company, and Danish renewables company Ørsted.



Mouth of the Merlion

Singapore boasts the second-busiest port in the world and remains a core hub for asset and wealth managers – as well as being one of the largest global commodity trading centres. *flow*'s Clarissa Dann looks at this trading city's remarkable evolution as it turns 60 in 2025



“
We continue to enhance our connectivity and trade links to remain a critical and trusted node in global supply chains

Chan Ih-Ming, Executive Vice President of the Singapore Economic Development Board

Singapore's overall growth. In 2024, net trade contributed 2.5 percentage points to the 4.4% overall growth. By sector, manufacturing, wholesale trade, and transport and storage contributed 2.1 percentage points. (See Figures 1 and 2, page 16.) According to the government, Singapore's growth may slow to 0–2% in 2025. This reinforces the Research team's view that “Singapore's external demand is unlikely to pick up to a level meaningful enough to increase inflationary pressures back within the historical mean of just below 2%”. Consequently, Deutsche Bank Research expects greater support from the authorities this year, with MAS likely to ease its monetary policy further, and potentially introduce additional fiscal measures to support households through near-term strains and labour market dislocations.

According to the 2025 *DHL Trade Atlas* report, Singapore's total trade volumes hit US\$951.6bn in 2025, making it the 15th-largest trading economy in the world. Its exports (US\$494.8bn) comprise mainly machinery, mineral fuels and precious metals (see Figure 3, page 17).

The city state is one of the largest global commodity trading hubs,

This article explores Singapore's unique position as a hub for Association of Southeast Asian Nations (ASEAN) market access; not only its status as a trade powerhouse, due to its optimal location and vast port infrastructure (making it particularly appealing to commodity trading companies), but also its attractiveness to investors and asset managers.

As the Monetary Authority of Singapore (MAS – the country's central bank) reported in July 2024, “Global assets under management (AUM) increased by 12% and Asia AUM ... trended up by 8% in 2023, on the back of gains in global bonds and equities after a challenging 2022.” Singapore's total AUM rose to US\$4.1trn – faster than overall AUM growth in Asia. “Singapore serves as a key gateway for global asset managers and investors to tap into the region's growth opportunities, with 77% of AUM sourced from outside Singapore, and 89% of total AUM invested outside the country,” added the MAS report.

As Deutsche Bank's Singapore-based Head of ASEAN, Burkhard Ziegenhorn, points out, “Singapore stands out from a transaction banking perspective, and as a hub it gives you access to local markets, which is very convenient for multiple ASEAN markets. At Deutsche Bank we have seen more than 60% growth in assets under custody over the past 12 months.”

The country has also been at the forefront of instant payments, advancing the connection of real-time payment infrastructure across the ASEAN region. The value of gross digital payments across the six largest ASEAN economies reached US\$806bn in 2022, up 14% year on year, and is forecast to rise to close to US\$1.2trn in 2025. This has much to do with the efforts Singapore has made to connect its rapid payment systems with those of other key Southeast Asian markets – most notably India and Thailand.

Trade and finance hub

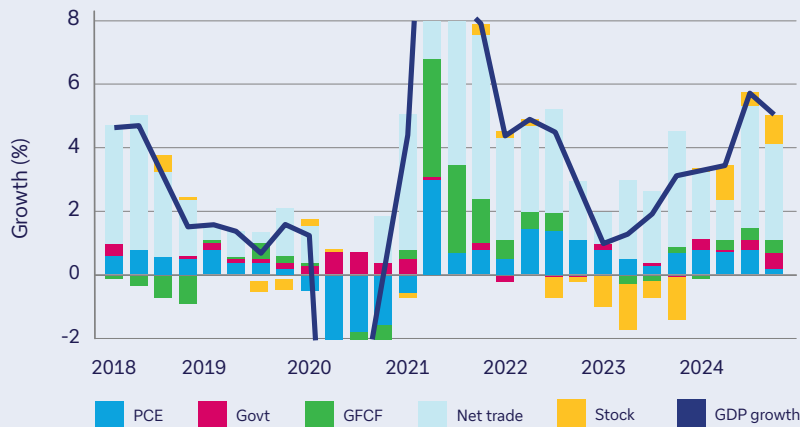
Singapore is the nexus of trade in the Asia-Pacific (APAC) region, thanks to its low taxes, free trade environment and geographical location. While it did not emerge unscathed from the US round of tariffs announced on 2 April, Deutsche Bank Research commented a week later that, along with other non-China Asian economies, there are no plans for retaliatory tariffs, and reciprocal tariffs are expected to fall after negotiations.

However, even with a broader trade deal in Asia, exports would still be a drag to

With the head of a lion and body of a fish, the Merlion guards the mouth of the Singapore River in Merlion Park, looking out over the Marina Bay Sands hotel. The statue celebrated its 50th birthday in 2022 and the Republic of Singapore's official mascot remains an emblem of its humble beginnings as a 14th-century trading settlement.

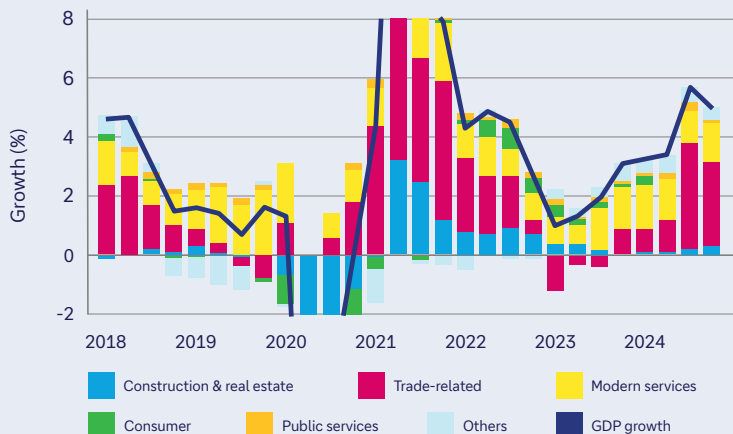
In 2025, this Asian powerhouse turns 60; the country's independence from Malaysia was confirmed on 9 August 1965. The country also elected its 15th parliament in May.

Figure 1: Singapore's GDP growth by expenditure



Source: Deutsche Bank Research, Department of Statistics

Figure 2: Singapore's GDP growth by industry cluster



Source: Deutsche Bank Research, Department of Statistics

despite having few natural resources of its own, and the world's largest trading companies have all taken the opportunity to establish bases here. The Global Trader Programme and Finance & Treasury Centre Incentive provide various incentives for eligible trading companies. Aaron Tay, Deutsche Bank's Head of Corporate Cash Management Singapore, points out that these companies use regional treasury centres to manage the region's payments and collections, risks and exposures, and liquidity, among many other priorities, while leveraging one of the largest trading and financial hubs in the world to access and manage their APAC set-up effectively. This growing ecosystem also creates a space for

“With more conducive regulations, there is an opportunity to invest in offshore markets

Pallavi Shetty, Head of Custody and Securities Services ASEAN, Deutsche Bank

international businesses to interact closely to form more trade corridors over time.

Singapore's ongoing investment in logistics helps retain its attractiveness to exporters – it is host to the largest air cargo hub in Southeast Asia. In October 2024, the Changi Airport Group announced the opening of Changi Nexus One, a refurbished air logistics facility within Changi Airfreight Centre.

The Maritime and Port Authority of Singapore has been busy developing a premier global port hub and international maritime centre “to advance and safeguard Singapore's strategic maritime interests”. It runs the Port of Singapore, one of the largest ports in the world and the world's second-busiest after Shanghai. It shifted 39 million twenty-foot equivalent unit (TEU) containers through its facilities in 2023.

The under-development Tuas Port, which opened in September 2022, is expected to have a handling capacity of 65 million TEUs when it is fully completed in the 2040s. As a ‘smart port’, it will deploy artificial intelligence and the Internet of Things to use driverless, automated guided vehicles, smart sensors and data analytics to predict congestion areas.

Global connectedness, in the form of exchange and openness, is key to Singapore's dynamic economic growth. The *DHL Global Connectedness Index* measures the depth and breadth of international flows of trade, capital, information and people from 2001 to 2024. Singapore remains top of the leaderboard thanks to its investment in strengthening its global physical and digital connectivity, explained Chan Ih-Ming, Executive Vice President of the Singapore Economic Development Board, on publication of the 2024 index last year. “Trade is our lifeblood. We continue to enhance our connectivity and trade links to remain a critical and trusted node in global supply chains, facilitating international trade and flows of capital, information and talent,” he added.

Singapore has done much to restore confidence in its financial crime prevention after a series of commodity finance scandals involving false trade finance documents that erupted during the Covid-19 pandemic. “The Association of Banks in Singapore now have this code of conduct we all have to implement, and a trade finance registry where we put documents for authentication has just been launched – there are no duplicate documents,” reflects Deutsche Bank's Ziegenhorn.

Custody reach

Singapore continues to be a focal point for fund management companies and investors as an attractive investment destination. This is due to its stable political and economic environment, strong regulatory framework and attractive tax regime. Deutsche Bank's Pallavi Shetty, responsible for custody and securities services in the ASEAN region, points out that Singapore is a popular country for Indian and Chinese families to set up family offices. "Before, investment by family offices was restricted to local markets, but now, with more conducive regulations, there is an opportunity to invest in offshore markets via setting up fund structures in Singapore – that is where we have been supporting with custodial services." Singapore's Variable Capital Company (VCC) structure is a prevalent choice with fund managers as the preferred domicile for launching investment funds targeting Asian markets and beyond. Family offices and wealth management companies are increasingly setting up VCCs as the preferred vehicle to manage their investment portfolios.

The launch of MAS's Project Guardian is contributing to the growth of Singapore's fund ecosystem and positioning it as a global asset tokenisation hub that is drawing financial and technical expertise, with positive spillovers to the broader economy. Being the launchpad for driving innovation, accessibility and cost efficiencies in tokenised products, it has enabled the successful issuance of the first digital native VCC to bring together the cost and distribution advantages of tokenisation with the flexibility of a VCC structure, and is further assessing the development of an open digital infrastructure (Global Layer 1) to connect fragmented liquidity pools.

Why corporates choose Singapore

"Singapore has a very unique status globally as well as within the region," reflects Kenny Khoo, Head of Intra-Asia Coverage (excluding Japan) at Deutsche Bank. He explains that this is not just down to its macroeconomic performance; its talent pool, with a broad range of linguistic skills, also positions Singapore very well to build its relationship with China. After formal diplomatic relations were established in 1990, further diplomatic ties between the countries were announced in November 2024. In addition to the Chinese family offices setting up in Singapore,



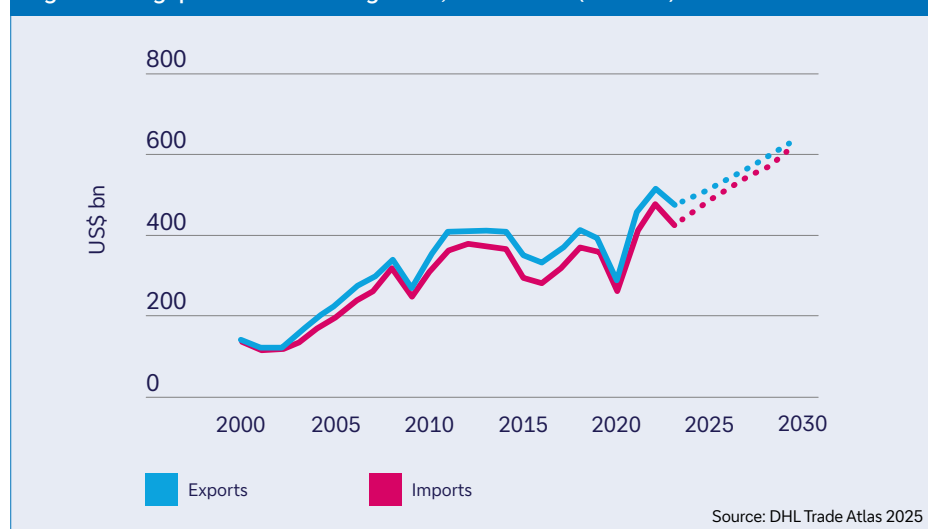
Khoo is seeing a lot of multinational Chinese corporates and other foreign corporates positioning their overseas hubs in Singapore. Its geography (access to ASEAN), favourable tax regime and intellectual property and intangible assets strategy make it particularly attractive.

As explained in the *flow* article 'The rise of global capability centres in APAC', Singapore proved so attractive for HOERBIGER – a technology company that supplies performance-defining components for the energy sector, the automotive industry, safety technology and the electronics industry – that the company moved its entire global treasury

function there during the pandemic. HOERBIGER is a privately owned company, headquartered in Zug, Switzerland and with a presence in 43 countries globally.

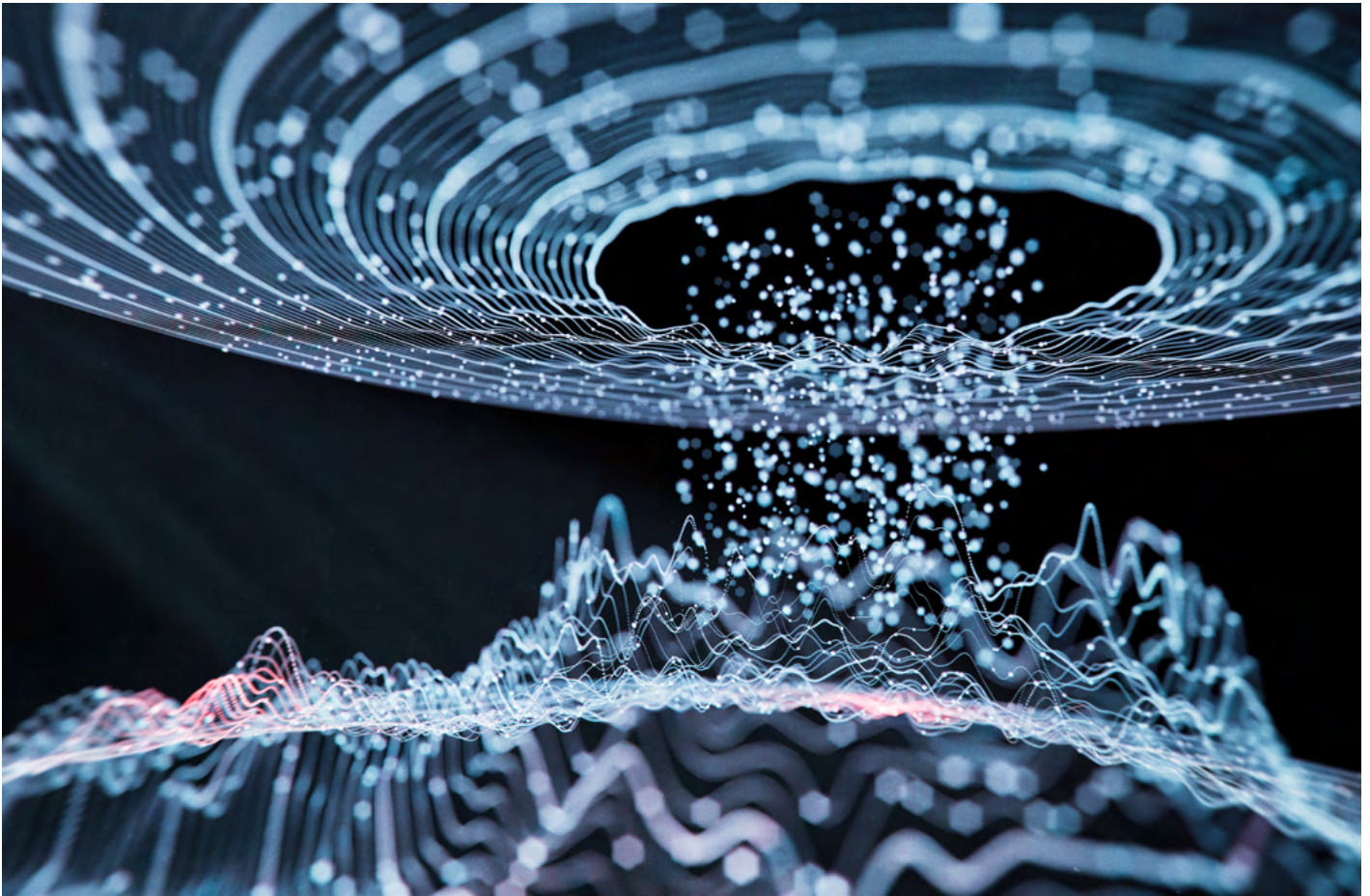
"Since 2012, the treasury middle office functions of liquidity planning and trade finance have been performed in Singapore," recalls Carl Lee, the company's Head of Treasury. "This was mainly because Asia starts the day, such that reporting and consolidation can be worked on once America closes." By afternoon Asia time – which is morning time in Switzerland – the numbers would be ready for the CFO, the Treasury Front Office and the Corporate Finance team to work with.

Figure 3: Singapore's trade value growth, 2000–2029 (forecast)



Eye of the storm?

As uncertainty continues to surround Washington's trade tariff policy, what does this mean for US manufacturing and appetite for inbound US investment? Ivan Castano Freeman digs deeper into what 'wait and see' could mean for America's economy



The Trump administration has put the world on alert with its sweeping new tariffs regime aimed at positioning 'America first' and trimming large trade deficits with multiple countries.

Sending shock waves through corporate America, the move has many firms worried that the levies will force them to hike prices, hurting consumer spending and denting economic growth.

Amid heightened uncertainty, US firms are exploring new ways to navigate a

very different trade landscape, including shifting manufacturing out of high-tariffed nations (such as China) and streamlining working capital and FX to cushion against the possibility of a prolonged trade crisis. Despite some dialling back from the original 2 April 'Liberation Day' announcements, average tariffs are still, as Matt Luzzetti, Chief US Economist at Deutsche Bank Research, puts it, "at the highest levels we have seen for a century," having noted on 14 April that the ensuing

record levels of policy uncertainty and the sharp tightening of financial conditions had already set the US economy "on a weaker growth trajectory".

Financial markets and businesses do not like uncertainty and are taking steps to reduce this. "We are establishing the infrastructure and underlying treasury solutions to prepare our clients for all possible scenarios," says John Cowart, Head of Corporate Banking Coverage, North America, at Deutsche Bank. The lender is helping clients assess new

manufacturing locations (with India and ASEAN prime destinations) while providing them with tools to boost working capital, streamline supply chain management and pare their currency risks.

De-risking drive

"A great number of clients are looking to invest in India as they seek to make sure that manufacturing facilities are in optimal locations," Cowart says. "In trade finance, clients want to leverage structured working capital solutions and manage payment terms appropriately to get cash back into the US.

"There is a great deal of effort to manage the dollar's downward trend by layering in cash flow hedges that reduce exposure to certain currencies, often in high-risk markets," he continues. "Companies are also expediting dividends and automating inter-company cross-payment flows and sending back to head office" to accelerate that effort, he adds.

The repatriated dollars are, in many instances, then being channelled towards evolving supply chains and invested to set up manufacturing facilities in territories with lower-tariff tensions, such as India and at home in the US, Cowart continues. As companies build their factories in the US, capital investment in the automation of routine processes to reduce labour costs at home now makes more economic sense – the low-cost-labour geographies become less attractive once tariffs are factored in.

Big investments

President Trump wants to bring back manufacturing to the American heartland and "even the playing field" for American workers. The White House 'non-comprehensive running list of new US-based investments in President Trump's second term' highlights 70 commitments (as at 30 May) from US and global multinationals, with the bulk of the funds coming from technology, manufacturing and pharmaceutical giants, most notably Apple, but also from SoftBank/OpenAI/Oracle (to launch the 'Stargate' AI project), Nvidia and IBM. Taiwan Semiconductor Manufacturing, Hyundai, Johnson & Johnson, Roche, Eli Lilly and Stellantis had also pledged investments.

German firms are participating too. On 6 March, Siemens announced it was "ramping up investments in the US to support and benefit from America's industrial tech growth" and building two "state-of-the-art manufacturing facilities for electrical products in Fort Worth, Texas,



“Most companies are taking a measured approach and not reacting quickly

John Cowart, Head of Corporate Banking Coverage, North America, Deutsche Bank

and Pomona, California". This US\$285m investment is, stated the company, expected to generate "more than 900 highly skilled manufacturing jobs".

Currently, manufacturing contributes US\$2.65trn to the US economy, accounting for 10.3% of GDP and employing nearly 13 million workers, according to the US Department of Commerce. The "golden age" for America promised in President Trump's inaugural speech relies on a resurgence in American manufacturing.

Wait and see

However, on 28 May, the US Court of International Trade struck down tariffs implemented by the Trump administration under the International Emergency Economic Powers Act of 1977. According to Luzzetti, while this plays out, trade policy uncertainty is "likely to remain elevated for an extended period". He adds that "prospects have diminished for quick trade deals, and US trade partners will likely want to wait for legal clarity around the proposed tariffs before continuing/ finalising discussions".

He points out that the administration can leverage other legal measures as needed to implement tariffs. "Trump believes

in the use of tariffs and has committed substantial capital to this effort," he says. "The success of the fiscal package in front of Congress also depends in part on the revenue gains from tariffs to defray some of the fiscal cost. Abandoning tariffs altogether is therefore not an option."

As the tariffs ordeal is sorted out, most companies are staying on the sidelines, taking a 'wait and see' approach until the future rules of the game become clearer. "Most companies are taking a measured approach and not reacting quickly," according to Cowart. "They are engaged in an assessment of what is happening, rather than making quick or sudden moves."

The drive to diversify production and reduce concentration is also nothing new. The Covid-19 pandemic brought significant supply chain disruptions and key component shortages when China's staffing shortages highlighted the need for American importers to shift away from distant suppliers. "It's something companies were already moving towards," Cowart adds. "This has been a five-year journey since Covid, and tariff talks are just accelerating an existing reshoring trend in a number of cases; it's not a sudden move."

The pivot has seen companies gradually outsource production to new ASEAN destinations such as the Philippines, Malaysia and Indonesia. Eastern Europe, notably Poland, is also gaining momentum.

Despite the trade noise, Cowart remains positive about the US's long-term prospects. "The markets are pricing in continued volatility, but at this point, most clients are optimistic about next year and that tariffs will be negotiated by that point."

European investors

The US remains by far the world's largest economy, growing 2.8% to US\$29trn last

year, with China in second place with nearly US\$19trn in GDP. This means American exceptionalism remains strong and is likely to continue for some time.

Despite America's vast economy, European investors have expressed caution. Luzzetti and Deutsche Bank's US Head of Rates Research, Matthew Raskin, met with more than 50 clients across Finland, Sweden, Italy, France and the UK during the last week of April.

In their report, *Notes from the road* (5 May), they reflect how European clients are "generally pessimistic on the outlook for the US economy and policymaking, seeing recent pronouncements and actions as a regime change in the US's role on the global stage". They add, "In particular, the US is now viewed as a less reliable and more unpredictable partner that has leveraged trade and economic policies."

Investors "unanimously believe they have become over-allocated to USD assets and signalled their intention to reduce exposure over time," say Luzzetti and Raskin.

Fiscal fears were also flagged as the US's ballooning, US\$36trn-plus debt remains a growing concern (see Figure 1). Deutsche Bank expects the nation's budget deficit-to-GDP ratio to hover near 6.5% over the next few years.

"If the US fiscal package this summer confirms our baseline expectations of no deficit reduction, this could be a catalyst for renewed sell-off at the long end (along with potentially disorderly moves)," Luzzetti and Raskin write in their report of the meetings, adding that the Federal Reserve is unlikely to bail out the bond market unless it sees "true signs of market breakdown".

Targeting new markets

Meanwhile, American retailers are signalling big concerns over the duties.

Apparel giant Gap said on 29 May that if the 30% levies on China and 10% tariffs on most other countries remain at current levels, it could cost them up to US\$300m this financial year. The company did say, however, that it will not yet raise prices to offset duties, contrary to a number of other big-box retailers.

Meanwhile, Chilean copper suppliers are looking at alternative markets in case there is a 10% levy on the South American nation's exports.

While Chile's copper currently enters the US duty-free, the country has been included in Washington's 10% baseline tariffs, so it could start paying levies later this summer.

"If there's any tariff above 0%, there's going to be an incentive to look at new

markets," Jorge Cantallopis, Executive Director of Chilean industry think tank CESCO, told *flow*. "And the higher the tariff, the higher the incentive will be, of course."

Chilean producers are already approaching potential new European customers, including Italy, Germany and Spain, to sell higher-priced refined copper as well, as the EU's planned defence build-up will boost demand for the metal, according to Cantallopis.

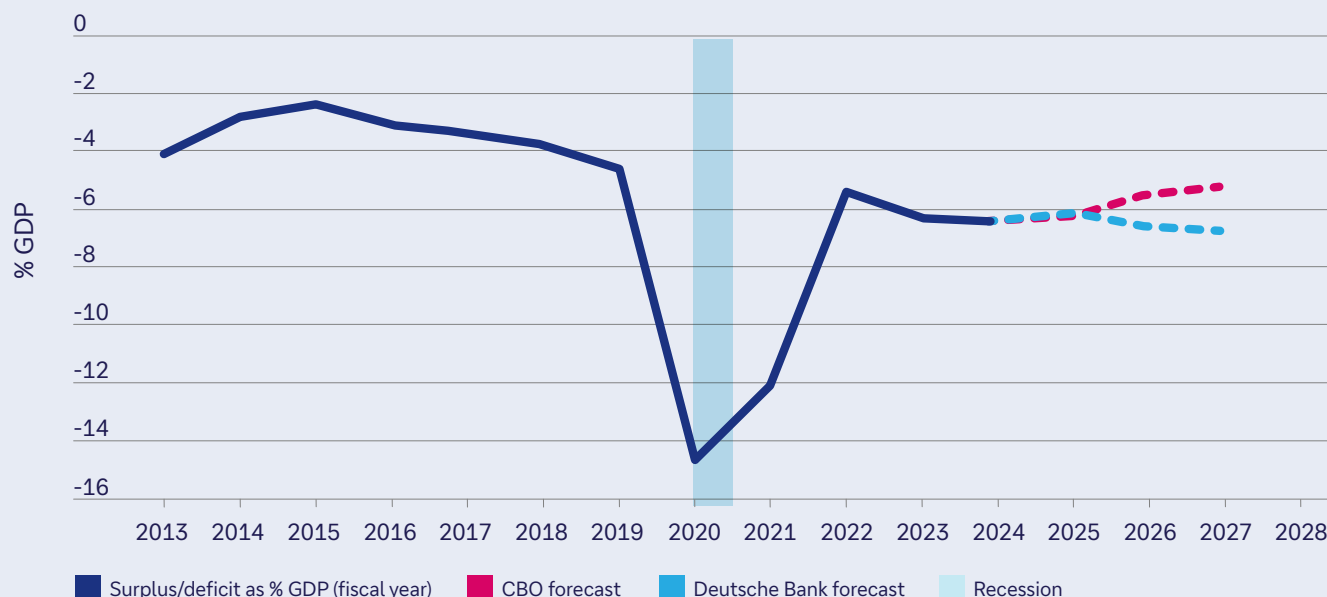
Chile's state-owned supplier Codelco sends 15% of its copper to the US, 55% to China and the rest to Japan, Europe and South Korea. Like other entities, however, it is also exploring India as a new potential market. "India is industrialising quickly and has installed new [copper] smelters, so it could be a buyer for our concentrates," Cantallopis says.

Cause for optimism

Despite what Cowart sees as "probably the most volatile of moments" and the fact that it is unlikely anyone can predict whether comparative normality will resume in, say, 12 months' time, he stresses that clients are ensuring they are in a position to cater for all scenarios. Which is really all anyone can do.

Ivan Castano Freeman is a freelance financial journalist

Figure 1: The federal budget deficit is projected to remain historically elevated in the coming years



Source: Congressional Budget Office (CBO), Haver Analytics, Deutsche Bank

Cash Management

The big issues facing treasurers, from managing geopolitical risk to harnessing the potential of technology

Big debate

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Navigating geopolitical risks in treasury

With the geopolitical environment getting rougher and corporates rethinking their supply chains, cash visibility and control are more important than ever. *flow*'s Desirée Buchholz hosts a debate on how uncertainty is impacting liquidity, funding and FX



There have always been times of crisis and volatility, but when this debate took place on 22 April 2025, the macro landscape was changing on an almost daily basis. On 2 April, the US administration had announced so-called reciprocal tariffs on goods from more than 180 countries and territories. Only a week later, the US government backed down, suspending these tariffs for 90 days to allow for negotiations with most of its trading partners – except for tariffs on the world's second-largest economy, China. On the contrary, over the course of April, the US and China kept raising duties on each other's imports – and then partially lowered them in May. Indeed, the tariff situation looks set to remain uncertain for the foreseeable future.

While global tariff policy was shifting radically, geopolitical tensions in other areas of the world continued: the Russia-Ukraine war, the ongoing conflicts in the Middle East, tensions between India and Pakistan, and political uncertainty in the South China Sea, are all still looming.

Since these geopolitical tensions are impacting business decisions, what does this mean for corporate treasurers? That is the overarching question for this year's big debate, featuring insights from three Deutsche Bank Corporate Bank clients.

Desirée: *Let's start with the big picture. Cornelia, SUSS is a leading manufacturer of equipment and process solutions for the semiconductor industry. Your company is headquartered near Munich in Germany but generates more than 85% of its global revenues from Asia-Pacific. As US-China tensions over semiconductor chips continue, how is SUSS impacted? And what's the knock-on effect for the semiconductor industry?*

Cornelia: Alongside Taiwan and South Korea, Mainland China is a very important market for us and one that we want to continue to supply. We are monitoring the situation closely, as, on the one hand, the US regulations in force could affect us as a German manufacturer.

On the other hand, the EU and Germany regulate high-tech exports to China as well. Compared with front-end lithography players, however, we are not pushing the physical boundaries of semiconductor equipment technology as much. This is why the focus of regulation is mostly targeted at leading-edge technology companies.

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Desirée: *SUSS is currently expanding production capacities in Taiwan, investing to open a new facility locally. Why did you decide on that geography, and what role did geopolitical uncertainties in the region play when making the investment decision?*

Cornelia: SUSS has been running operations in Taiwan for many years – and we are very successful there. In 2024, we even needed to significantly expand our local production capacity at short notice to be able to serve the rising AI-driven demand from our clients and to prepare for future growth. Now we are in the process of merging our various locations in the country into one bigger location to boost efficiency.

From our point of view, the opportunities still outweigh the risks. Taiwan is the most important advanced chip manufacturer, with around 60% of global supply produced in the country. And, even more importantly, 90% of high-end chip production globally takes place there. This fact cannot be changed overnight, and investing locally allows us to localise our supply chain.

Finally, we find highly motivated and skilled workers in Taiwan who want to work for us. We have not only established ourselves as an important supplier to the leading domestic semiconductor manufacturers, but SUSS is also a key employer, extending our workforce from 55 employees in 2020 to 400 in 2025.

Desirée: Ameet, DP World is a Dubai-owned ports and logistics company which manages ports and operates warehouses and logistics parks globally. In the light of increasing geopolitical uncertainty, research conducted by your company shows that many firms are engaging in 'nearshoring' and 'friendshoring',

i.e. sourcing and/or producing locally or in countries that are regarded as allies. Some are also creating parallel supply chains to mitigate geopolitical risk. What does this mean for your business model?

Ameet: First, we don't believe that globalisation is disappearing any time soon – it's evolving. Companies are diversifying their supply chains, but this takes time. Manufacturing cannot be moved easily due to economies of scale and other factors, as Cornelia explained.

Overall, I think, nearshoring and friendshoring provide opportunities for us at DP World. We see ourselves as a trade enabler, which means that our investments follow the key trade corridors. We have operations in 79 countries, and nearly 75% of our port capacity is based in emerging markets.

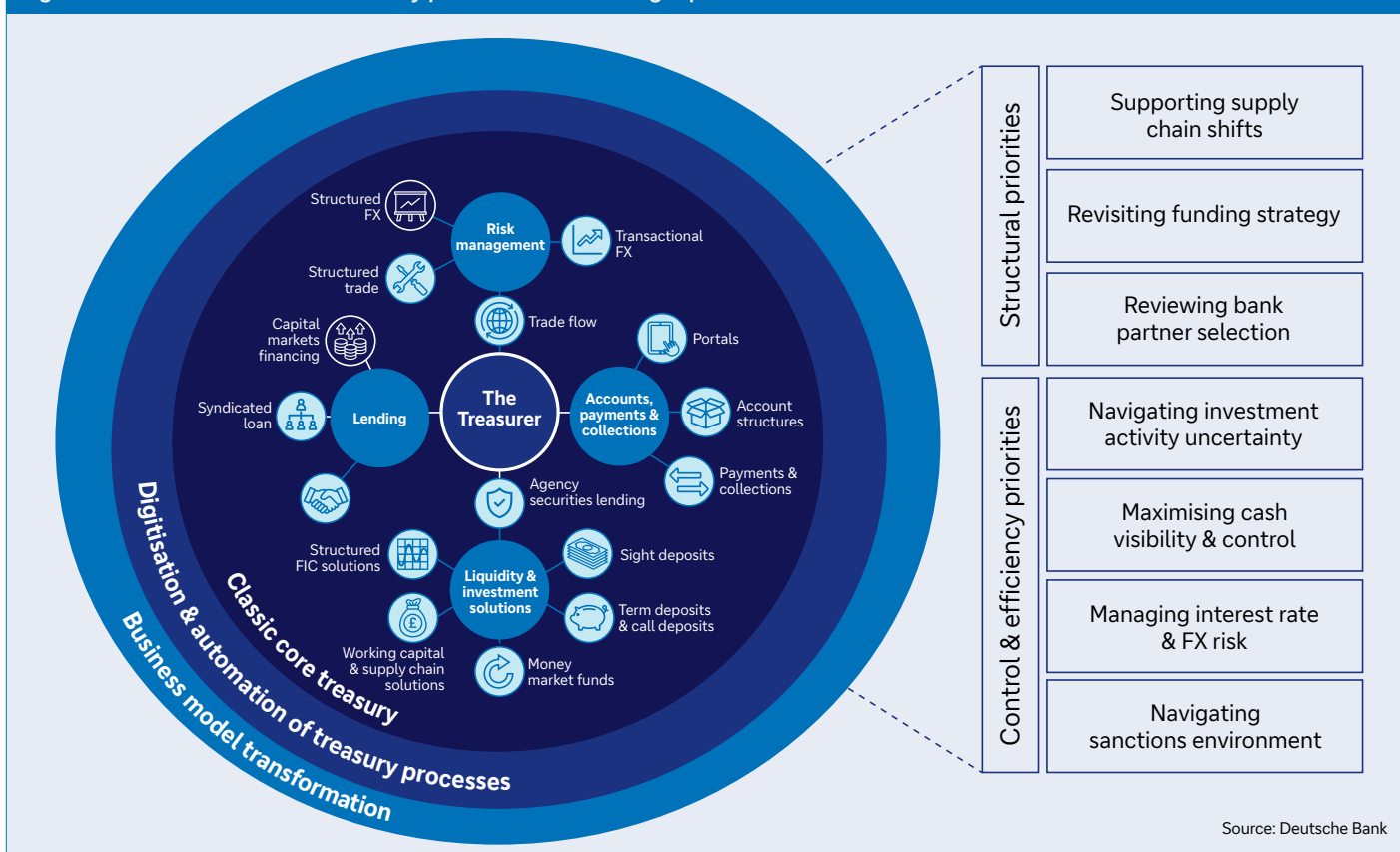
For instance, following the introduction of tariffs under the first Trump administration, we saw US direct imports from China declining. But at the same time, indirect imports into the US from China went up. This shows that companies have managed

to reroute their supply chains. Today, intra-Asia trade has overtaken Asia-Europe and Asia-US as the most important trade corridor – which is why Asia is now a huge focus for us.

Desirée: How flexible are you in terms of following your clients? In other words, how quickly can you adjust investment decisions if necessary?

Ameet: Ports will take at least two to three years to build, while logistics parks and warehouses can be developed and adapted much more quickly. But look, as moving manufacturing takes time, we can wait and see how the current tariff situation evolves. Our investment planning considers long-term trade flows, but we retain the flexibility to pivot if structural shifts accelerate. In the meantime, we're closely tracking customer expansion plans and macro developments, so if necessary, we'll have enough time to realign our investments – adjusting to our clients' setup and following the direction of emerging trade corridors.

Figure 1: The role of the treasurer – key priorities in a volatile geopolitical and market environment



Desirée: Magnus, TE Connectivity is an Irish technology company that designs and manufactures connectors and electronic components for various industries. How is your company impacted by the current tariff discussions?

Magnus: Given current market conditions, I cannot comment on this question.

Desirée: Christof, having heard from SUSS, DP World and TE Connectivity, to what extent are they typical of Corporate Bank clients? And how do geopolitical risks shape client discussions generally?

Christof: We serve clients globally from all kinds of industries and regions, and clearly, the exposure to geopolitical risks varies with these factors. However, in general one can say that geopolitics are at the forefront of many client discussions. This is not completely new, but the nature of geopolitical risks has changed significantly in recent years – and with it, the priorities for treasurers. It began with the Covid pandemic, a global health crisis with geopolitical implications. The Russia-Ukraine war has dramatic consequences for people and businesses in the region. Many treasurers are feeling the consequences of sanctions on financial flows directly. Now the rules of global trade are being rewritten and it seems as if the macro landscape is changing every week – with potential consequences for supply chains. There is just so much uncertainty that many clients tend to wait and see how to react.

Desirée: Let's look at this in a bit more detail. What are the most pressing concerns for corporate treasurers when it comes to dealing with geopolitical risks?

Gourang: It's the level of uncertainty. The United States is the largest economy in the world and the phrase 'When the US sneezes, the rest of the world catches a cold' has often been quoted. In some senses, this is what is happening now. Businesses usually like certainty before they invest, so until there is more clarity about global trade policy, it will take some time for business spending to recover.

In this environment, typically what happens is that corporate treasurers become more risk-averse. It's like driving in the rain; your visibility goes down. In treasury, if you don't know how your business cash flows will be impacted, you usually tend to increase cash buffers and



consolidate liquidity into your home or functional currency as much as possible. These are some of the actions that a treasurer might take now until there is more clarity on how things will unfold. Risk management is important right now.

Christof: Absolutely, and this is why a modern, state-of-the-art treasury function is so important. You need to ask yourself: are you able to access your global liquidity and bank accounts centrally? Do you have an in-house banking structure in place? Do you get information such as account balances in real-time, or only T+1 or T+2? Have you automated your processes to free up time for strategic decisions? All this is critical in a crisis. Corporate treasury has to take decisions that reflect the strategic decisions made by the management board. If, for example, a company adjusts its supply chains, treasury needs to be able to react quickly and support the business in terms of providing the necessary liquidity, funding and FX hedging. The more automated and centralised your treasury department is, the more reactive and adaptable you are in a crisis.

Cornelia: I fully agree. What's difficult at the moment is that you don't know what will happen tomorrow. But you need clarity, visibility and transparency to make informed decisions.

Desirée: In order to get this transparency, SUSS is currently revamping its treasury setup, introducing a new global cash pooling structure. Could you share some insights on why you are doing this?

Cornelia: At the end of 2024, we started to redesign our treasury structure to increase

transparency, efficiency and control over our global liquidity. Currently we are introducing a new treasury management system (TMS) which allows us to access all relevant treasury data in one place and manage processes centrally. This project is independent of the current situation, but of course, improved control and visibility are helpful in times of uncertainty. Finally, we intend to have a global cash pool to reduce costs.

Desirée: What's the situation like at TE Connectivity?

Magnus: Over the past few years, we have managed to implement an extremely centralised structure. We have a global cash pool where zero balancing pools are feeding a notional pool consolidating cash in over 27 different currencies. Also, China is part of the cash pool: the RMB is swept into Singapore, Singapore sweeps US dollar equivalent to Europe, and Europe then sweeps on to the US. We feel very comfortable with this structure.

Desirée: How far has DP World come in terms of centralising and automating its treasury function?

Ameet: As you mentioned earlier, we are currently growing our freight forwarding business. This business has very different working capital needs to the port business, where you encounter large upfront investments but working capital is light. With logistics and freight forwarding, it's the other way around – operationally intensive, with tighter liquidity cycles – which is why it requires a different treasury approach. That shift has meant rewiring parts of our treasury setup: we're currently migrating to a new treasury management system, and integrating recent acquisitions into a common enterprise resource planning (ERP) and billing framework to give us better visibility and enable more real-time liquidity decisions across the group.

We're also developing an intercompany settlement platform to net payments centrally, manage FX at group level and settle positions periodically – helping us reduce transaction costs and improve FX and liquidity risk management. Moreover, we have also grown by acquisitions in the past.

Desirée: ...which usually goes hand in hand with a lot of integration work for the treasury department to ensure an efficient set-up. ➔

Ameet: Indeed. We are currently integrating these entities onto a common ERP and billing system, and we are moving from our current TMS provider to a new one to support greater scale and control. So, we are deep into this journey, and while there is still some way to go before we reach the level of sophistication we're aiming for, we are getting there. For example, we are setting up a central intercompany settlement platform for our freight forwarding business. The goal is to have treasury net all intercompany payments, execute FX centrally and settle the net positions on a periodic basis – reducing transaction volumes, improving FX efficiency and strengthening liquidity management. As our business diversifies, this level of integration is critical for agility and resilience.

Desirée: *Christof, from what you have heard so far and from your talks with other companies, what are the key priorities for corporate treasurers in a volatile geopolitical environment?*

Christof: I would structure the priorities in two parts: first, responding to structural topics, and second, reviewing the daily business in terms of control and efficiency. (See Figure 1, page 24.)

Structural topics include:

1. Supporting supply chain shifts. De-risking supply chains has been an ongoing topic since the outbreak of the Covid pandemic, and in the light of tariff discussions, these trends could now be intensified.
2. Revisiting the funding strategy. In an ideal world, treasurers usually prefer intercompany loans to finance local subsidiaries, as this is most cost-efficient. But in the light of geopolitical risks, it may make sense in some cases to fund your entities locally, to allow for some independence and flexibility.
3. Reviewing bank partner selection. Clients ask how committed banks are to a certain country and region. They may not want to put all their eggs in one basket, in case a bank pulls out of a certain market due to geopolitical tensions.

Control and efficiency focus on:

1. Navigating investment activity uncertainty. We see that several companies are putting investment plans on hold. Treasurers need to assess the resulting change and uncertainty in their long-term liquidity forecasts.



2. Maximising cash visibility and control. We have touched on this already, but I feel it's important to say it again: without visibility over your global liquidity, effective and timely concentration of cash and sufficient automation, it will be difficult to react to crisis situations or black swan events. Real-time treasury, i.e. getting the relevant information at the relevant point in time, will help to further improve decision-making.
3. Managing interest rate and FX risk. In the light of increased FX volatility and an uncertain outlook for FX markets and the development of interest rates, corporates need to ask themselves whether they need to start hedging positions that were previously considered within their risk appetite. Moreover, structural supply chain shifts may leave established natural hedges ineffective.
4. Navigating a sanctions environment. This topic is particularly pressing in the Russia-Ukraine context. Yet, in general, sanctions risks are constantly increasing and need to be managed for goods as well as for financial flows.

Desirée: *Let's look in more detail at liquidity risk and the question of whether the cash buffer should be increased. Magnus, what's TE Connectivity's view on this?*

Magnus: Our cash buffer is currently lower than usual – but that's due to the fact that we just acquired Richards Manufacturing, a US-based company serving the energy distribution industry. Usually, we run the

company with a €500m cash buffer. In light of market uncertainty, there are discussions on whether to increase this buffer. But so far, nothing has changed.

There are two factors you need to know about TE. First, we are fortunate enough to have an investment-grade rating, which means that we can go to the commercial paper market if we need liquidity. Second, our business is very cash-generating, as our customers are generally very good at paying us on time. This is why, so far, we feel comfortable with our cash management as it is. But we continue to monitor developments closely to ensure we can react quickly if something unusual pops up.

Cornelia: Our cash buffer currently stands at €130m, and for the time being we are keeping it at this level in order to be able to act flexibly in these more volatile times.

Ameet: The same holds true for DP World; we have not significantly changed our cash buffer. We are a global company and have a structure of revolving credit facilities in place with our bank partners. We feel comfortable with this setup.

Christof: Our investment team basically echoes what you have all just said. The situation is very different now to that, for example, during Covid, when every company soaked up liquidity and prepared for the crisis ahead. This time – and I should add that this observation is not evidence-based, but an impression from the market – it feels a bit like business as usual. Obviously, everybody who follows the news knows that's not the case. But there may simply be too much short-term uncertainty to take decisions with a longer-term impact.

Desirée: *Let's look at hedging: could you elaborate on your FX risk management? Has this changed in light of the geopolitical tensions (for example, by adding new tools or redefining risk appetite)?*

Magnus: We try to be where our customers are. So if we have a customer in Germany, we produce in Germany, which means we have 'euro in and euro out'. For intercompany payments, we use intercompany netting – cashless in many cases – wherever possible. So, regardless of what currency our entities have as functional currency, that would be hedged internally – either through a net investment hedge or by offsetting against the exposure of other entities – Christof mentioned natural hedging earlier.

In general, we manage our FX exposure on a daily basis, hedging our cash flow and balance sheet risk with a time horizon of up to 30 days. This is because we are not hedging based on a speculation, we hedge on facts – and for 30 days we have a pretty good view of in- and outflows. Only for commodities, we take a layered hedging approach for 18 months, adjusted on a monthly basis. It's not about foreseeing market behaviours, but rather to smooth out the highs and lows.

One issue we monitor, i.e. in mid-April, is that the US dollar has dropped like a stone. But we are managing this risk as part of the usual hedging routine. One place where we are really seeing a change in terms of currency is in China.

Desirée: *What's the trend you are seeing there?*

Magnus: Over the past months, we have seen an increase in US dollar exposure by our Chinese customers and suppliers – which is odd, because in the current environment you would expect Chinese companies to opt for the renminbi more and more. We have not looked into this trend in great detail yet, given that the RMB is a rather small exposure for us. But if this keeps increasing, we might do a deep dive to explore why this is happening.

Desirée: *Ameet, FX risks will play an increasingly important role for DP World, as you are ramping up your freight forwarding business with local currency billing. Could you elaborate on how this is impacting treasury?*

Ameet: Logistics tends to be a dollar-based industry, which is why we prefer to hedge our FX exposure to the US dollar – to the extent that is allowed by local regulation. Seventy-five percent of our activities are based in emerging markets, and currency controls sometimes don't allow us to repatriate cash or use hedging. In the countries of the Gulf Cooperation Council, which is an important region for us, we benefit from the fact that most of the currencies are pegged to the US dollar, so this geography does not worry us as much. But in the other destinations – in particular in Asia – we hedge FX exposure to the extent that is possible.

Desirée: *SUSS hardly uses local currencies in APAC; your business is largely conducted*

in euros, with your clients carrying the FX risk. So how do you look at FX volatility in terms of potential impact on the business?

Cornelia: As you rightly said, our main business is in euros, but of course there are some currency risks. Even if the US dollar business is not that big, it has an impact on us. In my view, however, the use of hedging instruments for forward transactions is difficult in the current volatile times, as you have to be able to predict future inflows and outflows in different currencies with a sufficiently high degree of certainty in order to get hedge effectiveness. This predictability is currently limited, as a change in the customs situation can also have an impact on the delivery dates for our tools, and therefore on cash flows.

Desirée: *A key focus area for CFOs and treasurers is the structure and resilience of the cross-border funding strategy of subsidiaries. How can this be impacted by heightened geopolitical risks?*

Gourang: It's still in its very early stages, but I am seeing four developments regarding cross-border funding in China:

1. We see certain US companies in China building relationships with non-US

banks to prepare for a situation where US banks may reduce their activities in the country.

2. Certain clients are now looking into local borrowing for their Chinese subsidiaries, to isolate the risk and to benefit from low interest rates in China.
3. Certain Chinese companies have started converting their business flows from US dollars to RMB, which links back to what I said earlier: in a crisis situation, companies tend to convert to their home currencies.
4. In terms of investment, some companies are now going into shorter tenors.

As I said before, this is only true for a few clients so far, but if uncertainty continues for a longer period, these developments could become trends.

Christof: I think this sums it up quite well: we are at a time of uncertainty where the situation can change week by week. So, the key priority for many corporates is to be able to react and prepare for different scenarios. Some treasury departments are better equipped for dealing with geopolitical risks than others due to the centralisation and automation work they have done in the past. Therefore, this situation is yet another wake-up call to get your systems and processes in order. In any case, we will help our clients to get through this period of uncertainty.





How Celanese uses virtual accounts to streamline its cash

US-based speciality materials and chemicals company Celanese is rebuilding its global liquidity structure. Treasury specialists Hugo Rivera and Peter Szucs tell *flow*'s Desirée Buchholz why virtual account solutions play a key role in this project – and what lessons they have learned from peers

From a small shed in a Swiss backyard to a glass skyscraper by the shore of Lake Carolyn in Dallas, Texas; from revolutionising motion picture film to producing materials used in the automotive, consumer electronics, medical, food and many more industries: that is the story of Celanese Corporation in a nutshell.

Obviously, this summary does not do justice to the eventful past of the speciality materials and chemicals company – which today employs more than 11,000 people in 27 countries – and the impressive journey it has undertaken since the early 20th century, when Swiss chemists Camille and Henri Dreyfus started producing cellulose acetate film in Basel.

During World War I, the brothers relocated from Switzerland to the UK to supervise construction of a factory producing cheaper fabric for airplane manufacturing, and in 1918 Camille Dreyfus went to New York, where he founded the predecessor of today's Celanese Corporation. In 1987, control moved back to the 'old continent' with German company Hoechst AG acquiring Celanese Corporation. But only 12 years later, Celanese was spun off over the stock exchange again.

Acquired by private equity group Blackstone in 2004, Celanese was the subject of an initial public offering on the New York Stock Exchange in 2005, and the company developed into what it is today: a global leader in chemistry, producing speciality material solutions used across most major industries and consumer applications – including, for example, electric vehicles, battery energy storage, medical and consumer athletic, to name just a few.

Rethinking the global liquidity structure

Mergers and acquisitions have always been formative for Celanese. For the past 10 years alone, the company lists 12 acquisitions on its website – out of which the November 2022 purchase of the mobility and materials (MM) business from DuPont proved the most challenging for the treasury function.

In retrospect, this acquisition can be described as a trigger moment for the treasury team to rethink its banking and account structure. "It was the right time for us to perform an in-depth review of our liquidity structure," says Hugo Rivera, Global Treasury Director at Celanese. On the one hand, the treasury function had already established "a pretty mature set-up", building on payments and collections

“It was important for us to understand whether beneficiaries had any issues when the peer paid or received funds via a virtual account number

Peter Szucs, Director Treasury Europe, Celanese Corporation

on behalf of (POBO and COBO) and, since 2009, direct Swift connectivity.

Moreover, following the migration to software provider SAP's latest enterprise resource planning (ERP) system S/4HANA – which was completed in spring 2023 – the company ran on a single ERP system, which proved to be "a huge advantage", he adds.

After the MM deal, the number of bank accounts jumped to over 700 in more than 20 currencies. "So, there was a need to introduce a more efficient liquidity structure to minimise the idle cash in the organisation," says Rivera. In Q4 2023, the treasury team kicked off a cash management optimisation project with the following four goals:

1. Reduce the number of cash management providers to two or three per region, out of which one had to serve a cross-regional cash pool from Asia through Europe, ending in the US (for USD).
2. Reduce the number of bank accounts to increase efficiency and lower costs.
3. Increase the number of companies and currencies in the cash pool to improve the visibility and accessibility of cash worldwide.
4. Introduce new technologies to allow for process automation and reduce idle cash on non-pooling bank accounts.

Defining a new banking structure

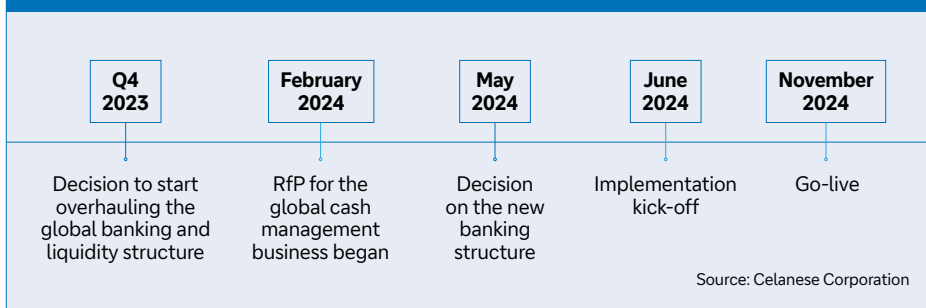
The first step the treasury team took was to set up a Request for Proposal (RfP) to decide how to allocate its cash management business among fewer banks going forward. As part of this process, its relationship banks were invited to present their solutions for the cash management services Celanese uses – in particular POBO, COBO and Swift connectivity for incoming and outgoing communication.

"We also added some additional features, such as the regional expansion of the cash pool and capabilities around application programming interfaces (APIs)," reveals Peter Szucs, Director Treasury Europe at Celanese. "Next to these quantitative measures, customer service and response time were also important as we had a

Figure 1: Celanese Corporation: key facts



Figure 2: Chronology of the cash management optimisation project



tight deadline for implementation, i.e. five months from selection to the go-live.”

Following the RfP, the Celanese treasury team chose Deutsche Bank as their main cash management provider for Europe – adding markets like the UK and Turkey, where the company had formerly worked with other banks. “Deutsche Bank has a strong presence in Europe, which is a great fit for Celanese,” explains Szucs. “The bank was able to cover all the various currencies and services in scope for Europe. Moreover, new features such as APIs and virtual account structures were also available in countries where we have a strong footprint.”

Role of virtual account solutions

As outlined above, Celanese had been using ‘on behalf of’ structures for many years – which allowed the treasury department to decrease the number of accounts significantly. Yet, over this period, the team realised that there were still some bank accounts that were only needed a couple of times a year. This is why it decided to leverage virtual account



One of our aims was to reduce the number of bank accounts to increase efficiency and lower costs

Hugo Rivera, Global Treasury Director, Celanese Corporation

solutions in connection with its existing on behalf of structures (see Figure 3).

“Essentially, virtualisation of the bank account structure removes the need for physical accounts,” explains Paul Mirabelli, Deutsche Bank’s Head of Cash Sales for US Corporates. “Instead, it connects a theoretically unlimited number of unique aliases, or virtual account numbers, to a single (or more if required) traditional

physical master bank account. So, when administrative changes need to be made to an account, like signer edits, or account openings or closures, the process becomes much more efficient.”

Hence, virtualisation immediately improves cash centralisation and process efficiency – thereby helping with all the targets the Celanese treasury team aims to achieve with its cash management project. “Additionally, the maintenance costs of virtual account solutions are lower than with physical accounts, as they don’t require the complete know-your-customer check that is needed with real accounts,” adds Szucs.

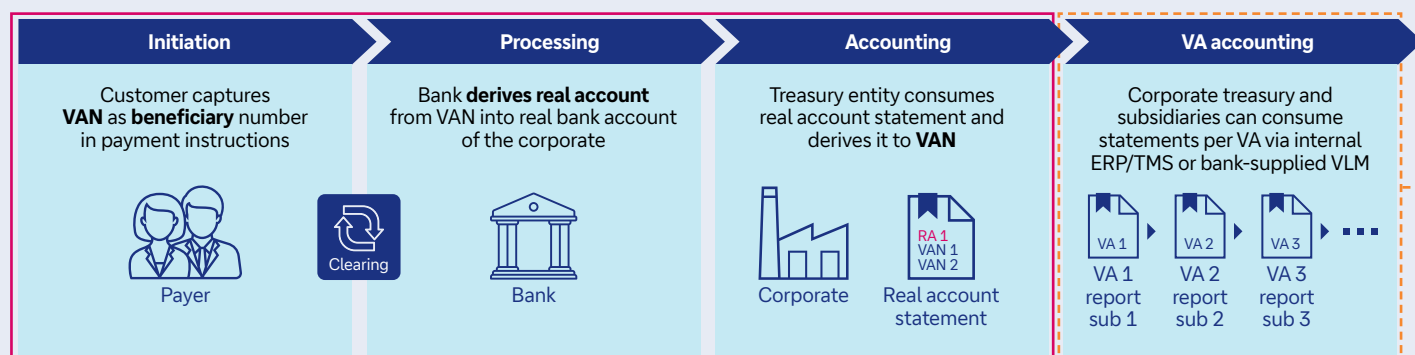
Learning from peers

Before the project kicked off, the company also considered a notional pool to concentrate its global liquidity. With notional pooling, a bank aggregates all participating bank balances into one virtual balance at the end of the day – but without actually moving cash. This allows for cross-currency pooling but has wide-ranging implications on the accounting and tax side.

In the end, the cross-currency aspect was not as important to Celanese. “Over the past few years, we have created efficient ways, such as using natural hedges to minimise the cash balance of the 20-plus currencies we are working with,” says Rivera. “If we don’t consider restricted or non-liquid currencies, we are using 13-plus currencies on a daily basis.” Because of this, “Our ‘on behalf of’ structure, virtual accounts and automation helped even more to decrease the overall number of bank accounts in the group structure.”

Figure 3: Payment process with virtual account numbers (VANs)

Incoming payment for corporate



As part of this evaluation and due diligence, the Celanese treasury team also had calls with peers “to get an independent opinion on services and features that banks can offer,” adds Szucs. “For example, in the case of virtual account solutions, we needed to understand whether beneficiaries (including authorities) had any issues when the peer paid or received funds via a virtual account number.”

His team also talked to fellow treasurers to understand the challenges and the change management associated with implementing virtual account solutions. “We also asked them about reconciliation, because it is important to see how accounting will reconcile the activities and if they are comfortable with the solution.”

Outlook: API and blockchain technology

So how far has the Celanese treasury team come with implementing its new targeted liquidity structure? The first step – revamping its banking landscape – was completed via a ‘big bang’ approach in November 2024. “We had a six-month implementation period to open more than 150 bank accounts, enable Swift connectivity and perform testing of payments and bank statement processing to ensure a successful go-live,” recalls Szucs.

In parallel, the team is currently rolling out virtual account solutions in three different currencies in three Celanese locations in Europe. “We can already see the quick wins, and our review has shown that about 10% of our bank accounts can be converted into virtual account numbers – with the opportunity to increase this further,” Rivera

The acetic acid unit at the Celanese plant in Clear Lake, Texas, US



says. For example, in Europe it may be possible to reduce the number of accounts by approximately 50%.

Yet implementing a structure that aligns with the company's overall business goals and ensures an efficient deployment of cash, reducing set-up times and costs compared to physical accounts, is not a one-time exercise, he adds. As the company grows, technologies evolve

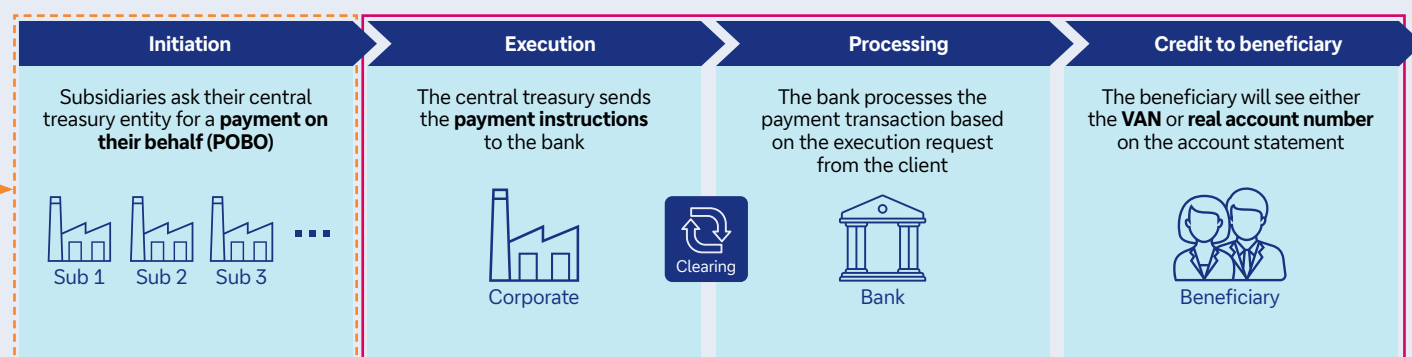
and it is important to stay at the vanguard. “We have put in place a transformation roadmap, where we have highlighted what steps will be taken when,” he says. Implementing API connectivity for real-time reporting and instant payments, and making use of blockchain technology, are just two items on the roadmap. In any case, the exciting ride for the Celanese treasury team will continue.

Images: Celanese

Outgoing payment from corporate

'real' flows/processes

'virtual' flows/processes



Source: Deutsche Bank

How technology is taking treasury into the boardroom

Corporate treasurers will have to embrace innovative technology to meet new challenges facing their departments and rising expectations from the C-suite. Dr Tobias Miarka draws on Crisil Coalition Greenwich research to explain the practical implications



The combination of an accelerating set of macroeconomic challenges and rapid advances in technology has expanded both the mission and the capabilities of corporate treasury departments far beyond their traditional cash management responsibilities.

In Q2 2024, Crisil Coalition Greenwich conducted interviews with more than 120 corporate treasury professionals in Europe, North America and Asia with sales turnover of more than US\$500m. The goal was to understand how the corporate treasury function and the role of the corporate treasurer was changing. More than 80% of respondents said the KPIs used to evaluate their performance have expanded in scope over the past five years (see Figure 1).

We conducted a follow-up study in April 2025 asking ca. 160 treasurers across Europe, North America and Asia how often they participate in C-suite strategic discussions. Between half and three-quarters said they are frequently involved in conversations on topics that fall directly under their remit and are occasionally included in C-suite discussions on other topics, such as corporate financial performance and metrics, geographic expansion and digital transformation.

Why are KPIs changing, and why are treasurers being brought into C-suite discussions more frequently?

First, the business environment has become more complicated. Companies today face a continuously evolving set

of economic and geopolitical issues, including wars in the Middle East and Ukraine, disruptions in supply chains, fast-changing regulations, and uncertainties about economic direction associated with trade policies implemented by the Trump administration in the US. This seemingly permanent 'poly-crisis' requires a heightened focus on risk management and strategic agility in which corporate treasury is expected to play a key role.

Second, the systems powering the modern treasury function available today provide a level of accurate and up-to-date data about companies' liquidity, accounts payable and receivable, inventories, funding situation and financial risks never before available to business leaders.

In short, companies are facing tougher challenges, and corporate treasurers have acquired new capabilities that put them in a unique position to advise the C-suite on how best to address them.

In the short term, with tariffs roiling global markets and inflation remaining above central bank targets in key regions, treasurers can expect to see an increased focus on cash flow forecasting accuracy, days of liquidity available, cost of capital and other measures.

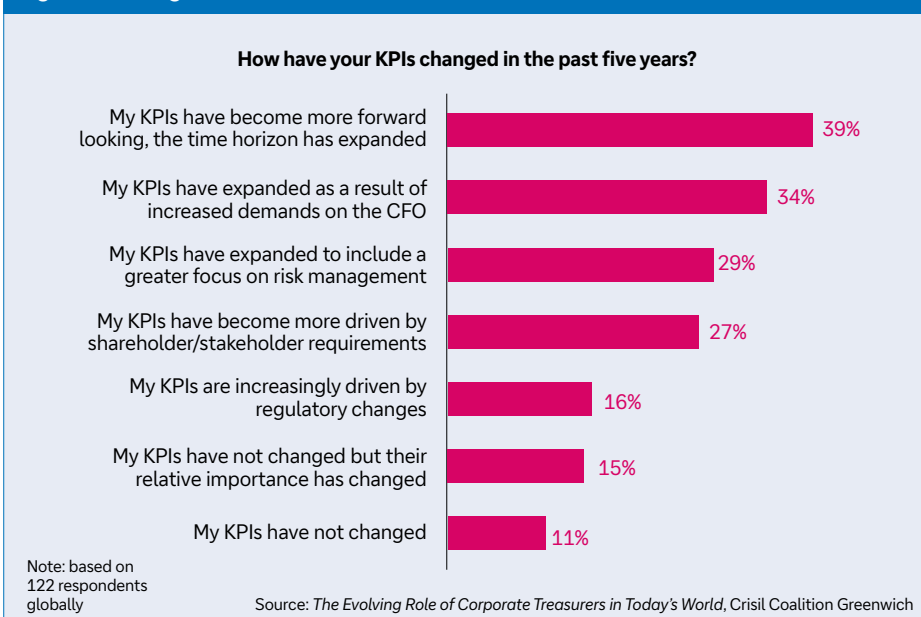
Over a longer timeframe, automation KPIs will likely take centre stage. Key metrics like the percentage of processes handled automatically and the reduction in manual adjustments will serve to highlight the extent to which treasurers are able to minimise manual intervention, increase efficiency and optimise their workflows as companies move towards an emerging 'real-time' treasury model.

Treasury and technology

Few, if any, of the corporate treasurers participating in our research indicated they had any form of relief from their core responsibilities to make room for these new demands. So how can they meet new expectations from the C-suite while also fulfilling their traditional duties? In short: technology.

Technology innovation within companies, on bank digital platforms and across the fintech universe is accelerating the transformation of both treasury departments themselves and the corporate treasury function. It is now up to individual treasurers to use new tools and analytic capabilities to generate efficiencies, data and analysis that both enhance the effectiveness of the treasury department and support strategic conversations.

Figure 1: Change in treasurer KPIs



Practical steps to treasury efficiency

Here are eight practical steps culled from our research, and from conversations with treasurers and treasury staff, that treasurers can take to leverage technology to meet rising expectations:

1. Harness treasury data

Our April 2025 research indicates that 70% of treasurers globally say that real-time treasury data has become critical to improving the treasury function. However, tapping into high-quality data can be a challenge.

Corporate financial data is frequently housed in multiple legacy computer systems that may not interact and sometimes store data in different formats. To some extent, treasury departments need their organisations to eliminate the inefficiencies this causes, but there are steps they can take on their own. AI applications are available that allow companies to source data from different systems, reconcile the data by converting it into a standard format and aggregate it into a single file or system.

2. Move away from spreadsheets

The use of spreadsheets often contributes to increased data fragmentation, with data existing in multiple local spreadsheets in differing versions. This increases risks of error, inconsistencies and out-of-date data, and makes the process of harnessing data

for use in enterprise systems and new AI solutions difficult.

There are levers treasurers can pull to move workflows out of spreadsheets, most of which harness some form of AI. These fall into three main categories:

- **Data extraction:** Treasury departments have access to a host of tools that can help them extract data from spreadsheets. These range in sophistication from simple Excel add-ins to basic robotic process automation (RPA) applications, and finally to more sophisticated machine learning (ML) platforms like Google Cloud AI Platform, Microsoft Azure Machine Learning or Amazon SageMaker that can be used to build custom ML models for data extraction and integration.
- **Data transformation:** Treasury departments can use a variety of specialised AI tools to convert extracted data into a unified, consistent and interoperable format. These include platforms like Talend, Informatica and Microsoft Power BI, all of which provide AI-powered data integration and analytics capabilities, as well as dedicated accounting and finance automation solutions like BlackLine, FloQast and Fides that often include data extraction and integration tools.
- **Data loading:** Once the data has been extracted from spreadsheets

and normalised, the next step is to move it into enterprise software and other technology solutions. Traditionally, this task would have involved basic batch processing techniques. Today, APIs and other data connectors can streamline and accelerate the process.

3. Automate relentlessly

Once companies have secured a reliable stream of treasury data, the real efficiency gains can begin. The first step is to identify the routine, repetitive tasks that consume the time of treasury staff and seek opportunities to automate them. RPA, which uses rule-based software to automate repetitive tasks without the need for human intervention, is now a standard tool in the business world, and treasurers should be using it at every possible opportunity.

As shown in Figure 2, nearly half of corporate treasury departments in the Americas are already using some form of automation, and more than half of treasury functions globally have plans to implement automation tools within the next three years.

4. Lean in on advanced dashboards

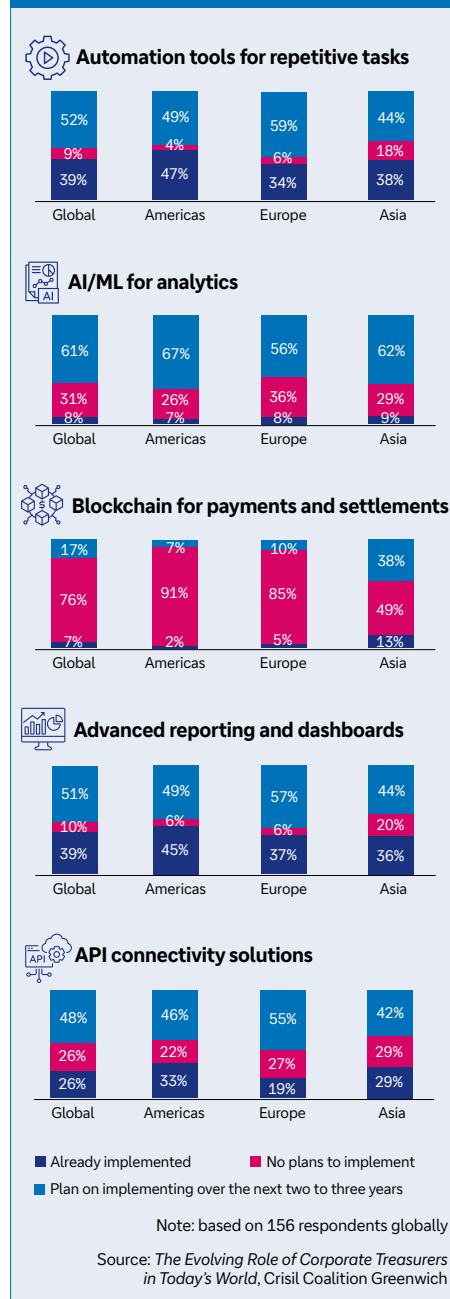
Another relatively easy efficiency enhancement is to switch to advanced reporting systems and dashboards that provide up-to-the-minute updates and allow for real-time analysis. Ask TMS providers and banks if they provide dashboards that can be customised. About half of corporate treasury departments around the world plan to be using advanced reporting and dashboards within three years.

5. Embrace AI- and ML-powered analytics

Analytic systems powered by ML and other types of AI provide unprecedented levels of transparency into cash, liquidity, inventory, funding, hedging, risk management and other core treasury functions. These systems will become increasingly powerful and useful in decision-making as banks and fintech vendors roll out sophisticated predictive analytic models. Existing solutions can analyse huge volumes of data to help identify and quantify credit, market and fraud risks, to run complex scenarios, and to probe correlations in business factors that in the past could not be examined due to constraints on data and analytic power.

Fewer than one in 10 treasury departments worldwide have implemented these solutions, but more than 60% of companies globally expect to implement

Figure 2: Organisations' plans for implementing new technologies



some form of AI/ML-powered analytic solution in the next three years.

6. Push hard on real-time payments

Although most companies are still building out the infrastructure to process real-time payments, treasurers see them as increasingly essential. More than 90% of study participants from Asia rate "the ability to make real-time payments" as a

valuable treasury capability, as do 80% of those in Europe and 71% in the Americas. By accelerating liquidity movement and enabling same-day payments, implementing robust digital payment capabilities can significantly enhance efficiency in cash management.

7. Insist on APIs

Digital platforms alleviate many of the traditional pain points companies experience around onboarding and reduce the time it takes to accomplish basic tasks in cash management and trade finance. To take advantage of these features, treasury departments need seamless connections that support real-time transaction data. In most cases, that will come from API solutions. About a quarter of companies we interviewed globally are already using APIs, and nearly half intend to be doing so in three years' time.

8. Take a hands-on approach to technology and talent

Some treasurers looking for efficiency gains have been disappointed with initial results of technology upgrades. Often, those disappointments stem from the perennial challenge of implementing new technology to replace or enhance legacy systems without disrupting day-to-day workflows. Treasurers must commit to proactively managing technology development strategy and implementation, and play a prominent role in ensuring that treasury staff actually adopt new technology tools and integrate them into workflows.

Moreover, roughly a third of treasurers interviewed globally say they are almost never involved in conversations with senior leadership about talent management and organisational development. This needs to change. Treasurers must be fully engaged in the company's human capital strategy to ensure that the fast-changing treasury function is supported by professionals with the skills and competencies required to meet new expectations and balance operational excellence with strategic insight.

Dr Tobias Miarka leads Crisil Coalition Greenwich Corporate Banking research globally and advises international as well as domestic banks on strategic client service and product issues that result in profit-enhancing and sustainable solutions. He is also affiliated with the ESCP Business School, where he teaches Banking- and Fintech-related subjects as part of the school's Master in Management programme

Direction of travel

Cross-border payments need to become faster, cheaper, more transparent and more accessible – that’s what G20 leaders asked for in 2020. But what has happened since then, and what is the rate of progress? *flow*’s Desirée Buchholz met Ulrich Bindseil, who has been at the centre of the initiative over the past few years, to find out



In November 2020, G20 members endorsed a Roadmap for Enhancing Cross-border Payments. It sets quantitative targets to lower the costs, increase the speed and improve the accessibility and transparency of international payments by the end of 2027 (see Figure 1 on page 37).

On 21 February 2025, *flow*’s Desirée Buchholz and Paula Roels, Head of Swift & Industry Engagements at Deutsche Bank Corporate Bank, met Ulrich Bindseil, who was then Director General for Market Infrastructures and Payments at the European Central Bank (ECB). Topics for discussion included the collaboration between public authorities and private banks to achieve the targets, why consistent ISO 20022 implementation is key, and how instant payment systems could be a game-changer.

Translating theory into action

Bindseil, who left the ECB at the end of June 2025 to take up a new challenge, kicked off by explaining why – in his view – all the earlier initiatives to improve cross-border payments were incorporated into one comprehensive roadmap in 2020:

- First, cross-border payment volumes were growing faster than global GDP and continue to do so, driven by cross-border trade flows and labour migration. Therefore, the total welfare cost of inefficiency in cross-border payments had increased;
- Second, he acknowledged frustration that the spectacular drop in IT and telecommunications costs did not result in decreasing fees for cross-border payments. “So, it was clear that some public action was needed, including in areas under the responsibility of regulators, so as to encourage initiative by the regulated private sector,” he said;
- Finally, he believed that the “memorable announcement by Facebook” in June 2019 that it intended to launch Libra – a multicurrency stablecoin for general cross-border payments – served as a “wake-up call to central banks and policymakers”.

While there are numerous international organisations involved in the G20 work, the overall lead organisation is the Financial Stability Board (FSB), which was set up after the 2008–2009 global financial crisis

to promote international financial stability. The FSB coordinates the G20 work in close collaboration with the Committee on Payments and Market Infrastructures (CPMI), which is part of the Bank for International Settlements.

Until March 2025, Bindseil was the Chair of the CPMI’s payments interoperability and extension (PIE) task force, which was founded to facilitate regular collaboration between the public and private sectors and translate theory into action. The public authorities set the legal, regulatory and compliance framework – “and the high costs and slow speed of cross-border payments are, in fairness, partly due to the complexity of compliance with various rules across jurisdictions,” he admitted. “It is for governments, regulators and supervisory bodies to ensure not only the effectiveness, but also the feasibility and efficiency of compliance.”

The second function of the public sector in cross-border payments is that it runs real-time gross settlement (RTGS) systems, and sometimes, like the Eurosystem, fast payment systems (FPS), Bindseil added. “But all the other tasks in cross-border payments are performed by commercial

Ulrich Bindseil,
former Director
General for Market
Infrastructures and
Payments, ECB



banks and non-bank payment service providers,” which is why the PIE task force was established to “find ways to incentivise the private sector to make cross-border payments faster, cheaper, more transparent and more accessible”.

The role of ISO 20022

A key tool for improving cross-border payments is messaging, i.e. the use of ISO 20022. “The ISO 20022 messages are richer in terms of data fields and therefore – if used properly – allow for straight-through processing of global payments,” Bindseil explained.

But realising its benefits requires two steps, he added: “First, technical migration to the new format; second, its actual use, with all relevant fields consistently populated and following agreed market practices. Currently, we can still see an inconsistent implementation of ISO 20022, and this undermines some of its benefits for cross-border payments.”

This view was backed up by the findings of a February 2025 report published by the second PIE task team, under the lead of Deutsche Bank’s Paula Roels. It showed that several market infrastructures need to ramp up their work to align with the CPMI harmonised data requirements for ISO 20022 messages. The report also outlined the necessary steps for each jurisdiction to

“
Even though it looks as if not all the targets will be met in time, I remain convinced that setting them was necessary to further improve cross-border payments

Ulrich Bindseil, former Director General for Market Infrastructures and Payments, European Central Bank

align with the data requirements, covering nearly 50 payment systems worldwide. “Most cross-border payments reports take an aggregate approach – but with this report, each community can really see where it needs to get better. This level of transparency supports momentum for improving alignment,” Bindseil commented.

Extending faster payments

Another task team within the PIE task force is looking at the role of faster payments in achieving the G20’s goals. “The beauty of

FPS is not only that they are fast, but also that they operate 24/7,” Bindseil said. This is important, because the earlier work on the G20 roadmap had shown how limited or misaligned operating hours in RTGS globally can delay payment processing.

While this is not the case for FPS, “you need some form of linking between the systems,” he added. Therefore, one of the task team recommendations is that FPS operators should always foresee so-called one-leg-out (OLO) schemes. In principle, these are message formats that cover the cross-border dimension. “Ideally, these OLO schemes are naturally deployed to all current participants and do not require new onboarding.”

Another recommendation is that interoperability should be promoted through common standards, such as effective ISO 20022 use. “In fact, the work for global market practices that has been done for RTGS now needs to be replicated for FPS,” Bindseil said. This has already started with the relaunch of the instant payments plus group, chaired by the ECB’s Jean Clement.

Moreover, the task team has asked regulatory authorities to prioritise the harmonisation of AML and sanctions screening requirements so that the private sector can screen payments more efficiently. This is because any manual intervention is an impediment when it comes to faster payments, adding to the cost and time of processing.

Asked whether he expects FPS to replace RTGS in the long run – given that FPS would solve many of the shortcomings of RTGS, such as limited operating hours and lack of speed – Bindseil said that while instant payments volumes are increasing and are also gradually moving into the corporate space, there would be no talks to replace RTGS. “Banks typically have their liquidity in the RTGS system and put some money on a technical account for instant payments,” he explained. “If we moved everything to instant payments, the architecture of liquidity pools would need to be changed.”

Tracking progress

Returning to the big picture, the roadmap sets quantitative targets for 2027. For example, 75% of cross-border wholesale payments should be credited within one hour of initiation, the rest within one business day.

Asked whether the targets will be reached, Bindseil said: “The targets were

set to be ambitious and to initiate a process. So, even though it looks as if not all the targets will be met in time, I remain convinced that setting them was necessary to further improve cross-border payments.” He pinpoints the geopolitical situation as one reason for progress being slower than expected. “Cross-border payments rely on international cooperation, and this is not really what we see improving these days. Yet, it makes the work of the G20 even more important.”

Moreover, he stressed that it should be acknowledged that when the targets were set, the industry did not have the quality and granularity of data on cross-border payments it has now. For wholesale payments, for example, the goal of 75% within an hour would easily be reached as far as the payment network between banks is concerned, “but we learned that the real challenge lies in the so-called ‘last mile’; that is, the crediting of the ultimate client account to allow the usage of the funds, after the bank has received the funds through an interbank payment”. This delay can also be due to domestic regulations. So, the industry and authorities now

Further reading

For more background on the G20 roadmap, download the September 2024 flow whitepaper *G20 Roadmap: Forging a path to enhanced cross-border payments*



need to focus on that last mile to further speed up cross-border payments through correspondent banking.

Yet, drawing on the results of the FSB’s annual report, which tracks key performance indicators on cost, speed, transparency and access, Bindseil also highlighted several positive developments:

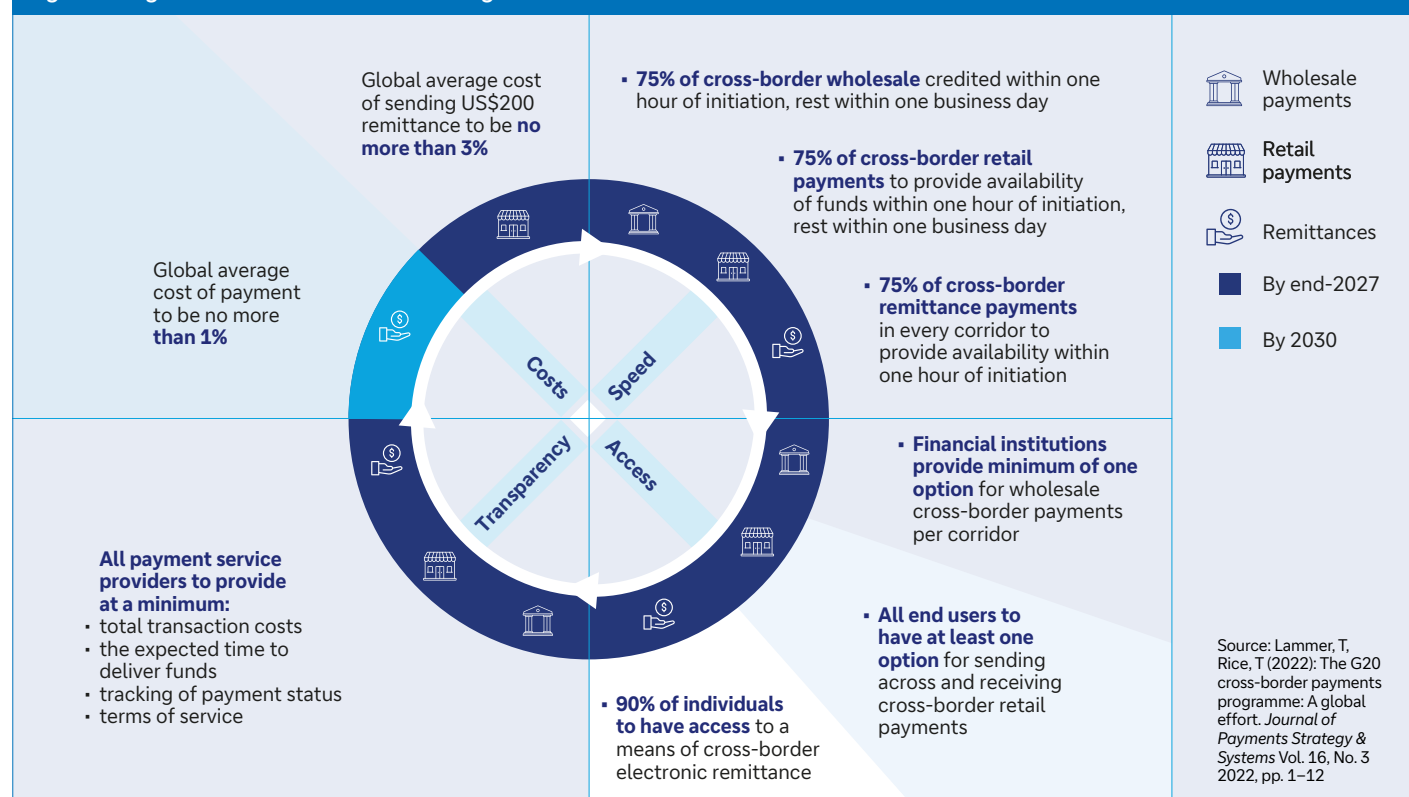
- Processing time of wholesale payments improved across almost all regions.
- Improvements in retail payment access were observed in the Asia-Pacific region, and transparency on cost and speed improved across all use cases.
- Digital remittances cost significantly less than cash remittances and have the potential to approach the 3% target.

ISO 20022 adoption needs to be pushed further

Ulrich Bindseil

In order to come closer to the G20 targets by 2027, Bindseil felt that “we need to intensify implementation efforts at the jurisdiction, system and stakeholder levels, including private sector parties. In particular, ISO 20022 adoption needs to be pushed further, and FPS interlinking should be implemented for additional currency pairs and through multilateral links.”

Figure 1: High-level overview of the G20 targets



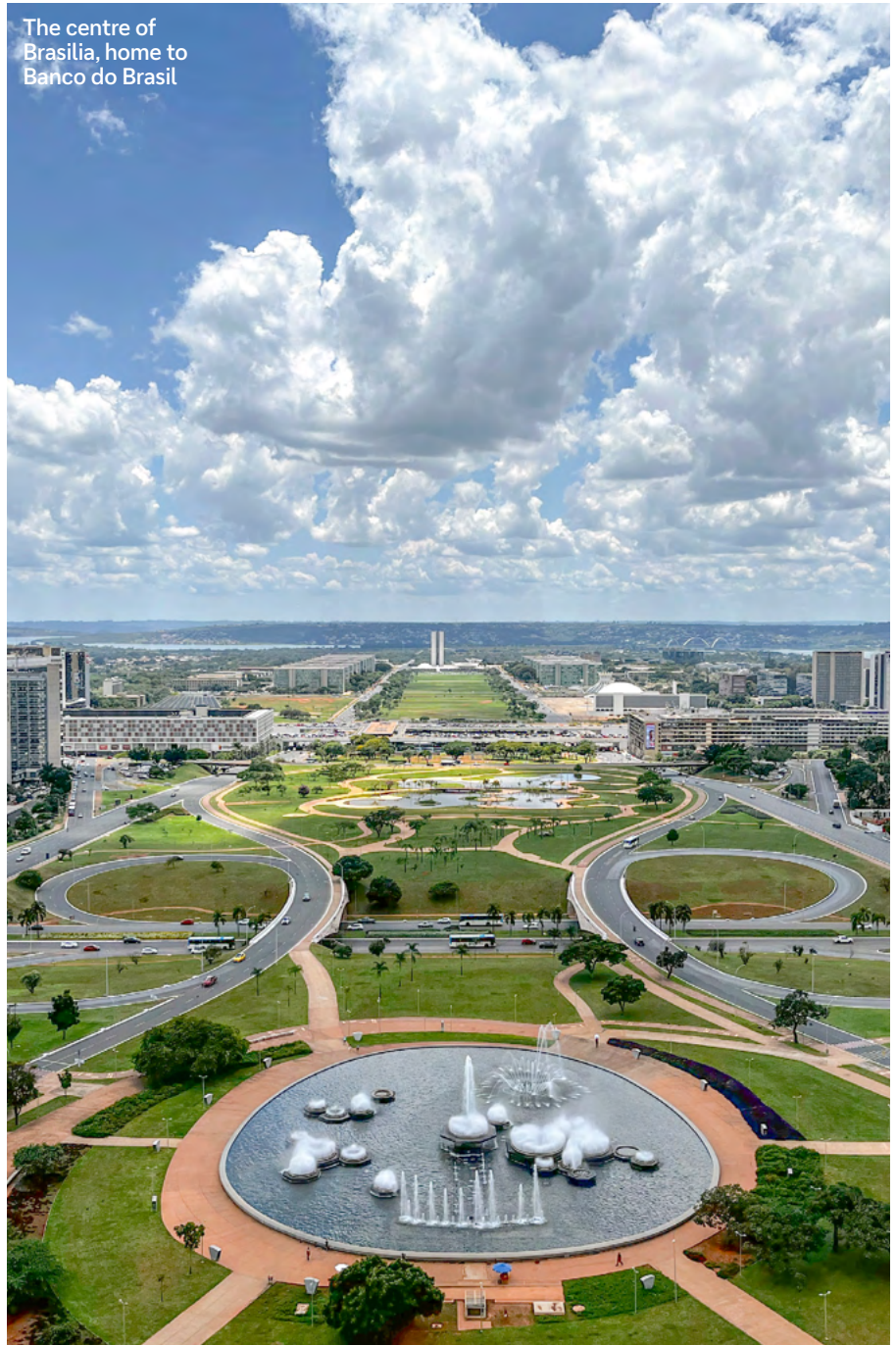
Brazil's gateway to global trade

How can Brazilian businesses finance cross-border trade in a volatile global landscape? Drawing on the example of Banco do Brasil – the country's second-largest bank – *flow* explores the role that correspondent banking plays in enabling these transactions

How do you finance the import of solar panels from Germany into São Paulo? Or enable a Brazilian airline to source major engine parts from overseas suppliers? What about helping Brazilian farmers to export soybeans to Asia, or supporting Rio's clothing retailers in buying new lines from Paris?

The solutions lie in correspondent banking – the backbone of international trade and payments. This global network of interbank relationships facilitates cross-border transactions by providing banks with access to financial services such as cross-border payments and trade finance in jurisdictions where they might not have a direct presence. This particularly assists emerging markets, where correspondent banking plays a major role in supporting trade flows, expanding financial inclusion and fostering global economic integration.

For banking institutions such as Banco do Brasil – the second-largest banking institution in Brazil – that rely on those services for international treasury



Images: iStock

operations, including money market transactions, trade finance solutions and interbank deposits, “correspondent banking relationships are foundational to Brazil’s integration with the global economy,” João Fruet, Director at Banco do Brasil, tells *flow*. “These relationships facilitate international trade, which represents a significant portion of our gross domestic product and supports millions of jobs across various sectors, particularly in agribusiness, where Brazil is a global leader.”

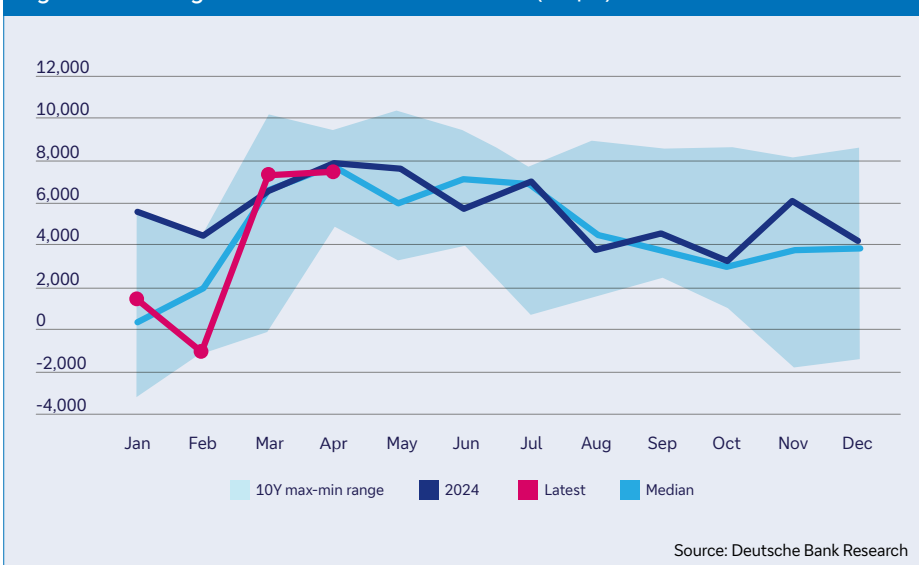
Brazil and global trade

As Latin America’s largest economy (and one of the world’s five major developing economies dubbed the BRICS), the country’s import profile reflects an economy in industrial transition and consumerist expansion, with imported goods ranging from heavy machinery, electronics and industrial chemicals to pharmaceuticals and refined petroleum products – all of which are vital to Brazil’s ongoing industrial development and growing consumer base.

Brazil’s top exports – soybeans, crude oil, iron ore, raw sugar and corn – are also essential commodities for global supply chains, fuelling demand from key large trading partners such as China, the US and the EU.

Over the past two decades, China has emerged as Brazil’s largest trading partner, accounting for 28% of exports and 24% of imports to Brazil in 2024, resulting in a surplus of US\$30.7bn, as data from Deutsche Bank Research shows. The EU is the country’s second-largest trade partner in goods, but Europe’s share of trade with Brazil has declined relative to the China-led boom, as the bank’s Research Analyst JP Schuchter points out. Looking at the US, Brazil had a deficit of US\$283m with

Figure 1: Brazil’s global trade balance 2024–2025 (US\$m)



the world’s largest economy in 2024, “the lowest deficit registered since the Great Recession of 2008, prior to which Brazil had trade surpluses with the US,” Schuchter adds.

There are signs that the China-led trade boom could continue. First, the two countries signed 37 acts to strengthen collaboration in fields such as agriculture, trade, investment, infrastructure and finance during the state visit of the President of the People’s Republic of China, Xi Jinping, to Brazil in November 2024.

Second, Brazil could benefit from the changing global tariff regime. In the past, China mainly used to buy agricultural products from the US, but following the introduction of tariffs on all US imports, China could now seek to diversify the source of its supplies.

One immediate impact has been to spur on Brazil’s agricultural sector, with China importing record levels of soy in Q1 2025 – leading to a surge in export volumes for March following a subdued start to the year (see Figure 1). While Brazil may see some short-term gains, the longer-term impact – and how global supply chains might be reshaped as a result – is not yet clear.

The changing trade patterns are also impacting local banks. Banco do Brasil’s international strategy, for instance, is firmly rooted in supporting two key client segments: local companies expanding abroad and foreign corporates engaged in Brazil-related business. Achieving this requires not only global reach, but also

capabilities that extend beyond the bank’s existing infrastructure. This is where correspondent banking comes into play.

“Our international structure is organised around three main liquidity centres that function as agencies: New York covers North and Central America, London handles Europe and Arab regions, and Tokyo manages Asia-Pacific relationships,” Fruet explains. “With our balanced credit portfolio across agribusiness, corporate and retail segments, effective correspondent banking services are essential for financing international operations. These relationships also support capital flows into Brazil, including foreign investments in our sustainable development projects.” For instance, Banco do Brasil has leveraged R\$800m (US\$140m) into R\$5bn (US\$870m) through the Brazilian government’s Eco Invest programme, enabling its application in projects with environmental and social benefits.

Navigating de-risking

Yet correspondent banking has not escaped the impacts of today’s increasingly uncertain global environment. Over the past decade, there has been a sustained trend of de-risking among correspondent banks, with financial institutions limiting or severing relationships with certain clients or client categories to reduce exposure to risks related to financial crime such as money laundering, terrorist financing, corruption and bribery. A recent report by the Bank for International



Settlements revealed that Latin America and the Caribbean had experienced the largest decrease of active correspondents between 2011 and 2022.

Why is that the case? According to Deutsche Bank Research's *LatAm Outlook 2025*, Brazil is one of the most vulnerable emerging markets when it comes to adverse growth and fiscal reforms, with the government's current strategy of expanding middle-class income transfers risking fiscal instability, higher inflation and weaker currency performance – all of which serves to heighten the perceived risk for international banks.

While some banks see risk as black and white, Deutsche Bank has taken a more nuanced approach. For example, the bank is enhancing its partnership programmes to better support financial institutions in high-risk markets, offering guidance to help improve risk management and reduce exposure (see the *flow* article 'An ecosystem approach to limit de-risking').

"Jurisdictions that are considered high-risk shouldn't automatically preclude engagement," says Trish Sullivan, Global Head of Institutional Cash Management, Deutsche Bank. "With the right governance, risk appetite, financial crime risk controls and transactional insight, banks can manage risk dynamically. That's why we're highly deliberate in choosing our partners – working only with institutions that demonstrate the same rigour we apply ourselves in serving our communities. It's about building long-term, resilient relationships, not looking for blanket risk avoidance."

Choosing the right partner

At the same time, respondent banks are evolving their own strategies. "Over

the past 10 years we have witnessed consolidation among global correspondent banks, resulting in fewer but deeper relationships," confirms Banco do Brasil's Fruet. "This trend has influenced our approach to partner selection, focusing on relationships that offer comprehensive solutions rather than maintaining numerous limited connections."

The bank has not only rationalised its international footprint and reinforced its risk and compliance frameworks, but has also increased its reliance on trusted correspondent partners – deepening ties with institutions such as Deutsche Bank. "We have expanded beyond traditional services into areas like Euro clearing and structured products. This approach ensures we maintain critical services while optimising our international banking relationships," explains Fruet.

In selecting a correspondent banking partner to meet both current and future needs, Banco do Brasil now considers several key criteria:

- **Local understanding and adaptability.**

The bank prioritises partners with a deep understanding of Brazil's economic landscape and the flexibility to tailor services accordingly. This includes support for sustainable finance initiatives, with Banco do Brasil having already deployed approximately R\$400bn (US\$70bn) in ESG-related transactions in areas such as carbon credits.

- **Technological integration.** As it expands its digital capabilities, Banco do Brasil seeks partners with strong application programming interface connectivity and real-time processing to enable seamless operational efficiency.

- **Regulatory compliance support.** In a landscape of diverse global financial regulations, Banco do Brasil values partners who can help navigate complexity while maintaining efficient and reliable services.

- **Funding diversification solutions.**

Correspondent banks that offer competitive pricing and access to innovative structured products are seen as essential to supporting Banco do Brasil's funding diversification strategy.

These criteria are more than a checklist – they actively shape Banco do Brasil's global partnerships. "Deutsche Bank's integrated approach to cash management and trade finance has provided us with increased operational efficiency," adds Fruet. "This integration has been particularly valuable for our international operations, where we require seamless coordination between payment processing and trade finance services."

In an environment of de-risking and accelerating consolidation, long-term correspondent banking relationships continue to prove their enduring value. These partnerships underpin the sustained success of businesses in Brazil and, more broadly, the country's real economy.

"As a key emerging global trade corridor, it's clear that we need more – not fewer – links between Brazil and the rest of the world," concludes Sullivan. "Deutsche Bank is the gateway to Europe and beyond and we are committed to supporting Banco do Brasil for the long term, with correspondent banking services that are underpinned by robust risk management and a strong compliance framework."



São Paulo, the financial capital of Brazil

Image: iStock

Trade Finance and Lending

The inside track on the financing of infrastructure and the energy transition – plus the big questions about the future of the Arctic

Energy transition

How KME is financing increased production of copper 42–45

Infrastructure investment

Export finance is driving major projects in West Africa 46–49

Arctic Circle

The battle to control resources on, and under, the ice caps 50–53

Water security

The dam that provides water to the people of Hong Kong 54–55

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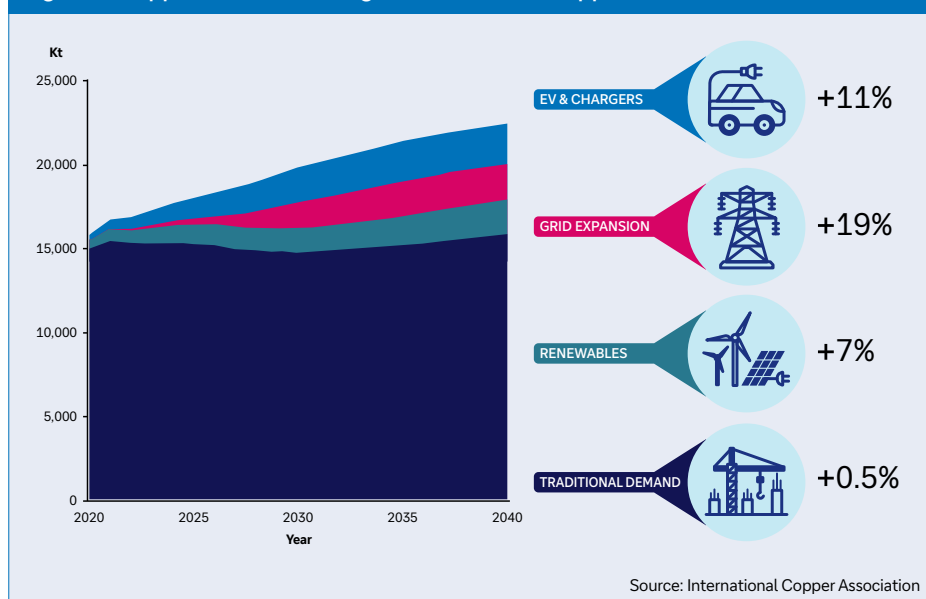
How copper is fuelling the digital age

Copper is one of the key energy transition metals and an essential component of the digital revolution, so its availability is closely scrutinised. Ivan Castano Freeman looks at the uses of this versatile metal and talks to copper processor KME Group about financing its production

Mankind has been using copper for 9,000 years, with ancient civilisations fashioning it into coins, jewellery and tools. Several millennia later, during the Industrial Revolution, entrepreneurs employed it for electrical wiring and machinery.

Today, this base metal is the main component powering the digital revolution, the energy transition and AI chatbots, making it the third most-used metal globally, after iron and aluminium. As a result, demand is brisk; some observers

Figure 1: Copper cable demand: green vs traditional applications



predict that order books will swell by up to 30% by 2029 and even double by 2045, as more electric vehicles (EVs) hit the roads, new renewable energy infrastructure is installed and AI data centres continue to multiply, sucking up vast amounts of energy (see Figure 1).

Copper is an excellent electricity conductor, which is why it is in huge demand from the energy and IT industries. Its soft and malleable qualities make it an essential component of electrical wiring, industrial machinery, EV batteries, and solar and wind power infrastructure. Myriad electronic devices benefit from its high conductivity to transfer electronic signals between intricate circuits.

The world's largest copper mines are in Chile, Peru, the Democratic Republic of the Congo (DRC), China and the US. Chile and Peru are by far the biggest producers, while China is the biggest buyer, employing copper in its huge property, construction and automotive industries.

"We know for sure that in the medium term, the market will grow a lot," enthuses Pierpaolo Di Fabio, CFO of German-Italian copper processing group KME, which is quickly growing its working capital facilities to gain expansion funding. "In three to five years, we expect at least 20–30% growth. And in the next 20 years, worldwide copper demand could double to 50 million metric tons (mmt) [per year]." That should bode well for the metal, which mainly trades on the London Metal

Exchange (LME) and whose price surged from US\$6,000/mt (metric ton) in 2020 to approximately US\$9,000/mt in 2024.

Industrial revolutions and evolutions

Milan-based KME manufactures a wide range of rolled copper and copper alloy products for diverse business applications. It produced ca. 200,000mt in 2023, generating sales of €1.9bn, and currently employs around 3,400 people and operates eight production facilities spread across Germany, France, Italy and the Netherlands.

The company has travelled far since its beginnings in 1886 in Italy as SMI, which began selling copper to feed the Second Industrial Revolution (1870–1914). It expanded further with the growth of the automobile industry in the 1920s and 30s, which benefitted from copper's thermal and anti-corrosion qualities. Further down the road, the enterprise began selling products to cool heavy machinery as well as for the booming construction sector, including plumbing and roofing materials. In the 1950s, the appearance of televisions and new household appliances also increased demand for its products. Nowadays, the bulk of KME's operations are focused on selling processed copper for modern electronics such as computers and cellphones, for AI data centres and for aerospace applications.

The company embarked on a series of acquisitions in the 1980s as add-ons to the existing Italian operations (Europa Metalli).

A key milestone occurred in 1987 when the firm bought Tréfinmétaux from French state-owned copper and aluminium group Pechiney. Other acquisitions followed: Kabelmetal AG and Stolberger Metallwerke (both based in Germany), LOCSA (Spain) and Yorkshire Copper Tube (UK). The company was officially named KME (taking the name of the most recognised German subsidiary) in 2006.

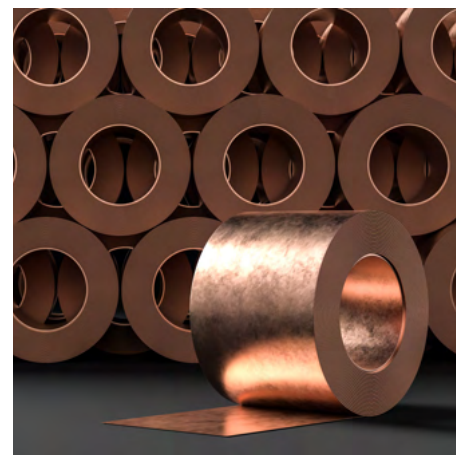
Targeting electrification

In another acquisition spree launched in 2019, KME bought full or partial stakes in European rivals such as MKM, Ilnor, Aurubis Zutphen, AML and, most recently, Sundwiger. Simultaneously, it started unwinding its less profitable copper-for-building franchise, which once comprised the lion's share of its business. All of this transformed KME into a leading European supplier of rolled copper targeting the booming electronics sector.

"We knew the market was trending towards electrification and energy transition, so we began selling our brass rods and tubes business," explains Di Fabio, who joined the firm in 2006 as a corporate director of finance and treasury. "Today, more than 90% of our sales are rolled copper – mainly to customers

“We knew the market was trending towards electrification and energy transition

Pierpaolo Di Fabio, CFO, KME SpA



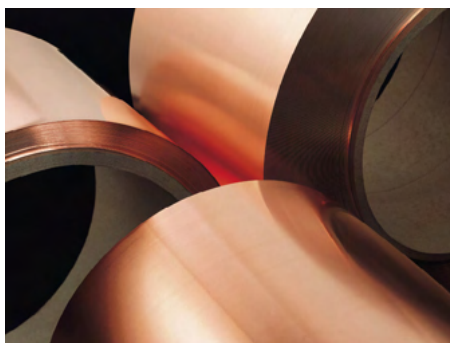
in the EU – and less than 10% are related to building applications.”

KME sells its products to around 5,000 customers worldwide, including leading electronics, digital infrastructure, and transport- and aerospace-related firms.

In recent years, it has been working to improve the ESG profile of its foundries, mainly by boosting copper recycling. In 2023, around 43% of output stemmed from reused copper, says Di Fabio, adding that KME has moved to streamline its foundries and raw copper processing facilities to achieve its environmental goals. The firm has also significantly reduced water usage and replaced gas furnaces with more environmentally friendly electric ones. According to Di Fabio, KME is on track to achieve its ambitious ESG targets by 2030.

Increased credit facility

In November 2023, KME announced it had enlarged an existing borrowing base trade finance facility (BBF) to €460m with a banking syndicate coordinated by Deutsche Bank as mandated lead arranger. BNP Paribas, Intesa Sanpaolo and Banca Nazionale del Lavoro acted as sustainability coordinators for the newly enlarged banking pool. Simultaneously, KME extended €376.5m of factoring lines. The €460m, which bolstered the BBF by €130m compared with the expiring credit line, is



“The BBF supports the working capital requirements in a flexible way

Barry Pieters, Head of Natural Resource Finance Amsterdam, Deutsche Bank

available on a revolving basis and matures on 30 November 2025. The agreement also provided an additional one-year extension option on lenders’ consent. KME says the accord included sustainability-linked provisions and “confirmed the flexible structure of the facility” to cope with the group’s working capital needs, primarily linked to inventory.

“The BBF is really important,” says Di Fabio, who worked as a treasurer and financial manager at GE Power Controls (now part of GE Vernova) before joining KME. “We use it to finance our inventory cycle and to enable us to cope with fluctuating copper prices, while we mainly use non-recourse factoring to finance our receivables.”

Deutsche Bank’s Barry Pieters, Head of Natural Resource Finance Amsterdam, confirms that the BBF is the cornerstone funding programme for KME’s business. “It supports the working capital requirements in a flexible way,” he says. “Deutsche Bank has been acting as sole coordinating bank and facility agent for the borrowing base facility for more than 10 years – a testimony to a great collaboration.”

Data centre surge

The expansion of the facility, collateralised by KME’s inventory and receivables, provided the firm with liquidity at a time



Images: iStock, KME SpA

when copper demand is set to surge amid soaring electricity demand to support the world's ever-growing appetite for AI. Indeed, demand is so huge that AI data centres in the US struggle to cope.

AI will clearly require a tremendous amount of computing power in the future, meaning that more copper will be needed to make high-performance computing motherboards that use it for quick data transfer while keeping systems cool. The US's fledgling Stargate project, which envisages US\$500bn of investments from OpenAI, SoftBank and Oracle to build new AI infrastructure in the country, is also expected to bolster future demand.

Market recovery

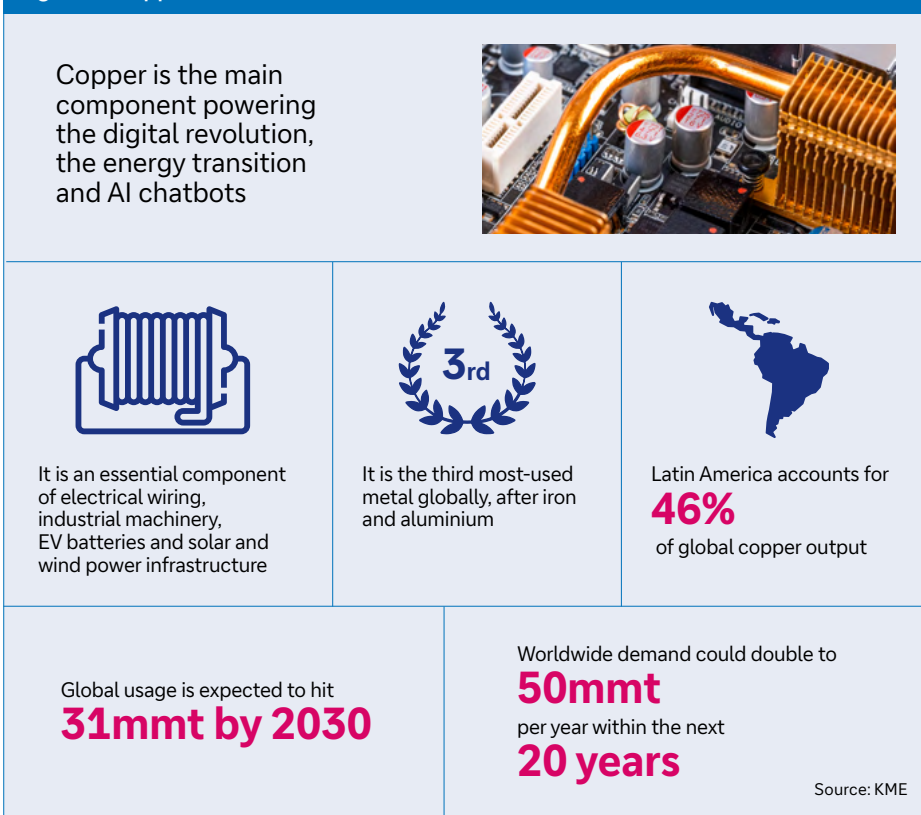
Meanwhile, Deutsche Bank Research analysts see global copper mining activity increasing in 2025 but caution that it is "heavily exposed to a global trade war". They note that, because the US is a net importer of copper, the threat of tariffs following last November's US election result had by January 2025 already led to the price of copper rising by more than a US\$300/mt premium (around 3%) to LME pricing. What happens next will, the analysts add, "depend on how tariffs are applied and potential exemptions for copper-producing countries".

The world supply of copper should rise by around 4.2% each year up to 2030 from the 22.9mmt anticipated for 2024, with the top five producing countries being Chile, the DRC, Russia, Zambia and China, according to a report by Research and Markets. Latin American mining projects, notably Tia Maria, Zafranal and Michiquillay (which, between them, will add 450,000mt of new capacity to the global supply network), will fuel the gains, the report adds.

Latin America accounts for 46% of global copper output and 40% of reserves. It is expected to garner almost US\$100bn by 2030 as 20 mining projects get under way in Peru, Chile, Argentina, Mexico, Ecuador and Brazil, according to KPMG.

"We are seeing the vast majority of global copper investment going to Latin America," confirms Henry Ziemer, an associate fellow at the Center for Strategic and International Studies. Chile alone attracted US\$680m last year; the world's largest producer churned out 5mmt of copper in 2023 (most of it produced by top supplier Codelco), while Peru made 2.5mmt, according to Ziemer. The other leading producer, Australia, delivered 1mmt.

Figure 2: Copper facts and statistics



Some analysts worry that US tariffs could sap demand and discourage investments, prompting the globe's largest miners such as BHP (which runs the world's biggest copper mine in Escondida, Chile), Rio Tinto and Anglo American to dial back spending on fledgling projects.

But Ziemer does not see President Trump's trade agenda hurting that much. "I am not sure it will delay any projects," he says, adding that global demand should remain brisk, boosting Latin American production to account for 47% of the world's 31mmt expected usage by 2030.



No risk of a shortage

Meanwhile, KME's Di Fabio dismisses claims that the world is facing a copper shortage, saying a lot of inventory is unaccounted for. "There's enough copper out there," he notes. "Two years ago, there was an expectation that 2025 would see shortages, but that hasn't happened."

Nimble suppliers such as KME can also quickly reshuffle inventory to meet demand spikes for certain industrial products. "You can allocate your machinery and capacity to target the most popular product," he explains. "That way, you only make the product that is more in demand and more profitable."

Recycling should also keep stocks in abundance. "Every year, all new copper that goes into the market is in addition to the overall stock that can be recycled," Di Fabio points out. "Potentially, in 50 years, there may not be a need for mining because there will be so much product that can be recycled."

Ivan Castano Freeman is a freelance financial journalist based in the US

Building essential infrastructure in West Africa

As West African countries have built their economies, it has often been a lack of infrastructure that has held them back. *flow's* Clarissa Dann looks at the trading history of Nigeria and Cameroon and shares case studies of how export finance has enabled improved electricity supplies and a vital road

Siemens Energy is working to improve Nigeria's electricity supply



Sean Manley (left), Siemens Energy Project Director, Presidential Power Initiative, and Oladayo Orolu, Siemens Energy Regional Director for Grid Technologies Sales



Images: Siemens Energy

Situated in the crook of the West African coastline, Nigeria and Cameroon share not just a 1,700km border, but also a longstanding economic relationship influenced by historical ties, geographical proximity and economic trends.

Early trade relations between the two countries were limited because of inadequate infrastructure, border security concerns and divergent economic policies. During the oil boom of the 1970s, Nigeria experienced rapid economic growth, but trade with Cameroon did not increase. “Although there was a slight rise in Cameroon’s dependence on Nigerian imports – primarily due to Nigeria’s dominant industrial sector – high tariffs and existing border tensions hindered deeper economic collaboration,” reflects Yemi Kale, Afreximbank’s Chief Economist.

He continues, “Over time, economic cooperation grew, especially in key sectors such as oil and gas, agriculture, and manufacturing. The Bakassi Peninsula dispute in the 1990s strained relations, but since its resolution, both nations have pursued deeper economic ties.”

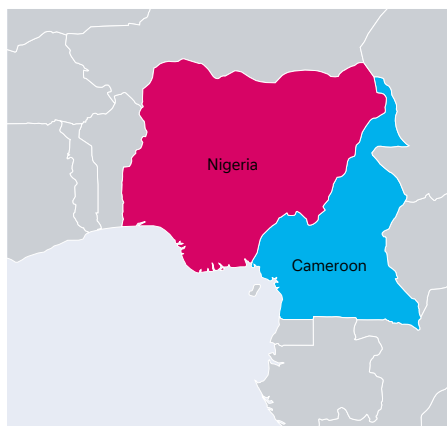
Growing trade partnership

By the mid-2010s, Nigeria’s exports to Cameroon were hitting US\$3.3bn a year. This was largely down to petroleum and an increase in manufactured goods, supported by improvements in cross-border infrastructure (see Figures 1 and 2). Flowing the other way, Cameroon’s exports to Nigeria mainly consisted of cocoa, timber and processed goods. Following the economic shocks of the Covid-19 pandemic, and despite the impact of the ongoing Russia/Ukraine conflict, this trade has been recovering since 2023 and stood at US\$170.7m at the end of that year. Kale sees potential for these economies to “deepen their economic ties through policy coordination, trade facilitation and investment collaboration”.

In short, both countries have navigated high levels of poverty and taken steps to improve bilateral trade, as well as supporting each other to protect their territories from terrorist threats. Given the theme of infrastructure improvement, this article shares details of two transformational export finance deals that have contributed to this – a vital road in Cameroon and electricity distribution in Nigeria.

Powering Nigeria

Despite being one of the largest economies in Africa, Nigeria faces significant



“The reliable supply of power remains one of the biggest infrastructure tasks in Nigeria

Andreas Voss, Country Head, Nigeria, Deutsche Bank

challenges in the power sector, including frequent power cuts, poor grid quality (with more than 100 entire grid collapses in the past 10 years) and limited access to electricity in rural areas. Even in urban areas where electricity is available, supply is often intermittent and unreliable.

In 2021, about 85 million Nigerians (43% of the population) lacked access to grid electricity, making it the country with the largest energy access deficit in the world, according to the World Bank. As Deutsche Bank’s Lagos-based Country Head Andreas Voss reflects, “The reliable supply of power remains one of the biggest infrastructure tasks for the current and all following governments in Nigeria. The next levels of economic diversification will only materialise if country-wide electrification makes significant progress.”

The Presidential Power Initiative (PPI) was conceived during a meeting between the President of the Federal Republic of Nigeria, Muhammadu Buhari, and German Chancellor Angela Merkel on 31 August 2018. The PPI aims to enable the power sector to achieve commercial autonomy by facilitating investments in critical infrastructure.

The Federal Government of Nigeria established a special purpose vehicle, the FGN Power Company Limited (FGNPC), to own and execute the PPI. This includes securing funding, coordinating stakeholders, and establishing commercial and contractual agreements to address the country’s infrastructure gaps.

The PPI is being executed in three phases:

- Phase 1: Focus on implementing critical ‘quick win’ measures to increase the system’s end-to-end operational capacity to 9GW.
- Phase 2: Expand the capacity of the transmission and distribution systems to enable the supply of up to 11GW of electricity to end consumers.
- Phase 3: Increase total operational generation and grid capacity to 25GW through further expansion of the generation, transmission and distribution systems.

It supports the reduction of greenhouse gas emissions and pollution from alternative means of power generation and the facilitation of modern technology to optimise grid performance, in line with the President’s Eight-Point Agenda:

- New lines will bring electricity to agricultural processing facilities and allow for refrigeration of products.
- Improved electricity supply improves standard of living and enhances quality of life.
- Economic growth and job creation.
- Inclusivity and knowledge transfer: a requirement for international contracts is training and transfer of knowledge.

The pilot project

Export credit agencies (ECAs) are government institutions that provide financial cover to domestic exporters in order to promote the export of goods and services and enable financing to importers and borrowers. This cover underpins the export transaction, and related financing reduces the financial risk for the loan, which serves the financing of the trade contract.

In December 2021, FGNPC and Siemens Energy of Germany concluded the first export contract concerning the supply and operation of 10 132/33kV mobile substations and 10 132/33kV transformers as part of Phase 1. This is set to swell Nigeria’s transmission sector by an additional 1,300MW, which goes

Figure 1: Nigeria's trade with Cameroon (US\$m)

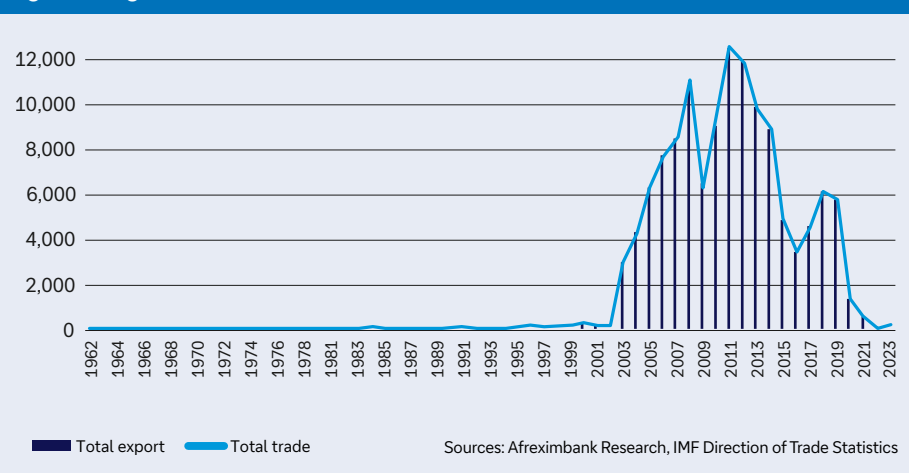
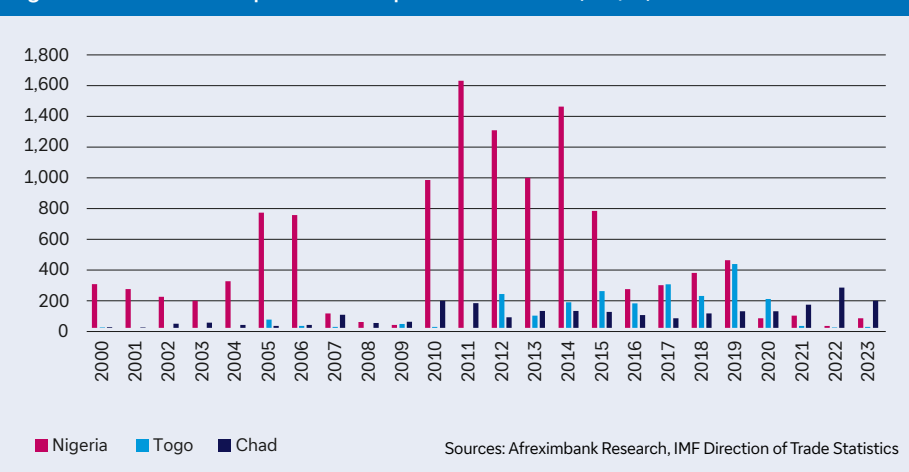


Figure 2: Cameroon's top three trade partners in Africa (US\$m)



some way towards tackling the country's electricity shortages.

The loan agreement, whereby Deutsche Bank arranged a €60m 12.5-year loan backed by the German ECA Euler Hermes, reached financial close in August 2024; the delay was mainly caused by the Nigerian presidential election in 2023 and the approval process. Due to the importance of the project, Siemens Energy and FGNPC agreed to effect deliveries earlier, in 2022–2023. FGNPC made payments under the contract that were reimbursed out of the loan to the borrower upon financial close of the facility. Deutsche Bank acted as sole arranger, facility agent, Euler Hermes' agent and lender on the transaction.

Jyad BouChrouh, Sales Head, Grid Solutions Western Europe and Africa at Siemens Energy, tells *flow*: "The

“The Olounou-Oveng road project is an important project for Cameroon

Smith Arrey, Deputy Director of Cooperation with Europe, MINEPAT, Cameroon

ECA financing arrangement and our collaborative approach in this pilot project play a key role in addressing the capacity gap between power generation and transmission in Nigeria.” He continues, “By leveraging Siemens Energy's grid

technologies, we aim to support the development of a more reliable and sustainable power infrastructure. This initiative highlights how strategic partnerships and well-structured financing models can contribute to meaningful improvements in electricity access and support broader economic development.”

Deutsche Bank's Annette Seip, part of the German Structured Trade and Export Finance (STEF) team who structured the deal, makes the point that these mobile substations “will help reduce power outages, improve voltage stability and enhance the overall reliability of the power grid”. She expects this to have a cascading effect on Nigeria's economy; reducing the need for costly diesel generators, lowering electricity prices and providing businesses with the consistent power they need to grow and create jobs.

Resurfacing roads in Cameroon

The Cameroon government's National Development Strategy 2020–2030 (NDS30) set out a road resurfacing plan that, by 2024, had evolved into a commitment to deliver 11,300km of asphalt-surfaced roads by 2027.

One of the critical highways is the dirt road connecting Olounou and Oveng. Its planned redevelopment includes rehabilitation, modernisation and expansion of the existing route over a construction period of 36 months. According to the feasibility study, once it is completed, the project will improve the lives of millions, boost economic trade, reduce travel time and curtail air pollution from cars.

Smith Arrey, Deputy Director of Cooperation with Europe at Cameroon's Ministry of Economy, Planning and Regional Development (MINEPAT), told *flow*, “The Olounou-Oveng road project is an important project for Cameroon because it will facilitate connection within the national network and between south Cameroon and neighbouring countries such as Congo and Gabon.”

Italian support

A €94.8m ECA facility was arranged by Bluebird Finance & Projects, with Deutsche Bank as sole lender and agent, with a tenor of 13 years; it is backed by SACE (Italy's export credit agency), with the involvement of various Italian suppliers. SIMEST (the Italian development finance institution) is contributing a subsidy mechanism that allows an attractive fixed rate. Closed in October 2024, the project has now moved

Infrastructure projects such as road-building are vitally important for emerging markets such as Cameroon

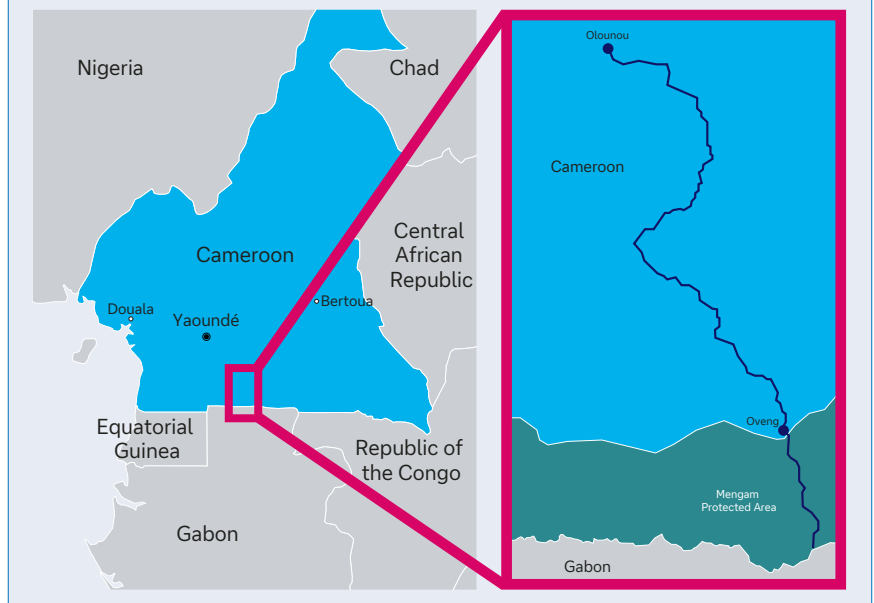


into the construction and operation phase. The construction is being carried out by two Italian contractors, Seas and Cosedil. A further 50km is being planned as Phase 2 of this project, to complete the connection between Oveng and the Gabonese border.

The transaction is a good example of how medium-sized Italian enterprises can create a huge impact in a key infrastructure project – illustrating that projects like these are not just the domain of the giant engineering, procurement and construction companies.

Ndeye Rivet, part of Deutsche Bank's STEF team for the Middle East and Africa, explains how "this project of national importance for Cameroon aligns with Deutsche Bank's strategic focus on supporting infrastructure development in key emerging markets". She highlights "the significance of the financing structure in enabling long-term sustainable growth while reinforcing Deutsche Bank's commitment to facilitating cross-border trade and investment in the region".

Figure 3: The route between Olounou and Oveng





60-second takeaway

Russia, China and the US are focusing on the Arctic Circle for both strategic and economic reasons

- Russia depends on the Arctic for much of its oil and gas, but China is increasing its investment
- As the ice caps melt, the Arctic's critical mineral resources are becoming easier to access
- This also creates the potential for new trade routes, but these bring environmental risks

The trillion-dollar ocean

Dr Rebecca Harding looks at the issues in – and beneath – the Arctic Circle and its impact on the global economy

Image: iStock

In 2016, a Bloomberg article declared the Arctic Ocean the “trillion-dollar ocean”.

Oil, gas and mineral reserves in the Arctic Circle were argued to total this sum of money. Perhaps as a result, what was seen by most as a vast tract of frozen land and ice, populated by Inuit indigenous peoples and polar bears, has become the centre of geostrategic attention. The two key drivers behind this are:

- The rate at which Arctic ice is melting and opening up new commercial opportunities.
- The return of the ‘Great Power Competition’ which has the region as its focus.

There is some scepticism that the promised critical mineral wealth of the region will materialise, based on the time and money that would need to be invested. Even if it does, there are huge potential environmental costs associated with it.

Shipping already runs through the Arctic Circle via Canada (the Northwest Passage – NWP) and Russia (the Northern Sea Route – NSR). Canada has an indefinite moratorium on exploration or development of its part of the Arctic Circle and the NWP has never been a viable trade route because of the quantities of ice and the environmental restrictions on it. In contrast, President Putin sees the NSR as an opportunity to potentially send 100 million tonnes of cargo through the Arctic Circle. This would increase the quantity of shipping-related black carbon emissions and therefore speed up the rate at which Arctic ice caps melt.

However, the combination of geopolitics and rapidly warming temperatures (global environmental charity WWF estimates that the rate of warming in the Arctic is four times the global average) means that this region is likely to have a dramatic effect on our economic, climate and defence security in the coming years. There are difficult choices ahead; this article summarises what is at stake.

Geopolitical tensions

Attention on the region has become more pronounced since 2022, when Russia was suspended from the Arctic Council, which consists of the countries bordering the Arctic Circle – Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden and the US – plus a representation of indigenous peoples’ leaders. Up to that point, the region was considered neutral and the Arctic Council had no formal treaty, with its operations largely confined to climate

research that relied on data collection by the indigenous population and international scientists, including Russian nationals. When Russia’s membership was suspended, these projects ceased immediately, pushing the Arctic Council into a geostrategic rather than scientific role.

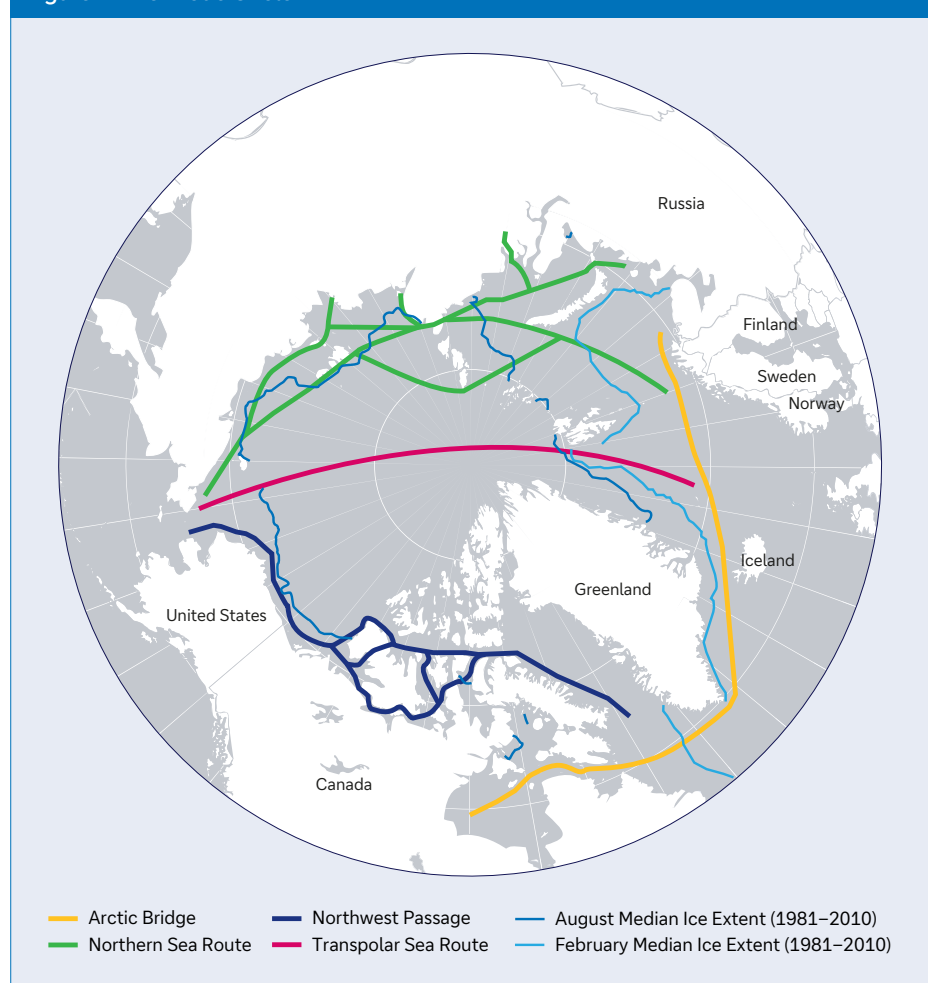
Russia changed its own Arctic policy as a result, removing all mention of the Arctic Council from previous policy documents and laying claim to the continental shelf beyond 200km from its Arctic coastline. This has been upheld by the UN’s Commission on the Limits of the Continental Shelf, extending Russia’s exclusive economic zone far beyond those claimed by other Arctic Council members. In addition, Russia has declared that no vessel may pass through this zone without the permission of Russian maritime authorities (although Chinese vessels are exempted) and it now has more military bases in the Arctic Circle than NATO.

Russia is focusing on new strategic cooperation with China, not least through its Arctic Liquefied Natural Gas 2 (Arctic LNG 2) platform, in which China has invested US\$20bn, and a new research station on the Norwegian archipelago of Svalbard with other BRICS nations. Russia has explicitly stated its wish to exploit some 400 oil and gas reserves.

China has declared itself a “near Arctic nation” and in 2018 launched its Arctic strategy to develop a ‘Polar Silk Road’. It has been working with Russia to create an alternative shipping route through the NSR. It regards this as a more cost-effective alternative to the Suez Canal, and potentially more environmentally friendly. (Once finished, it would reduce the journey time from China to Europe by around nine days.)

Since the change of US administration in January 2025, there has been a renewed focus on the Arctic Circle, with President

Figure 1: The Arctic Circle



Trump arguing in an interview at the end of March that Greenland is essential for US security. This develops a perception that has been building in the US since 2009 that the Arctic Circle is strategically important for economic security and defence because of the dominance of Russia in the region compared with NATO capability.

Canada is increasingly being urged by commentators to accelerate its December 2024 Arctic Foreign Policy strategy and prioritise its position as a key regional player in the Arctic Circle. Here the emphasis is on both economic security, through greater investment in deep-water ports, and national security, through a sustained military presence. Canada's strategic approach to the region back in 2019 was predominantly focused on environmental protection and research. However, its 2024 Arctic Circle strategy focused explicitly on the need to see the region as strategic in foreign policy, with hard military investment alongside diplomacy necessary to maintain regional stability.

Economic considerations

The Arctic Circle accounts for just 0.7% of the world's GDP, with an annual output of US\$500m. WWF estimated in 2018 that the region will need around US\$1trn of investment – spread across renewable energy projects, rail, maritime and municipal buildings – to realise its full potential without causing significant damage to the already melting ice caps. So how much of this is now in the pipeline?

Numbers are hard to come by, but China is estimated to have invested at least US\$90bn in the region, including a US\$10bn investment in Russia to explore and develop the NSR between 2013 and 2022. Two Chinese businesses, the China National Petroleum Corporation and the Silk Road Fund, each hold a 10% stake in the Russian Arctic LNG 2 project and 20% in the Yamal LNG project, which are both currently subject to international sanctions. These companies may well invest more into Arctic projects if the 10% Russian tax on dividends is reduced or abolished.

Russia's is the economy that is most dependent on the Arctic Circle. The region generates around 70% of its oil revenues and 80% of its gas reserves – it is not all under an ice cap. Russia obtains 20% of its GDP from the region and 30% of its exports originate there. It has invested some US\$19bn in infrastructure.

The sanctions against Russia have increased its dependency on China.



“
There is scepticism that the promised critical mineral wealth of the region will materialise. Even if it does, there are huge potential environmental costs

Dr Rebecca Harding, trade economist

However, China has not invested in its Polar Silk Road initiative much beyond its 2018 objectives, which were to conserve the region, conduct research and take advantage of it commercially in line with international law. Russia, however, has explicit and current objectives to exploit oil and gas in the region and build its military presence there.


This rhetorical disconnect is creating tensions between China and Russia in

the region, not least because much of the investment funding has come from China and is now on hold. Russia itself is not currently in a position to invest significantly in long-term oil and gas extraction anywhere, given its ongoing military expenditure. There is growing commentary suggesting that Russia is open to cooperation with the US in exploiting the region's resources. This may reflect Russia's own need for investment as much as any strategic realignment of its interests, given that this would reduce its reliance on Chinese investment.

Mineral resources

Despite their magnitude, the Arctic Circle's mineral resources have hitherto been hard to exploit because of the climatic conditions there. For this reason, they need to reach a high value threshold to justify the added risk to capital that extracting them represents. However, increasing accessibility because of ice melting, and renewed attention on its critical mineral deposits, have altered national priorities.

According to WWF, Arctic ice is being lost at a rate of 13% per decade. If emissions rise unchecked, it argues, the



An oil drilling rig at Tuktoyaktuk in the Northwest Territories of Canada

region could be ice-free in summer by 2040, with the UN's Intergovernmental Panel on Climate Change estimating that it could be entirely ice-free by 2050. This makes the NSR navigable and a viable alternative to other, longer routes from the Southern Hemisphere to the Northern Hemisphere, such as the Suez Canal. It also reduces the capital risk involved in extracting minerals in the region.

Energy transition, electronics, aircraft, and defence and security equipment all rely on critical minerals. The Arctic Circle accounts for around 10% of the global production of nickel, platinum and palladium, for example. But major investment will be needed to capitalise on such potential.

There is huge potential in the region, but it is likely that a lot of production, in the short term at least, will come from existing mines and facilities. This is because conditions for exploiting undiscovered reserves are not good, even with ice caps melting as quickly as they are. This means it will take longer than is currently estimated without a significant investment in infrastructure. At present, that investment is nowhere near the required level, due to

a combination of the constrained Russian economy, the economic climate in China and its caution regarding sanctions on Russia, and the fact that Europe, Canada and the US have historically under-invested in the potential of the Arctic.

Diverting trade

An operational Sino-Russian shipping corridor has been open since July 2023 and China sent approximately 80 ships a year through the region until 2023, when sanctions against Russia made this difficult. Most shipping is in oil and LNG and there is no container trade at present.

The attractiveness of the NSR rests in the fact that it shortens travel time between the Southern and Northern Hemispheres, reducing costs by some 25% and travel time by around 40% compared with the equivalent journey through the Suez Canal.

The viability of the Arctic Circle as an alternative trade route will depend entirely on the speed at which ice melts, and at what point sending container ships as well as cargo ships through the NSR year-round becomes possible. In 2022, around 1,700 ships went through the Arctic, compared with 23,000 through the Suez Canal and 14,000 through the Panama Canal. Some 41% of these are fishing vessels. At present, as is the case with natural resources in the region, the costs of exploiting its economic potential as a trade route will be high, and perhaps too high to be feasible. But the costs are not just those of exploration.

On thin ice?

Water depth in Russia's Arctic coastal exclusive economic zone is just 200m and the climate risks of more traffic through the region cannot be understated. Beneath the sea floor are ice sheets, below which lie substantial methane deposits. These are already leaking and releasing greenhouse gases (GHG) into the atmosphere, and this effect is worsening as more shipping traverses the shallow waters. The risk of a vicious circle where increased shipping accelerates GHG emissions, speeding up the melting of ice caps and allowing more shipping through, is clear.

Added to this, there are increasing numbers of icebreakers in the Arctic Circle as NATO countries try to address the asymmetry between their icebreaker fleets and Russia's. Russia has scores of icebreakers, China has four and the US has just one. This presents another

environmental risk since, by definition, icebreakers break ice: every icebreaker creates around 7km of broken ice (effectively ice cubes, which melt more quickly and therefore accelerate the melting process).

The escalating threat of the Great Power Competition in the Arctic Circle is there to see. From the analysis here, it is not clear that this is genuinely about either access to minerals or, indeed, the advantage of shorter and cheaper trade routes, for the simple reason that this potential will take time and significant investment to realise.

It is worth pointing out that many of the estimates of the extent to which the economic and natural resources of the region can be unlocked are a few years old. Recent commentary is more focused on the geostrategic game that is playing out between China, Russia and the US.

Whatever happens, the risks in the Arctic Circle are significant. As the Great Power Competition heats up along with the temperatures, both pose a threat to the potential of the "trillion-dollar ocean".

Dr Rebecca Harding is an independent trade economist and a regular contributor to trade publications

Energy and critical mineral potential between Alaska and Russia

- The US geological survey estimates that undiscovered oil and gas in the region could amount to 22% of the world's total production, or around 412 billion barrels of oil
- The Arctic Economic Council estimates that 31 of the 34 critical minerals required for energy transition are in the Arctic Circle
- There are 400 oil and gas fields in the North Arctic Circle. The US, Canada and Russia already extract 2.6 million barrels of fossil fuels a day from the region. This accounts for 10% of the world's supply of oil and 25% of its supply of gas
- An estimated US\$1.5trn–US\$2trn worth of critical minerals is in Russia
- Canada has the potential to access large reserves of copper, gold, molybdenum, lead and uranium
- Melting ice in Greenland is exposing mineral belts that may contain critical metals including platinum, nickel, lead, zinc, gold and rare earths

Source: geographical.co.uk



Liquid assets

Water security is a critical global challenge. According to the United Nations, more than two billion people face water stress annually, and this number is projected to rise due to climate change, population growth and environmental degradation. Around the world, inventors and engineers are working on solutions, from small-scale efforts to bring water to individual villages to huge infrastructure projects that support urban populations

Plover Cove Reservoir in Hong Kong was the first freshwater coastal lake to be constructed by damming a section of the ocean. With a capacity of 230 million m³, it secures the water supply for the world's fourth most densely populated region



Access to safe water, sanitation and hygiene is the most basic human need for health and wellbeing. Billions of people will lack access to these basic services in 2030 unless progress quadruples

United Nations Sustainable Development Goals



Water scarcity in numbers

Four billion people – almost two-thirds of the world's population – experience severe water scarcity for at least one month each year

700 million people are at risk of being displaced by intense water shortages by 2030

By 2050, water scarcity could cost some regions – particularly the Middle East and the Sahel region of Africa – up to **6%** of GDP due to water-related impacts on agriculture, health and incomes

Source: High Level Panel on Water, UNICEF, World Bank

image/Stock



Project finance explained

flow explores how project financing supports essential infrastructure and energy projects around the world

According to the International Renewable Energy Agency (IRENA), by the end of 2024, renewables accounted for 46% of global installed power capacity. Yet this growth is not enough to triple installed renewable power capacity to 11 terawatts (TW) by 2030. To meet this goal, which was established in December 2023 by nearly 200 countries at the COP28 climate summit, the world now needs to add in excess of 1,120 gigawatts (GW) each year for the rest of this decade. “Looking ahead, we need to see a much faster pace of growth in the stock of renewable power plants and distributed electricity generation around the world,” said IRENA’s Director General, Francesco La Camera, in the agency’s *Renewable Capacity Statistics 2025* report.

The challenge that many economies face is how they convert ambitious renewable

infrastructure targets into reality. Such projects tend to be capital-intensive and come with long-term risks. Take the example of a large-scale solar farm: the project would likely take one to two years to build and, even after completion, could take many more years to generate the kind of revenue that returns the initial investment.

Whether it is building roads or hospitals, replacing ageing infrastructure, upgrading transport networks or accelerating the pace of renewables installation worldwide, project financing is well placed to help fund large-scale, capital-intensive projects.

What is project finance?

Project finance is a method of funding a single asset or a group of similar assets. Unlike traditional corporate loans, which are secured by a company’s overall balance sheet, project finance relies solely on the

Image: iStock

cash flows generated by the project itself to repay debt and service equity. In the case of a highway, this may come from toll revenues, or for a hospital from availability payments, while for a renewable energy project, repayment would come from the sale of electricity.

Since repayment comes directly from the assets, project finance imposes stricter controls and more tailored restrictions than a traditional corporate loan. A corporate loan, for instance, is issued at the company level, usually for the short to medium term – and is structured with covenants linked to the company's overall financial position. In contrast, project finance – due to the focus on the project's future cash flows – has covenants designed to ensure that the project can generate sufficient revenue to cover its debt obligations.

To ensure that proceeds from the project go towards repaying investors, the project's sponsor – responsible for its initiation and organisation – establishes a project-specific entity, usually in the form of a special purpose vehicle. This serves as a standalone entity, isolating the project's financial risk and ensuring its financials are kept separate from the sponsor's broader

“A key element in ensuring a steady revenue stream and the long-term viability of the project is the presence of a reliable offtaker

activities. This type of non-recourse or limited-recourse financial structure is what helps enable project financing to support complex and riskier projects.

The initial financing for the project typically then comes from two main sources: project sponsors, who can provide equity financing to support it, and lenders – such as financial institutions – who provide debt financing through long-term loans or bonds. Governments can also play a role in this financing ecosystem. They may support projects through export credit agencies, which provide guarantees

to lenders, or offtake contracts, which guarantee the purchase of the project's output – providing additional security to investors.

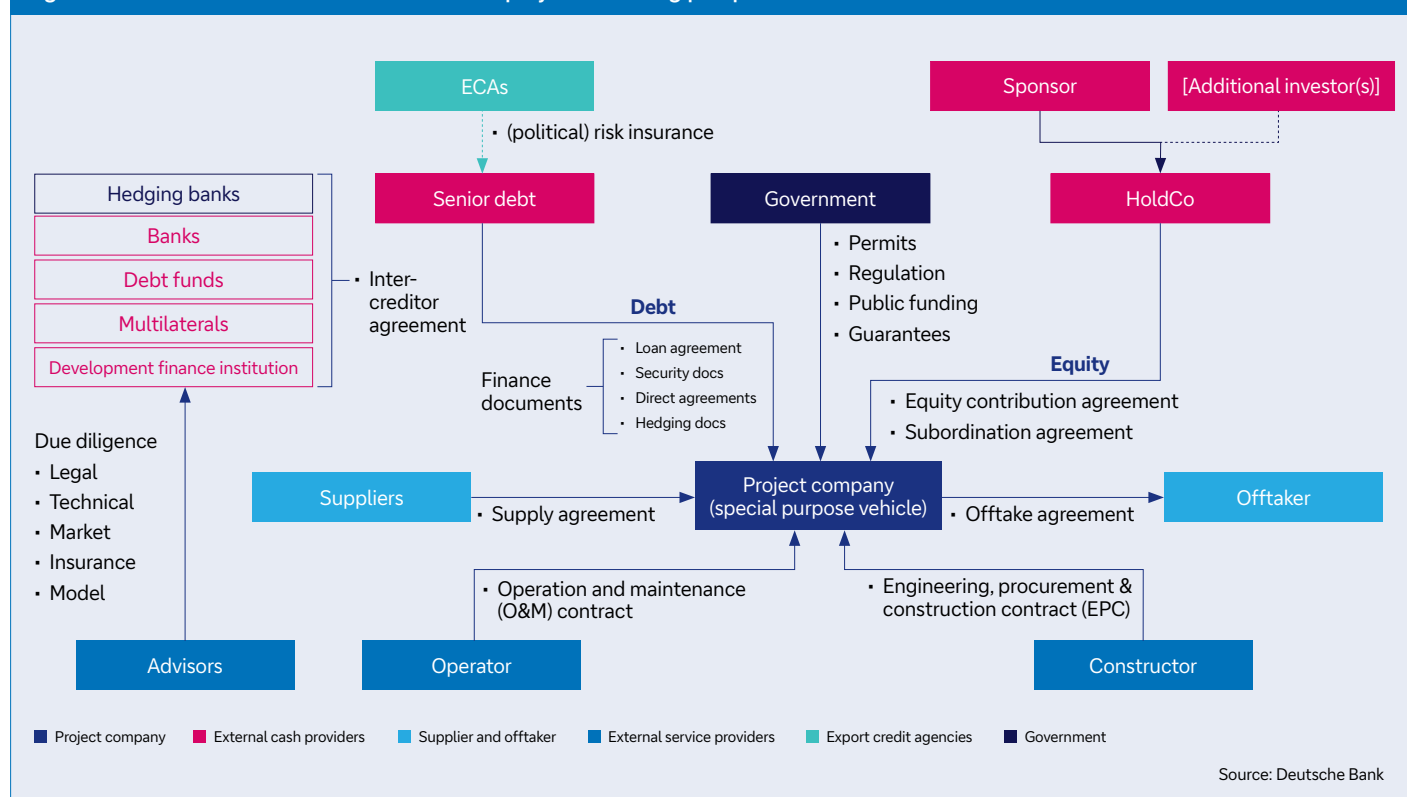
How banks manage project risks

While the underlying concept is fairly simple – providing the capital needed to finance an essential project – project financing involves a highly complex decision-making process. Lenders perform rigorous risk assessments to determine the viability of the project. At a macro level, the first consideration is the risks associated with the country in which the project is being developed – reviewing how existing policy and regulation might impact the project, as well as the risk of legal changes, incoming tariffs or even the onset of war or civil unrest.

The technical and design feasibility of the project will also be carefully evaluated. For example, in an offshore wind project, lenders must ensure that the turbines are reliable and suitable for the specific environmental conditions.

The practicality of construction is another important area, particularly for greenfield projects, which involve

Figure 1: Illustrative business structure from a project financing perspective



Source: Deutsche Bank

building entirely new infrastructure rather than upgrading existing assets. Construction risks can include cost overruns, issues with obtaining necessary permits or land, and delays to the completion date – all of which can impact the expected cash flows from the project.

Lenders will also consider the long-term operational risks involved, including the reliability of the project operator, as effective maintenance and management directly influence the asset's long-term performance. Equally important is ensuring that the necessary resources are consistently available to support both the completion and ongoing operation of the project, avoiding any potential disruptions.

Banks must ensure that projects adhere to environmental regulations, including the Equator Principles – the risk management framework for responsible investment.

As cash flows from the assets underpin the financing structure, a key element in ensuring a steady revenue stream and the long-term viability of the project is the presence of a reliable offtaker – a party committed to purchasing the project's output for a set period. For projects such as wind farms and solar plants, this often takes the form of a long-term power purchase agreement.

Transaction highlights

Three recent project finance transactions show how this structure works in practice:

- During **Q1 2025**, Deutsche Bank acted as mandated lead arranger in a €2.9bn non-recourse project financing for Polska Grupa Energetyczna SA (PGE). At 1.5GW, Baltica 2 is the biggest offshore wind farm project currently planned in Poland, developed jointly by PGE and Danish offshore wind power energy company Ørsted, and will produce green electricity to meet the needs of around 2.5 million households.
- On **7 April 2025**, Aukera Energy, the pan-European renewable energy developer, announced that it had secured a £135m senior debt facility from Deutsche Bank and Rabobank to finance the construction of five UK solar PV projects, expected to be fully operational before the end of 2026. Pascal Emsens and Catalin Breaban, Aukera's co-founders, said, "It has been fantastic to see this team working together so effectively to deliver this complex and efficient financing. It has been a pleasure to work alongside the excellent teams at Deutsche Bank and Rabobank to deliver this transaction, marking the beginning of Aukera's next stage of growth as our project pipeline starts to reach maturity in all four of our markets."
- On **21 January 2025**, Australia's Quinbrook Infrastructure Partners announced its new debt financing – to the tune of AUD722m – for Stages 1 and 2 of its Supernode battery storage project in Queensland; one of Australia's largest stand-alone battery energy storage system (BESS) project financings to date. Deutsche Bank acted as lead arranger, original lender and hedge counterparty. Quinbrook has secured long-term offtake agreements with Origin Energy for Stages 1 and 2 for a combined BESS nameplate capacity of 520MW/1,856MWh.



Image: iStock

Securities Services

A glimpse into the future of settlement cycles, capital markets and digital payments

T+1 in Europe

The story so far, and what happens next 60–63

Euroclear

CEO Valérie Urbain on tomorrow's capital markets 64–67

Digital assets

Expert insights on the future of digital payments 68–70



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Europe braces for T+1

The course is set, with Europe proposing regulation to effect a move to a T+1 settlement cycle, along with the UK and Switzerland, on 11 October 2027. *flow* tracks the consultation journey so far, the benefits and challenges of a coordinated move, and how market participants can reap long-term gains



One year after the US, Canada, Mexico and Argentina shortened their settlement cycles to T+1, the EU, the UK and Switzerland are focused on doing the same. On 11 October 2027, they will coordinate a move to minimise market fragmentation and operational complexity, and improve competitiveness, by removing misalignment with other major markets.

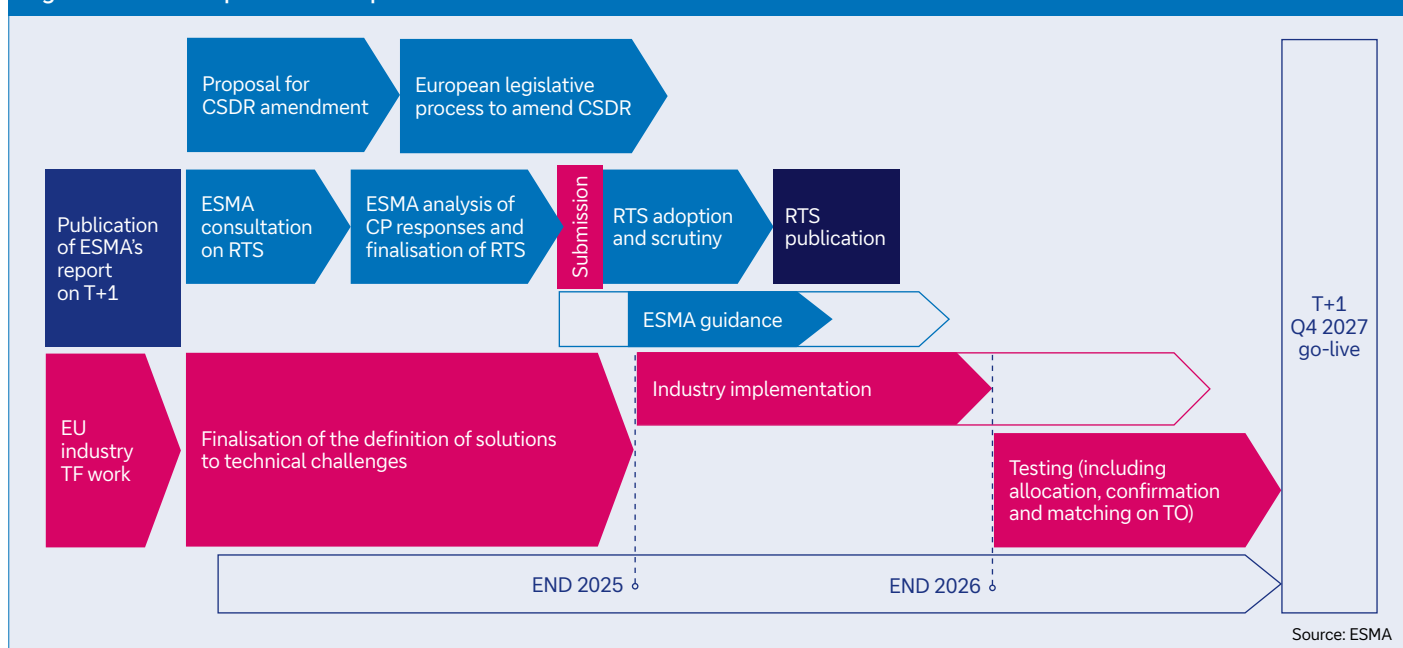
The *flow* article 'T-day for the EU?' traces the start of Europe's consultation journey. It notes the roadmap published by the European T+1 Task Force (led by the Association for Financial Markets in Europe (AFME) and representing 21 industry associations across all market participants) in October 2024, which points to a crucial period in 2027 for systems testing. The European Securities and Markets Authority's (ESMA) report on a potential EU move to T+1, published in November 2024, also indicated an October 2027 migration date to T+1 for greater settlement efficiency and better global market integration.

Following these events, in early 2025, the European Commission (EC) proposed amending the Central Securities Depositories Regulation (CSDR), setting T+1 as the settlement date for transactions in transferable securities which are executed on trading venues. In June, the co-legislators (European Parliament and Council) reached a preliminary political agreement on the quick fix to adjust the CSDR with a view to making the required adjustments for T+1, including an exemption for securities financing transactions from T+1 and a possible suspension of cash penalties via the existing Level 2 measures.

The EU T+1 Industry Committee published new guidance in its High-level Roadmap to T+1 Securities

Image: iStock

Figure 1: EU T+1 implementation period



Source: ESMA

Settlement in the EU report, issued on 30 June 2025, noting that these “high-level recommendations developed by the Committee serve as a roadmap for the financial services industry, guiding stakeholders through the necessary changes to achieve this pivotal objective”.

T+1: the global state of play

These proposals launch Europe into the global settlement compression race, following India, which moved to T+1 in 2023, and the Americas, which followed suit in May 2024. Europe is focused on planning and stakeholder engagement, along with the UK and Switzerland, with further consultation and preparation for global alignment with these markets. In summary, stakeholder groups' actions include:

- **ESMA, the EC and the European Central Bank (ECB):** These regulators created a governance framework in January 2025 comprising an EU T+1 Industry Committee, 12 technical workstreams and a coordination committee (with EC, ESMA and ECB representation and an independent chair) to assess operational impacts and obstacles to T+1 settlement and propose solutions to help market participants and national-level stakeholders prepare.
- **The EU T+1 Industry Committee:** This group, comprising the independent

chair, association representatives and workstream leads from different industry segments, and its technical workstreams – with broad industry representation – published high-level recommendations on 30 June 2025 for removing critical obstacles to a smooth transition. A playbook is targeted for Q4 2025, including detailed guidance on actions to be taken by individual market participants. Industry Committee Chair Giovanni Sabatini notes: “The Committee’s draft timeline proposes an investment phase for market participants in 2026 and a testing phase in 2027.”

- **The UK Accelerated Settlement Taskforce (AST):** This unit of industry leaders, and its technical group, published an implementation plan in January 2025, requiring firms to accelerate up to 29% of their post-trade instructions for UK trades. The plan has 12 critical operational actions and 26 highly recommended actions.
- **Swiss Securities Post-Trade Council (swissSPTC):** This independent industry group of financial participant representatives for the Swiss and Liechtenstein markets created the swissSPTC Task Force to coordinate and provide recommendations for the transition. Market infrastructure group SIX has proposed amending its exchange rules to make the change.

Sabatini says collaboration among all stakeholders for a common regulatory approach and market practices is critical: “The AST, the EU T+1 Industry Committee and our technical workstream will help to find a common solution to prevent inconsistencies and ensure smooth functioning of markets across regions.”

These actions set the course and make T+1 a strategic concern for all market participants – including buy-side, sell-side, intermediaries and financial market infrastructures – with readiness impacting bottom lines. According to research by the Value Exchange (led by AST and including insights from more than 550 organisations in the investment cycle), 62% of global firms are now engaging in plans to prepare for the UK transition. “It sounds like it is miles away, but trust me, it isn’t,” reflects AST Chair Andrew Douglas.

Europe’s market fragmentation challenge

The need for timely preparation surfaced in the *flow* article ‘Post-trade: Can one become zero?’, which analyses the benefits and challenges of settlement compression on a global scale. In a European context, however, the stark reality of heightened risk, in areas such as settlement and funding, and potential increases in trade failures if market cut-offs are not met, is now setting in.

“While it all comes under one banner of Europe, there is still a lot of market

fragmentation,” explains Fiona Neville, Head of Securities Services Europe, Deutsche Bank. “Each EU jurisdiction has distinct settlement infrastructures, local market cut-off times, and regulatory nuances. While the 24 CSDs connected to TARGET2-Securities (T2S) broadly adhere to the T2S harmonisation standards, including a common T2S calendar and schedule of the settlement day, there are still some gaps reported – mainly around T2S matching fields, T2S corporate action standards, shareholder transparency and restriction on omnibus accounts.”

A fragmented Europe (comprising Switzerland, Iceland, Norway and the UK, plus the 27 member countries of the EU and multiple market infrastructures) presents an additional layer of complexity, necessitating end-to-end testing across different participants with varying levels of straight-through processing, and different jurisdictions.

Specific challenges include considerations for investors in different time zones (the EU covers three), foreign exchange (FX) funding deadlines for transactions involving non-euro currencies, local market nuances, specific requirements across European jurisdictions, and funding and liquidity management across multiple currencies.

Local market considerations

Stakeholder groups are preparing market infrastructure readiness assessments across Europe to address the challenges at a national level and minimise concerns for industry participants. “As an agent bank with local presence and local expertise, as well as local participation in the individual countries’ working groups as they respond to T+1, we are well positioned for our clients – be they global custodians, asset managers or brokers,” says Neville.



Deutsche Bank’s aim is twofold: ensuring clients are aware of those local market nuances, and getting them to think about their funding. It is guiding firms to map local market cut-offs and infrastructure constraints, and making sure that they are aware of the intraday funding timelines. “We have that discussion on a market-by-market basis with our clients,” says Neville.

Taking action

Market fragmentation makes changing to T+1 across the EU an issue that needs urgent action. *flow*’s ‘Breaking the settlement failure chain’ white paper captures what is at stake. It shows how mitigating settlement failures by compression reduces the time to complete settlement, putting pressure on processes (see Figure 2) and legacy systems, increasing

the chance of failure. Manual intervention in processes is a common theme.

In a European T+1 environment, that is no longer viable for legacy systems and processes that lack the requisite variety for such a huge market shift. “That lack of harmonisation is the primary element participants have to get their heads around, especially in securities lending and FX, which then adds complexity under T+1, because there’s just less time to get things resolved,” adds Neville.

The UK faces similar concerns: more than a quarter (26%) of firms responding to the Value Exchange survey indicated they will miss the target date of 31 December 2026, when all trade allocations and confirmations will need to be completed on trade date.

The role of technology in addressing this – removing inefficiency and manual processing in the securities value chain – is irrefutable. Increased operational efficiencies will lower the risk of trade fails and financial penalties. There is more clarity on what that looks like, and firms can prioritise technology solutions and leverage workflows and straight-through processing to ensure the trade lifecycle is as seamless and fluid as possible, says Neville.

A move towards greater end-to-end automation, improved allocation/confirmation, matching rates (speed and accuracy) and real-time data reconciliations is part of that. “We can’t just assign more of our workforce to this task,” continues Neville. “The solutions need to be technology-driven.” (See Figure 2.)

These solutions include electronically managing standard settlement instructions (SSIs) and keeping them up to date so that same-day settlement can happen; automating stock lending and corporate actions; and dashboards with real-time view of trades.

Figure 2: Pre-settlement processes



Source: ESMA

Reaping long-term benefits

Ensuring the trade lifecycle is as seamless as possible for European T+1 also relies on centralised tools for checking settlement instructions and monitoring real-time settlement.

Approaches that drive immediacy and connectivity are key. “We’re automating delivery of information back to clients, so they have data in near-real time and are not relying on batch processing overnight to see if a trade has settled, as this causes challenges from a funding perspective that wouldn’t exist in real time,” says Neville. Data is where Deutsche Bank sees long-term benefits from T+1 investment, she explains: “Deutsche Bank is going through a complete restructuring of its custody platform into a proprietary new custody system called S2; a modern tech stack which is adaptable and can communicate directly via APIs, so clients can consume trade and settlement data back into their system and see it almost immediately.”

She sees T+1 as an opportunity to catalyse strategic change by leveraging technology to improve connection points, reducing friction and increasing automation. S2 demonstrates how the bank works with industry partners to make that happen: “Partnering with scalable technology-driven providers such as Deutsche Bank allows clients to leverage shared infrastructure, enhanced market infrastructure connectivity, the benefits of our investment in existing automation, and our experience managing the transition to a shorter cycle in India and the US.”

Lessons from US T+1

Lessons from the US experience make the case for technology clear. Many

firms, including Deutsche Bank, adopted automated post-trade solutions, such as real-time trade matching and driving efficiencies in the allocation and affirmation process, helping to avoid settlement delays and issues. The Depository Trust & Clearing Corporation (DTCC) showed that affirmation rates improved in the days after T+1 went live, reaching well over 90%.

The DTCC noted that collaboration among market participants and authorities was also critical to smooth implementation. In the context of a fragmented Europe, this becomes even more important.

What happens next?

While we continue to prepare for T+1, we anticipate that attention will progressively turn towards T+0. The industry has started to compare the marginal benefits of moving from T+1 to various forms of flexible settlement such as multilateral netting (for market-side trades) with an accelerated timeline, real-time gross settlement, or atomic settlement via distributed ledger technology/blockchain. The benefits of further acceleration will need to be carefully weighed against the investments required before any consensus can be reached.

So far, India is taking the lead, with plans to roll out T+0 settlement on an optional basis on 1 November 2025 (extending the original deadline of 1 May). However, for firms trading in Europe, T+1 is where the focus remains, and it will rely on strong market engagement and collaboration through associations such as AFME, the International Securities Services Association and working groups to build that consensus.

Figure 3: Global timeline of T+1 settlement cycle transitions



Source: ESMA, EU T+1 Industry Committee, UK AST, swissSPTC



Euroclear and tomorrow's capital markets trades

Becoming a next-generation financial market infrastructure requires balance. Euroclear CEO Valérie Urbain spoke to Janet Du Chenne about how she is doubling down on client-centricity and innovation while retaining the company's DNA as a trusted settlement engine in capital markets



Since becoming Euroclear's CEO in May 2024, Valérie Urbain has changed things beyond what might be considered normal for a traditional financial market infrastructure (FMI).

This is hardly surprising, given Euroclear's place at the centre of the capital markets ecosystem, settling trades. It is the European provider of settlement and safekeeping services for cross-border transactions in 50 markets, connecting more than 2,000 markets and participants, and Urbain's strategy is to do more

with what Euroclear has got. "We are gradually moving into the next generation of Euroclear, using more digital and data-enabled processes to continue to meet our clients' needs," she says.

Changes include expanding in Asia Pacific, taking a strategic stake in distributed ledger technology (DLT) market infrastructure operator Marketnode and providing an end-to-end fund distribution solution in private markets.

As investors explore new markets and assets, and digitalisation quickens,

Image: Valérie Urbain

Euroclear is moving beyond the current sequential market model for securities (see Figure 1), where data duplication leads to inefficiencies and risks, towards an open, shared platform to provide data-enabled services for all market players. It is exploring technology and unleashing the potential of the vast amount of data it sits on as a provider to reduce risk and increase efficiency and connection within the ecosystem.

"It's what I'd call Euroclear 3.0 – continuing to do what we do, but in a different way," notes Urbain.

Opening up

To deliver a digital and data-enabled FMI with an open platform, Urbain is accelerating taking a stronger client lens, launching and scaling initiatives to serve issuers, investors and dealers, and developing solutions to deliver growth across geographies and asset classes. With this strategy, Euroclear is targeting obtaining half its income from non-core activities (funds, global and emerging markets, and financing) while maintaining growth across European markets and Eurobond offerings.

Urbain's vision for Euroclear aligns with the insights she's gained since her arrival

I value our competitors, because they continue to push us to innovate

Valérie Urbain, CEO, Euroclear

there in 1992. "Working with domain experts is motivating, and our central position allows us to contribute to capital markets and the real economy," she says. "I have never been bored, which is why I stayed. I'm always learning."

Serving in various roles, Urbain saw Euroclear as greater than the sum of its parts, which informed her vision of where it needed to go. In client-facing positions, she was at the centre of remaining relevant for clients as the market evolved. Where they go, Euroclear follows. Working across the Euroclear Group, including its International Central Securities Depository (ICSD), gave Urbain further insight into clients' domestic and global activities.

She also served as Group Head of HR, a role that has been her greatest teacher in people-centricity. "Understanding the relationships with business partners and the collective interest in moving forward, as well as how you recruit and nurture people, is a mindset shift," she says.

At the centre

Today, Euroclear is at the centre of the securities value chain, serving multiple assets and countries. It has an ICSD, Euroclear Bank, and six CSDs (in Belgium, Finland, France, the Netherlands, Sweden and the UK) serving cross-border and domestic trades. "Where I am now, of course, I would tell you we are at the centre, but I mean it," says Urbain.

There is plenty of evidence. Euroclear has come a long way since the early years of solely providing settlement infrastructure for Eurobonds, and there is now increased competition in the space. "I value our competitors because they continue to push us to innovate," she reflects.

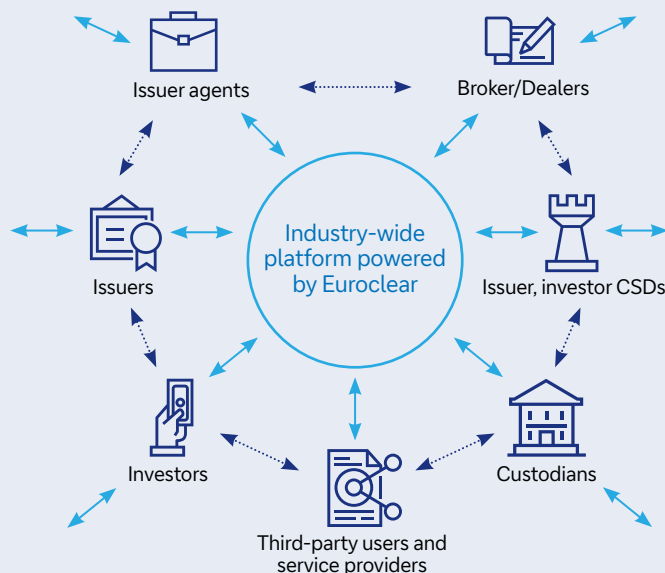
Globalisation and the euro made Euroclear diversify into providing market access to international players. Merging with CSDs in France, Belgium and the Netherlands and acquiring the UK-based CREST settlement system

Figure 1: Euroclear aims to evolve the securities value chain into an open platform

FROM a sequential value chain, where data is duplicated across multiple layers



TO a digital and data FMI (D2FMI): an open shared platform providing a catalogue of data-enabled services available to all market players and complemented by third parties



Source: Euroclear

“demonstrated that we were a European financial market infrastructure playing a leading role in Europe,” reflects Urbain. From here, Euroclear developed links with other markets outside Europe, including the US and Japan.

The FundSettle platform (now called FundsPlace) for mutual funds broadened Euroclear’s asset offering, while the collateral highway allowed firms to use their securities to finance their operations and secure exposure. The highway surpassed €2trn in mobilised collateral in February 2025. “While settlement used to be our most appealing service, collateral management is moving into that role,” explains Urbain.

With growth in core areas, and assets worth €40trn, Euroclear is ready for the next chapter.

Enhancing client-centricity

Directing this settlement giant towards an open platform requires several changes.

Urbain is leading cultural and organisational transformation to drive client-centricity and innovation. In addition to streamlining and simplifying the company structure, she has redesigned the structure and composition of her top management team, hiring Sebastian Danloy from BNP Paribas as Chief Business Officer to drive a stronger focus on business operations, people and clients. Having finalised her management team at the end of 2024, she says, “I truly believe in having a diverse team of people with different personalities, backgrounds and experiences, because that is the best way to make an informed decision.”

Urbain’s people-centric leadership style of engaging different people was instilled from a young age. As the daughter of Belgian diplomats, born and raised in Senegal, her first 14 years were foundational for her awareness and understanding of the perspectives of people different from her. “I was on the outside and looking in, which helped me see others’ points of view,” she reflects.

Through this lens, she is transforming Euroclear’s culture towards a purpose-driven mindset, collaboration, empowerment, accountability and client-centricity. “Without our clients, we don’t exist,” she says. “We put ourselves in their shoes to be relevant and foster a good experience, which doesn’t necessarily mean saying yes to everything, but understanding their constraints and how we can help.”

Simplicity is also key, and Urbain encourages more proportionality in risk



Without our clients, we don’t exist. We put ourselves in their shoes to be relevant and foster a good experience

Valérie Urbain

management, to reduce waste and simplify relationships and internal processes.

Balancing innovation with market resilience

As Euroclear develops its position in the capital markets, Urbain strongly believes a digital future needs a resilient market infrastructure.

“European financial market infrastructure has demonstrated throughout several decades that we have been extremely resilient during crises,” she says. She highlights, for example, how Euroclear kept running consistently during the war in Ukraine and subsequent countermeasures against Russia, such as the freezing of sovereign assets held in Euroclear Bank.

“We have also demonstrated the value of the legal framework in Europe for asset protection and settlement finality, highlighting the importance of the rule of law, especially during a crisis,” declares Urbain. “That’s led many investors to trust the European capital markets.”

“I always say to my team that it is a balance – I love to work on digital and new ideas, but our *raison d’être* is to be here, day after day, secure and

resilient,” she adds. “A significant chunk of our investment portfolio remains in the resilience and security of our services and the legal certainty of what we are doing – that remains key.”

Harmonising Europe

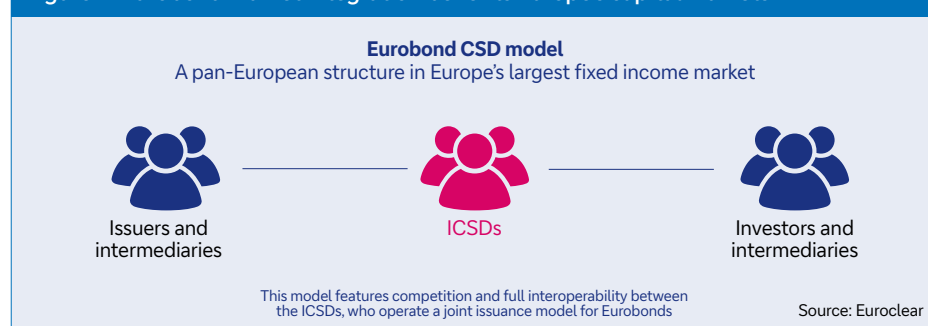
Urbain is equally passionate about Euroclear’s role in making Europe’s capital markets more efficient to attract investors and issuers globally, and she advocates financial integration and scale to support this.

In a recent paper, Euroclear urges CSDs, EU Member States and EU authorities to work together to build a resilient, competitive and unified post-trade environment that supports European competitiveness globally. Highlighting Eurobond settlement as an example of an interoperable framework (see Figure 2), the report urges alignment of market practices across Europe, embracing technology-driven efficiencies, and providing an environment that balances robust regulation with innovation.

Urbain notes that the Capital Markets Union (now the Savings and Investments Union) plan to create a single market for Europe has slowed, but further harmonisation is necessary to move things forward. “In our domain, size matters, so the more you harmonise, the bigger the addressable markets become, and the more you can automate, the more synergies you bring, and the more efficiency gains for the market there are,” she says. “The private sector should be allowed to freely compete while also being permitted to build on some integration to ensure the critical mass adds value.”

However, open competition and access conditions in Europe’s capital markets face several barriers, as highlighted in the report. “Europe needs to remain an open economy to foreign investors to support

Figure 2: Eurobond market integration benefits Europe’s capital markets



growth and its financing needs,” says Urbain. “Closing it would be a big mistake.”

Euroclear also plays an active role in moving Europe and the UK towards a shorter settlement cycle. “We are always looking for the stability of the financial markets, so it is in our interest to collaborate on the changes needed for a smooth transition and raise issues to avoid problems later,” says Urbain. “We should also support investors outside of Europe to cope with the time zone differences.”

Exploring innovative technologies

Building an open, shared cross-asset platform, reinforcing core client services, and further expanding in growth areas while targeting acquisitions and partnerships, means assessing how technologies drive efficiencies in the securities post-trade value chain. “Due to our nature, we assess how the market is evolving. At the same time, we are increasingly using new technology, such as artificial intelligence (AI) and natural language processing (NLP), in our operations to improve and increase efficiency,” says Urbain.

“As we grew comfortable with these technologies internally and listened to our clients, we explored their use in creating services and products.”

That exploration has unearthed several uses in the past year. One of these is a DLT-based issuance platform. “DLT won’t replace the entire technology stack, however,” says Urbain. “We first want to ensure that clients adopt the technology and that there are enough benefits.” Through a seven-year strategic partnership with Microsoft, announced in early 2025, Euroclear is also exploring developing services around data, digital and AI to enhance its service offering.

Euroclear’s funds practice is also key to its D2FMI strategy of becoming a provider of data and digital-enabled FMI services for all market players. The strategy evolves the company beyond its latest Digital-Financial Market Infrastructure (D-FMI) platform, as it looks to include the alternative fund space and explores ways to support private assets. Urbain explains, “We want to be a one-stop shop for all fund types. We started with mutual funds, and we’ve also built an efficient exchange traded funds (ETF) franchise. Replicating our Eurobond settlement model allows multiple ETF listings with a single liquidity pool. We’re allowing the market to benefit from wider solutions but with a simple settlement offering.”



Another strength is collateral management, where Euroclear continues to optimise its pool of assets. “We’re collaborating with external parties to bring more sophistication and optimisation of tools to allocate collateral,” says Urbain. An example is Euroclear’s diversification into the US market with the launch of a DVP repo service for US Treasuries. “Collateral management is a good example of client-centricity and part of our strategy to be a diverse provider of services for clients’ needs.”

Growing globally

Noting Euroclear’s European anchorage and global footprint, Urbain has set her sights on further expansion. “Asia and the Middle East are areas where we play an important role,” she says. “We’re shifting our approach where commercially, we’re already benefitting from a large footprint with Asian investors, custodians and insurers, especially through the Eurobond practice. But, given our geographic evolution, we’re talking to local partners about how we can contribute to the growth of the Asian market by sharing our know-how and partnering with them on common initiatives.”

Euroclear’s strategic stake in Marketnode in Singapore is one example. The initiative will initially target building a DLT utility for funds. “These are the type of partnerships we find interesting because we can bring our experience, our network of clients and our know-how while still being local,” says Urbain. A wholesale banking licence in Singapore also enables it to offer services there.

As part of Euroclear’s Asia growth strategy, Urbain appointed long-time colleague Phillipe Laurensy as Asia Pacific CEO to drive efficiencies based on the company’s experience of Europe, which has similarly fragmented rules and landscape. “There is never a single Asian strategy,” she says. “Players must accommodate different regimes and ways of working. We’ve thus partnered with Deutsche Bank for local custody in a few markets to make them Euroclearable, including Malaysia and South Korea. We help international investors gain comfort with local rules and work with the market to adopt standards.”

Euroclear is also considering replicating its expertise in Asia, given the region’s ambitions to play at a digital level. “With trading flows within Asia Pacific and the Middle East increasing, we intend to play a role here,” says Urbain. “Our geographic shareholding has also evolved. A third of our shareholders come from Asia Pacific, which creates new opportunities.”

With an approach to open platforms, and a focus on people, clients and operations, Urbain is setting Euroclear up to remain relevant and resilient in a digital future. Her strides towards D2FMI show that wherever clients are, in whatever form – digital or traditional – Euroclear has positioned itself to be at the core, and open to enable their growth.

Janet Du Chenne is a freelance financial journalist and a former Co-Editor of flow and of Global Custodian



Digital money at the crossroads

Digital assets are creating new forms of money while fuelling demand for new types of payments and post-trade settlement services. *flow* shares insights from industry experts on what this means for market infrastructure participants and the direction of travel

On 6 March 2025, European Central Bank (ECB) President Christine Lagarde confirmed that the ECB intends to complete the digital euro preparation and testing phase by October 2025. On the same day, US President Donald Trump issued an executive order announcing the establishment of a strategic bitcoin reserve and a national digital asset stockpile. Both announcements were preceded in 2024 by the full implementation of the European Markets in Crypto-Assets Regulation (MiCAR).

As digital assets move into the traditional finance space and drive demand for new services, the discussions at Deutsche Bank's Payments and Digital Assets conference on 12 March 2025 provided a deep dive into how this is playing out in terms of regulation, technology and market demand, all converging to shape the next decade of finance.

Key trends in payments

Different approaches to digital money are evolving as "the US is leaning towards

stablecoins, while Europe is more focused on central bank digital currencies (CBDCs)," said Deutsche Bank Research Managing Director Marion Laboure, who added that central banks and the private sector are both expanding the portfolio of digital money in the monetary system (see Figure 1).

Wim Mijs, CEO of the European Banking Federation, said that, while Europe has a "very efficient and well-managed credit transfer system", we now need to "speed up the interoperability of instant payments" to facilitate European cross-border payments.

Mijs pointed out that Europe's payments are partially dominated by non-EU companies such as international card schemes, big tech firms, wallets and super apps. While he agreed that central banks are right to explore CBDCs, the fact that Europe has taken a different direction with its preparation for a retail digital euro raises a number of issues. First and foremost, because the digital euro "is much more than the digital equivalent of cash", it would need to be smoothly integrated with digital wallets, banking apps and instant payments. He suggested the ECB is "trying to do everything for everyone all at once", creating a new pan-European payment system and rulebook.

This explains why banks' reception has been "lukewarm", with the proposed partnership between central and commercial banks being unbalanced. The latter are being asked for sizeable investments into a system "over-prescribed" by the ECB that does not factor in the investments European banks have made or are making into payment solutions and does not adequately recognise the difference between banks and other stakeholders. The EU should recognise its banking sector as a strategic actor, added Mijs, especially in the current geopolitical context, and a public-private partnership should be one "where both EU authorities and market participants engage on an equal footing to reach a mutually acceptable and attractive solution that can serve Europe's strategic objectives of sovereignty, resilience and competitiveness".

Retail CBDCs

Any retail CBDC would need to work closely with commercial banks' payment solutions, as central banks would not be banking retail borrowers directly. That entails establishing the right parameters, including the appropriate legal framework from the European Commission and European Parliament.

Michael Mainelli, President of the London Chamber of Commerce and Industry and former Lord Mayor of London, pointed out that a conflict exists between stablecoins and CBDCs, which suggests that coexistence is not on the immediate horizon. "The great advantage of CBDCs is the same great advantage of smart contracts in Ethereum, which is programmable. But when you tie your money to anything very tightly, you lose its fungibility." He also highlighted

When you tie your money to anything very tightly, you lose its fungibility

Michael Mainelli, President of the London Chamber of Commerce and Industry

the potential risk to financial system stability and the fact that governments could use CBDCs as part of fiscal policy implementation. After all, when a central bank issues money to a payee, it is issuing government debt, so "we are actually trading in tax credits".

Rationalisation and innovation

Reflecting on the many different forms of digital money (see Figure 1), Sabih Behzad, Head of Digital Assets, Deutsche Bank Corporate Bank, asked whether CBDCs are needed if private money can do the same thing, and why there are so many cryptocurrencies.

"I don't think we need so many cryptos," replied Kaiko CEO Ambre Soubiran, who founded the digital asset market data business in 2014. "We cover about 300,000 instruments, which is thousands of individual assets – an instrument being a pair, so there are many more. We think that only 50 should be deemed investible." She added that part of Kaiko's business is providing indices and benchmarks that are investible and that can be replicated and hedged, and that only

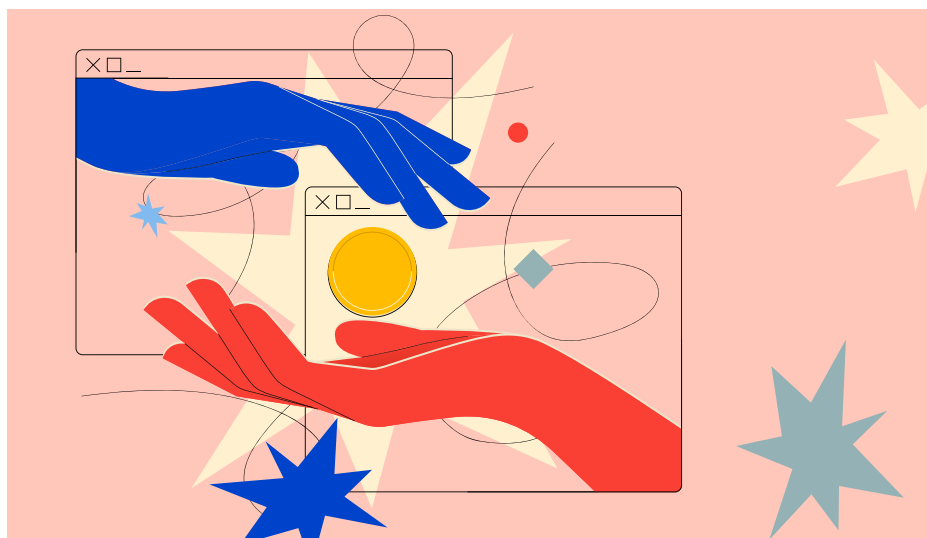
around 10 assets would meet these criteria. These would not include any CBDCs.

Contrasting stablecoins with CBDCs, Behzad talked about the intentions of central banks. "Given the demise of cash, they want to offer a fully digital alternative to end customers. Adoption is not the only measure – the desire to retain independent monetary policy is also a fundamental reason to pursue such instruments. Central banks do not want to be fully disintermediated in financial flows – this is why the future is unlikely to consist exclusively of private money."

Edward Budd, co-founder of Adhara, discussed tokenised deposits that bridge the gap between traditional banking deposits and the new technology underpinning crypto. Tokenised deposits aim to deliver some of the benefits provided by the crypto ecosystem but within a traditional banking model – always on, 24-7 money movements coupled with atomicity and the potential for programmability.

"It is a different way of digitally representing an existing bank of money in an account – i.e. a liability," he said. "There is nothing innovative about that – from a regulatory and accounting perspective, adoption that breaks those norms is very slow and very costly." In November 2024, Adhara announced the successful conclusion of a blockchain-based corporate payments experiment between UBS and Deutsche Bank, leveraging the Bundesbank's Trigger Solution and bank-issued tokenised deposits.

Swift's Head of Innovation, Nick Kerigan, sees significant momentum in the growth of existing securities tokenisation



and highlighted that some real issuance is taking place as financial institutions, central banks and fintechs push ahead with tokenised asset classes that could change the capital markets landscape. The German development bank, KfW, has issued more than €17.5bn in digital bonds, and the European Investment Bank had launched its fifth digital bond worth €100m. Meanwhile, BlackRock and other asset managers are leading the way in tokenised investment funds.

On 28 February, Piero Cipollone, Member of the Executive Board of the ECB, explained why the availability of central bank money to settle transactions using distributed ledger technology (DLT) is so important. “First, if we don’t use central bank money, other settlement assets – such as stablecoins or tokenised deposits – will be used, which would reintroduce credit risks and fragmentation in the financial system,” he said. “Second, the possibility to settle in central bank money is seen by the market as a key factor in the adoption of new technologies.”

The ECB’s 2024 trials of DLT for central bank money involved 60 industry participants, including Swift and Deutsche Bank. More than 40 experiments and trials covered a wide range of securities and payments use cases, including the first issuance of an EU sovereign bond using DLT. A total value of €1.6bn was settled via

“
Central banks do not want to be fully disintermediated in financial flows

Sabih Behzad, Head of Digital Assets, Deutsche Bank Corporate Bank

trials over a six-month period, exceeding values settled in comparable initiatives in other jurisdictions. The trials offered three different solutions to link the ECB’s TARGET services to market DLT platforms. This allowed participants to either settle real transactions in central bank money or conduct experiments with mock transactions.

All of this, said Kerigan, “shows a groundswell of innovation in the European market around tokenisation and the demand for central bank money instruments”.

Regulating digital assets

On the topic of regulation, Mat Seneviratne, Global Head of Anti Financial Crime, Digital Assets at Deutsche Bank, noted that in the US, there is increasing regulatory certainty, with President Trump’s call for

a stablecoin proposal, and for the Office of the Comptroller of the Currency to lift regulatory restrictions on banks engaging with crypto firms. In January 2024, the US Securities and Exchange Commission approved the first spot bitcoin ETFs, clearing 11 to list. The *Financial Times* called the move “a watershed moment that cryptocurrency enthusiasts are betting will draw new retail and institutional investors into the market”.

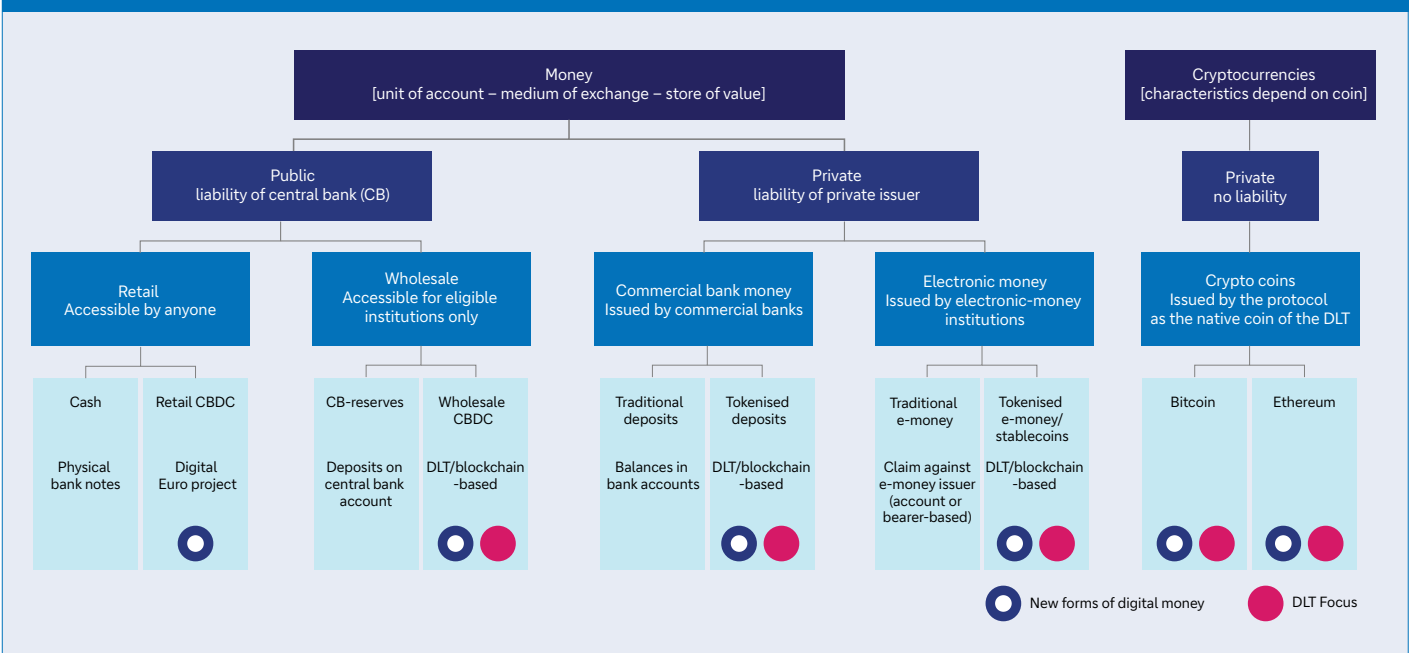
However, Europe’s MiCAR is now in place – and, while not complete (it does not cover decentralised finance or non-fungible tokens), it can have its scope widened later.

“What you ideally want is not to have to set up different liquidity pools in different jurisdictions – do you really want a separate custodian in every country?” asked Seneviratne, who called for pragmatism given that “there is room for harmonisation in certain areas and scope for building a suitable control framework”.

He concluded, “While there is a growing opportunity to operate in the digital asset space with regulatory clarity, where uncertainty still exists, we can look to apply lessons and standards from other areas of financial services to help foster continued innovation.”

This article draws on insights from Deutsche Bank’s Payments and Digital Assets conference, held on 12 March 2025

Figure 1: The different types of digital money in the monetary system



Trust and Agency Services

Customer stories
from Germany
and China, plus an
essential explainer on
a growing asset class

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Germany's capital market 72–73

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Bond issuance goes digital

In January 2025, Evonik and Deutsche Bank partnered to issue electronic securities via Clearstream's digital platform. *flow*'s Desirée Buchholz reports on an important milestone in digitalising the German capital market

Deutsche Bank Trust and Securities Services (TSS) has supported one of the first corporate bond issuances to take place via D7, Clearstream's digital issuance and post-trade platform. Acting as both fiscal and paying agent, the TSS multi-disciplinary team supported Evonik Industries AG, a publicly listed speciality chemicals company based in Essen, Germany, with the placement of a €500m five-year green senior bond on D7.

The transaction was completed in January 2025 and expanded upon new opportunities brought about by the Electronic Securities Act (eWpG), a German law that came into effect in June 2021. The law permits the issuance of certain securities – such as conventional and convertible bonds, profit-participation certificates, warrants and investment certificates – in a purely electronic format. Previously, financial

instruments deemed securities under civil law had to be issued in the form of a physical certificate. On its website, Germany's Federal Financial Supervisory Authority (BaFin) notes that, "The entry of the issue in a database is now replacing this physical global note used in the past."

Clearstream, the post-trade services provider for Deutsche Börse Group, introduced D7 in October 2021 in the context of the new Act. As of 1 July 2025, the digital platform had handled more than 1.5 million electronic issuances totalling €28bn. The majority of these issuances were structured products like certificates issued by banks. The Evonik deal was the first corporate bond benchmark issuance from an issuer outside of Deutsche Börse Group, and only the second to be administered by an external issuing and paying agent; in October 2023, Deutsche Börse itself

issued €3bn worth of corporate bonds via its digital platform.

Ludger Nahen, Head of Capital Markets at Evonik, explains that, "This transaction illustrates the growing relevance of a digital securities services ecosystem which will contribute towards increasing the efficiency of capital market funding. Deutsche Bank managed the legal and technical preparations that were needed to enable this digital issuance very well."

Looking ahead, Soeren Lindequist, Trust and Securities Services, Deutsche Bank, believes that, "The practical implementation of eWpG in the corporate space will reduce processing times of securities issuance and risks related to physical deliveries and manual handling of transaction documents for our corporate clients. The transaction also demonstrates Deutsche Bank's commitment to collaboration on innovation and dedication to client solutions."

How digital issuance works

As part of the transaction, Deutsche Bank TSS acted as fiscal agent tasked with creating an XML file that included the issuance parameters (based on the electronic note file consisting of the pre-agreed terms and conditions sheet), and then uploading both the XML file and the electronic note file (see Figure 1, step 2). On the issue date, the bank managed the delivery-versus-payment settlement instruction to D7 and ensured that Evonik received the excerpt from the digital register (see Figure 1, step 9). Over the lifecycle of the bond, TSS will act as paying agent to ensure payments related to debt instruments (such as interest and redemption payments) are made between Evonik, as issuer, and the investors.

In the old model based on physical documents, the issuer had to create a physical global note and courier it to the fiscal agent. The agent manually authenticated the global note, uploaded the technical details onto its systems and delivered the global note to Clearstream. The settlement provider again had to type the details into its settlement system and take the physical global note into safe custody. Finally, copies of the global note were delivered to the issuer for the proof of issuance. This process, which could take up to two business days, has now been replaced by an end-to-end digital process.

For now, D7 is focused on the domestic market in Germany, but there are plans to extend its reach to its International Central

Image: Evonik



This transaction illustrates the growing relevance of a digital securities services ecosystem

Ludger Nahen,
Head of Capital Markets, Evonik

Securities Depository to allow for the digital issuance of Eurobonds.

The evolution of digital assets

"This transaction marks a significant milestone, as we have now put in place processes to support issuers to keep pace with the digital asset evolution in the financial services industry," says Miriam Keeler, Business Head, Trust and Securities Services, Deutsche Bank.

There are two angles to this evolution: first, the tokenisation of securities, and second, the drive towards shorter settlement cycles. Indeed, the eWpG was introduced on the back of the German government's distributed ledger technology (DLT) strategy. As such, the law not only removes the requirement for a physical certificate, but the electronic registry can also be operated based on DLT systems (a crypto securities register), as BaFin explains on its website.

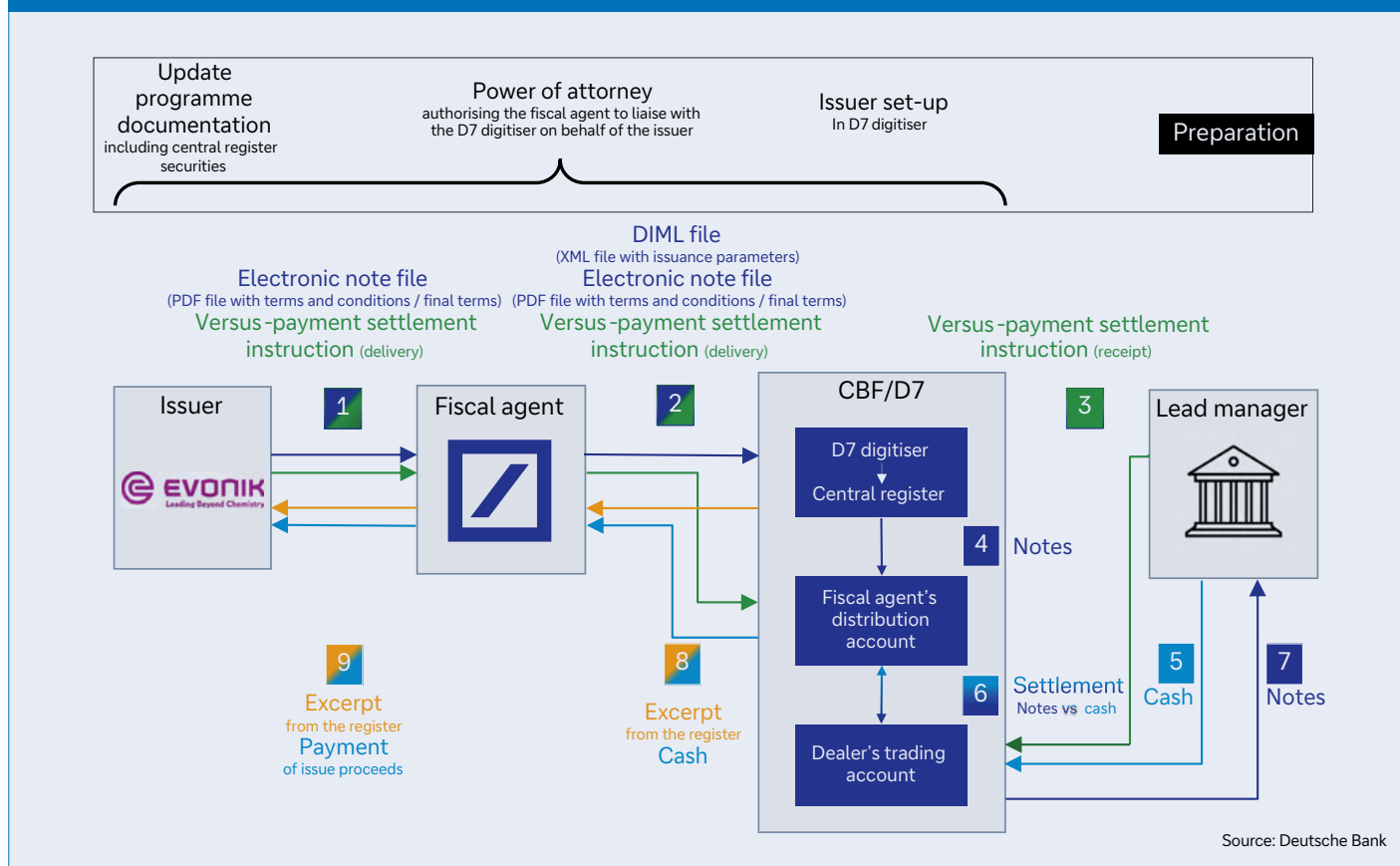
So far, the EU Central Securities Depositories Regulation precludes the trading of crypto securities on European stock exchanges, but pilot transactions are being conducted to understand the technical requirements for doing so. Clearstream, for example, has complemented its D7 platform with DLT-based architecture to enable frictionless tokenisation of securities. The solution was launched as part of the blockchain trials conducted by the European Central Bank in 2024. According to Clearstream, these trials demonstrated the "D7 DLT's ability to issue securities on blockchain, handling

both securities and central bank digital currency, with a vision to further scale these capabilities in the future".

The Evonik transaction is part of the general move towards shorter settlement cycles in Europe. In November 2024, the European Securities and Markets Authority recommended 11 October 2027 as the target date to transition to next business day settlement (T+1 – see page 60). The aim will be to increase the efficiency and resilience of post-trade processes which, in turn, will bring greater settlement efficiency in the EU, and better global market integration.

"Digital issuance represents a significant leap forward in the efficiency and security of securities transactions," concludes Jens Hachmeister, Head of Issuer Services & New Digital Markets at Clearstream. "We are thrilled to welcome Evonik and Deutsche Bank on our digital D7 platform as one of the first corporate issuers. Our clients' commitment and trust highlight the transformative potential of scalable digital solutions for the future of digital financial markets."

Figure 1: Issuance of eWpG securities and settlement via Clearstream



Private credit explained

Following our coverage of collateralised loan obligations (CLOs) and trade finance assets from an origination and investor perspective, *flow*'s Clarissa Dann reviews private credit, a rising asset class that has grown significantly in a climate of 'higher for longer' interest rates



By the end of 2024, the total of private debt assets under management had reached US\$1.62trn – up 17% from 2022, and showing a pattern of meteoric growth over the past 23 years (see Figures 1 and 2).

In January 2024, the Bank of England estimated a four-fold rise to around US\$1.8trn since 2015. “Given the limited data available, the true market size could be much larger,” commented Lee Foulger, Director of Financial Stability, Strategy and Risk at the UK central bank. But what is private credit, and why are investors attracted to it?

Characteristics of private credit

Private credit is non-bank lending, usually to middle-market companies, which typically range in size from US\$25m to US\$75m in EBITDA. These companies can either be sponsored, owned by a private equity firm or non-sponsored. They are also often unrated companies, although a credit assessment or point-in-time rating of the company will often be done in conjunction with financing. The term ‘direct lending’ is synonymously used with private credit, capturing the direct nature of the financing process which foregoes needing an arranging bank as an intermediary – thus, financing is directly negotiated between a single lender, or small group of lenders, and the borrower.

A few additional characteristics help to define private lending:

- Financing is typically floating rate in nature (over the Secured Overnight Financing Rate), meaning that the interest that needs to be paid by the borrower will fluctuate with interest rates. The borrowers have traditionally been small to mid-sized private companies with a credit assessment of B-; however, larger companies, with a credit rating of B or higher, are increasingly tapping the private credit market. The ticket sizes have grown recently as larger private credit funds have been raised and able to deploy more capital to borrowers.
- The financing typically spans a range from US\$10m to US\$250m for a three- to seven-year term loan. What was typically a ‘one lender to one borrower’ relationship has grown into a small group of lenders that are able to pool financing together. This has brought the upper boundary of ticket sizes to US\$5bn+, mirroring the size of large public market transactions

Figure 1: Breakdown of assets under management (US\$bn)

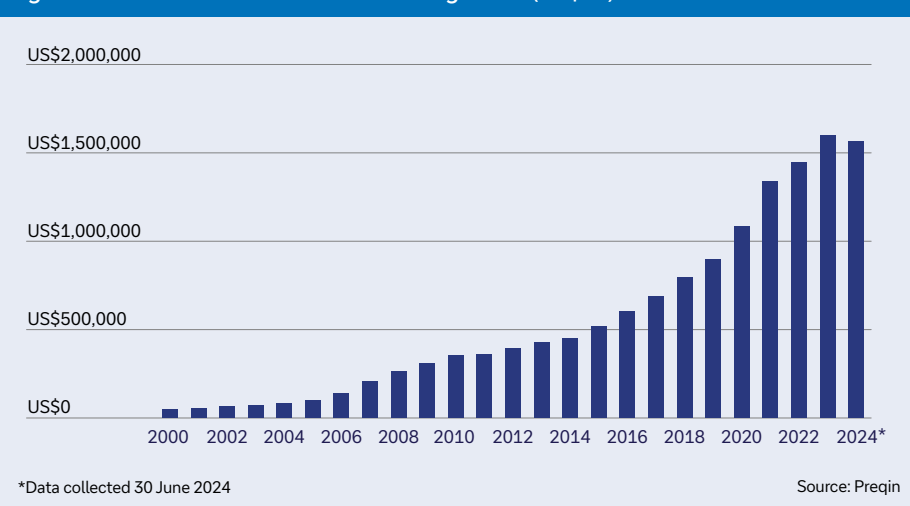
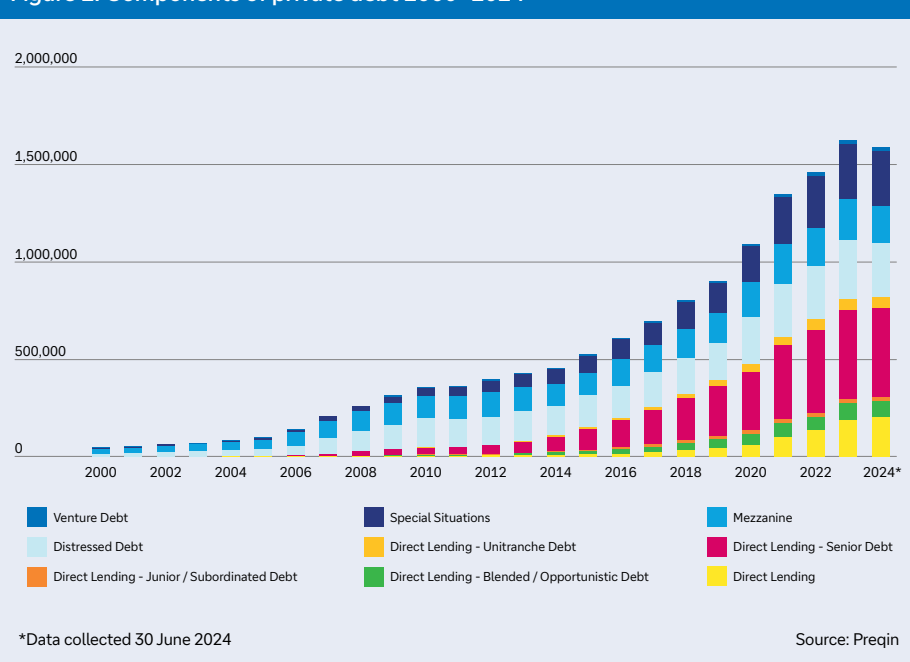


Figure 2: Components of private debt 2000–2024



and blurring the lines to some extent between public and private credit.

- Financing terms can be as high as 400bps above the lending rate for a publicly funded transaction. This large spread differential is partly the result of an ‘illiquidity’ premium attached to the debt, which does not trade on the secondary market and is therefore used to compensate an investor for the increased risk of not being able to unload an asset during a period of market stress. This spread pick-up, however, is

one of the most attractive aspects of the asset class for both investors and private credit managers and was one of the driving forces behind private credit's ascent following the low interest rate and broadly constructive macro backdrop after the global financial crisis (GFC).

- The deal terms for a private credit transaction are typically ‘covenant-heavy’, meaning that the deal documentation includes provisions meant to offer downside protection for lenders, such as the company needing to maintain

specified thresholds for liquidity and leverage. Covenant-rich documents have traditionally been a point of departure from public market syndications, which have typically been 'cove-lite' following the resurgence of the leveraged loan market in 2011 post-GFC.

Private equity

The relationship between private credit and private equity (PE) is synergistic; to help finance a leveraged buyout or acquisition, a PE firm will seek additional financing. Traditionally, leveraged buyouts (LBOs) and mergers and acquisitions activity have been provided by the public market, with arranging banks bringing a deal to market and providing the initial financing before syndicating the debt to a group of investors. But deal activity began to bifurcate towards private credit during 2022, the result of a few high-profile deals being 'hung', or left on the balance sheets of arranging banks, as investors shied away from the market due to a rapid rise in interest rates from the Federal Open Market Committee that put downward pressure on loan prices.

"With a pull-back by arranging banks, private credit funds could establish market share during a period of heightened market volatility, and although interest rates have begun compressing in both the US and in Europe, LBO financing will likely be a blend between the private and public markets," explains David C. West, Global Head of CLO & Transformation at Deutsche Bank.

Synthetic risk transfers

And increasingly, the relationship between banks and private credit is also becoming synergistic. Although most private credit transactions are 'unitranche', meaning that the first lien senior-secured and second lien (more junior) portions of a transaction are typically bundled and financed by the same lender (or small pool of lenders), banks are increasingly providing first-lien financing for private transactions and sourcing the second lien – the riskier and wider-spread yielding part of the debt – to a private credit manager. This can be structured as a synthetic risk transfer (SRT), which enables a bank to compete in the direct lending space while unloading the riskiest part of the notes (transferring the risk) to private credit funds and other investors.

"SRTs have seen greater market adoption in Europe so far than in the US – in 2023, the deal volume of SRT transactions with



With a pull-back from arranging banks, private credit funds could establish market share during a period of heightened market volatility

David C. West, Global Head of CLO & Transformation, Deutsche Bank

performing loans was roughly €155bn, with synthetic transactions taking the bulk of the volume compared to cash transactions," noted Deutsche Bank Research CLO strategists Conor O'Toole and Jamie Flannick in *US CLO Weekly: The knock-on effects of tightened regulation and high interest rates* on 24 June 2024 (see Figure 3).

Deutsche Bank has been an early mover in this space and has a robust SRT business in Europe which is being scaled in the US. Thus, SRTs have increasingly become intertwined with the private credit market as banks scale their direct lending efforts while balancing the risk-based capital charges stemming from prudential regulation such as Basel 3.3.

Competitive landscape

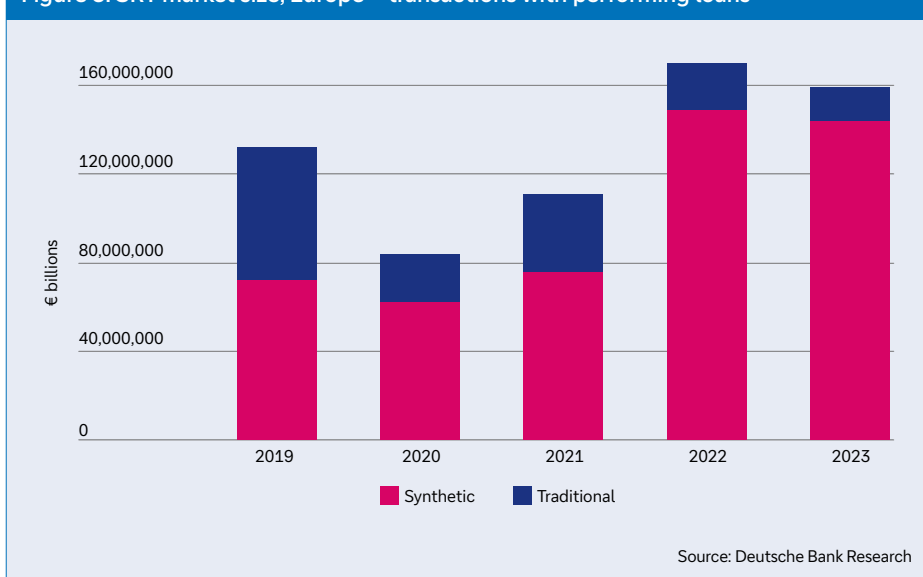
Private credit is often associated with corporate direct lending. However, the broader category of private debt is rapidly branching into other segments of the capital markets and now includes asset-based financing (ABF) – the private financing of hard assets, such as data centres and infrastructure projects, and peripheral assets, such as music royalties and other esoteric collateral. The attraction for investors is that these assets offer diversification from the equity and bond markets, and may serve as a hedge to systemic volatility in some cases.

Private credit managers mostly focus on the same core set of activities: sourcing deals with compelling companies (origination), structuring deal terms and financing that is often quicker and more flexible than anything borrowers could find in the public markets, and providing integrated banking services that extend beyond simply the cheque that is written for the transaction. And, due to the average term being three years, the deal funnel must also be a constant focus for a private lender. Deal sourcing and credit selection are critical top- and middle-funnel activities for private credit managers.

Given the variety of players and the mixture of sector specialisations, the competitive landscape for private credit is often categorised according to ticket size and risk:

- Core middle-market providers compete to simplify borrowing for sponsors to

Figure 3: SRT market size, Europe – transactions with performing loans



secure multiple unitranche (or 'hybrid') deals – these being single tranches with blended senior/junior rates.

- Upper middle-market providers are typically larger, and their deals are fewer, but bigger than the core; they compete with the broadly syndicated loan lenders.
- Lower middle-market providers used to specialise in lower-risk senior debt but are increasingly moving upwards into the core middle-market. Global banks compete for well-known, marquee sponsors, but also reach down into the market.
- Niche or regional banks compete for senior direct lending to non-sponsored corporates.
- Opportunistic specialists seek situations for workouts on loan-to-own deals and/or spread pick-up on distressed deals.

Retail investors will shortly have access to this asset class via exchange traded funds – a growing part of the market.

Role of banks in private credit

Traditional banks remain vital components of the private credit market due to their expertise and capabilities, including teams focusing on origination, work-out, cash management, treasury, lending, trustee and agency, and IT infrastructure. Private equity sponsors (who back up to 80% of deals) and their portfolio companies alike rely on these banking services – such as FX hedging, research, and risk management and transfer. Full-service corporate banks such as Deutsche Bank's Trust and Securities Services (TSS) team can serve as a conduit to new customers and new customer segments that traditionally have not invested in private credit. These could include regional insurance companies that have lacked the right partnership to enter the market and deploy capital. Or it could be via the high-net-worth or family office segment, often aligned to an investment bank's wealth management arm. And, increasingly, it could be via relationships with sovereign wealth funds, which have capital to deploy and are likely to have touchpoints with investment banks that have a large global footprint.

Although the relationship between banks and private credit lenders has often been portrayed as contentious, the operations and differentiation between both are in some ways becoming increasingly intertwined as the market evolves. In their 1 July 2024 report, *Finding a constructive equilibrium*,



“
Traditional banks remain vital components of the private credit market due to their expertise and capabilities

Deutsche Bank Research strategists O'Toole and Flannick explain how the role of banks and private credit lenders is “converging” and that “a constructive equilibrium seems to be within reach”.

Many banks are expanding their operations in private credit by using their own balance sheets, by marshalling resources through other means such as commingled funds or separately managed accounts, or by establishing other managed funds. Deutsche Bank has been among this group; in September 2023 it established Deutsche Bank Investment Partners (DBIP), which provides private credit investment opportunities to bank clients.

Given the sheer scale and momentum of the market, it is safe to say that private credit will be a strategic focus for years to come.

This is an abridged and updated version of the flow online article 'Private credit – a rising asset class explained', published on 8 October 2024



HUTCHMED's office
in Shanghai

A biopharmaceutical organic growth story

HUTCHMED's cutting-edge work helps reduce the toxicity of cancer drugs while increasing their efficacy. *flow's* Clarissa Dann finds out how this innovative company is delivering progress for patients and financial self-sufficiency for shareholders



HUTCHMED's office
in Hong Kong SAR

Images: HUTCHMED

Celebrating its 25th birthday in 2025, HUTCHMED's metamorphosis into one of China's leading biopharmaceutical firms has been remarkable. It started out being incubated – as the name suggests – within former international conglomerate Hutchison Whampoa, headquartered in what is now Hong Kong SAR. Mark Lee, Senior Vice President in Corporate Management at HUTCHMED, explains that its parent company was not in the biotech space but had the flexibility to invest in new areas. Certainly, the fledgling idea of “let's see what we can do in China with a pharmaceuticals company” has yielded handsome dividends.

HUTCHMED took the opposite path to many of its competitors in the Chinese biopharmaceuticals market. Others favoured licensing the rights to European or American drugs as a way of then trying to achieve sales in China. But HUTCHMED has always focused on “actually discovering our own medicines, and then developing and launching them,” Lee says. Furthermore, HUTCHMED may be based in China, but it aims to “create innovative pharmaceutical products for the world, not just for China”.

Scientific excellence meets capital markets expertise

Lee should know: a biochemical engineer by training, he was a healthcare sector-focused M&A banker in London and New York. He joined HUTCHMED in 2009, when it was valued at US\$70m and had just started clinical trials in China. Some 16 years later, over US\$1.4bn in capital has been raised, the firm has had two further IPOs, and so it is now triple-listed in London, New York and Hong Kong SAR. Its novel cancer products achieved sales of US\$500m in 2024, and the company now has a market capitalisation of more than US\$2.5bn.

Also supporting the CEO, scientist-businessman Dr Weiguo Su, and his team are David Ng and his investor relations (IR) department, who help to bridge and nuance communications between the scientists, corporate management and the capital markets. This is quite something, given the complexity and dynamism of the firm and sector.

A pharmacist by training, Ng worked for a few years in the field of pharmacology before becoming a sell-side equity analyst for biotech stocks in Toronto. On returning home to Hong Kong SAR, he switched to cover the ever-popular real estate sector before seizing the opportunities afforded

by the Hong Kong SAR regulators' efforts to attract investment into biotech. As one of the first analysts to cover HUTCHMED, he gained an in-depth view and liked what he saw so much that he joined them. As he says, “That's a good personal testimonial: it's an attractive company to work for.”

Investor relations

The three-person IR team Ng heads provide global coverage, with Ng and one colleague based in Hong Kong SAR and a third, based in Shanghai, predominantly dealing with mainland investors. The team sits alongside Lee's external relations team and the business development team: a useful location, given the coordination required across communications with investors and the public in general. This culture of collaboration can be found throughout HUTCHMED. Ng explains that in some companies, “IR teams are often totally excluded from managerial discussions, such that the IR team might be the last to know something: that is not the case for us”. Management in general – from the CEO and CFO down – value the capital markets expertise that Ng and Lee provide.

HUTCHMED's disposal of a non-core asset earlier in 2025 helps to illustrate this. The disposal led to a huge cash windfall, boosting the company's cash balance by

50%. Lee and Ng tempered management's expectations by explaining that investors' reaction – and HUTCHMED's share price – might be more muted than anticipated, due to a range of market factors. They also managed investors' expectations; in response to investor requests for the cash windfall to be used for dividends and buy-backs, they explained that this would not make much sense for a biotech firm in a growth phase. Ng notes that this should not have come as too much of a surprise for investors, given that HUTCHMED is “well-known for being very realistic and conservative, for never wishing to ‘over-hype’ or over-promise”.

But whether the issue being addressed is a one-off disposal or the mainstay of its business model, Ng's IR team works hard to constantly inform – and even educate – its ever-expanding roster of investors and stakeholders on key aspects of its finances, products and value generation. HUTCHMED's bread-and-butter work can be divided into its pipeline of products and its modes of commercialisation and distribution.

Given that companies such as HUTCHMED have various products at different development stages, from clinical trials to going to market, walking investors through that pipeline is something all biotech IR teams do (see Figure 2 in the

Figure 1: HUTCHMED: key facts







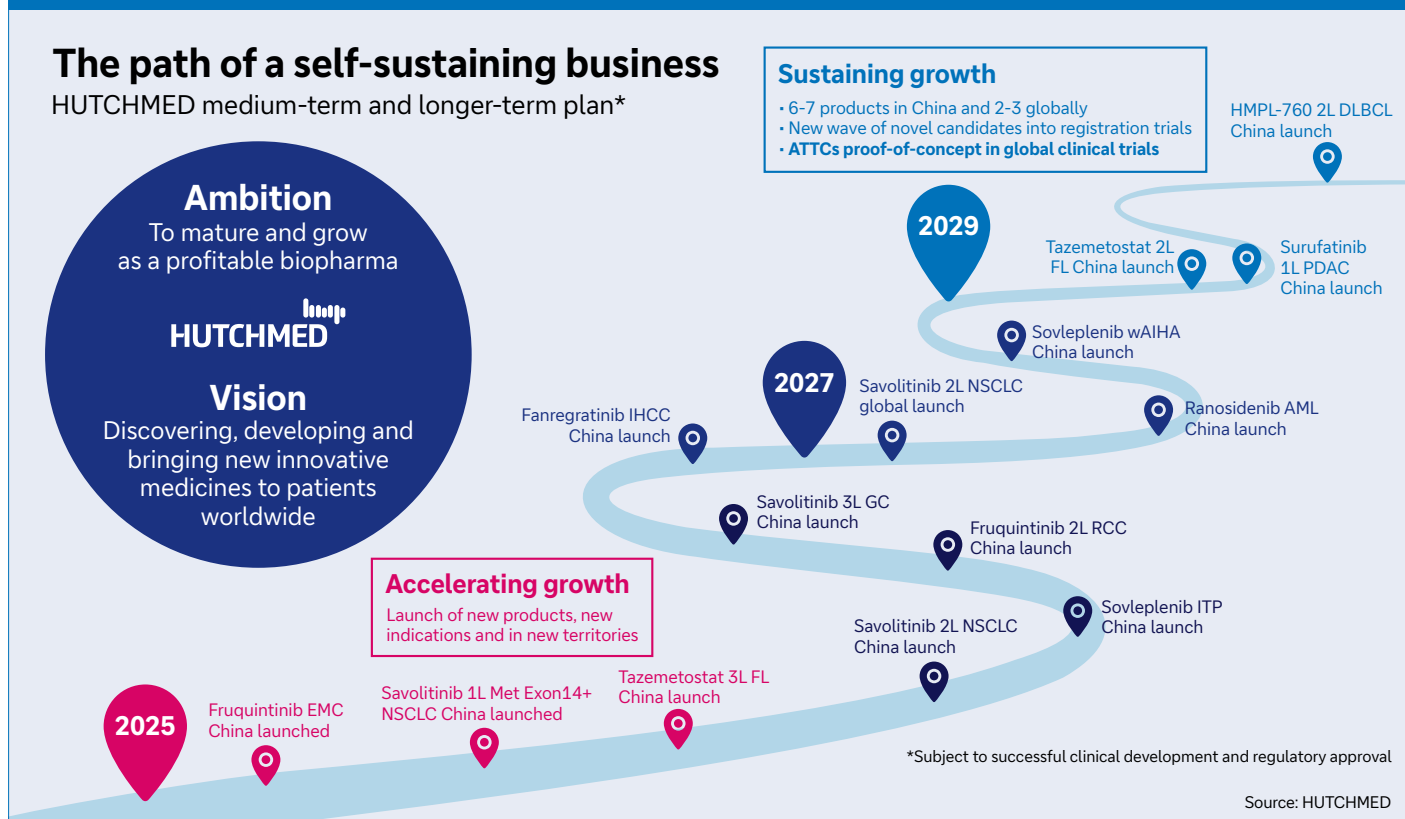
Founded in 2000	Listed on: HKEX 香港交易所	Nasdaq	
 150,000+ patients treated by HUTCHMED medicines	 4 approved and marketed cancer products (savolitinib, surufatinib, fruquintinib, tazemetostat*) in China	 1 approved and marketed product (fruquintinib) worldwide, including in US, EU and Japan	
40 clinical trials worldwide, including 14 clinical registration studies	 20 drug candidates from in-house discovery engine	FY 2024 net income: US\$37.7m	
		FY 2024 cash balance: US\$836.1m	
Source: www.hutch-med.com		2025: Sold a non-core asset for US\$608m	

Figure 2: HUTCHMED's focus for the future



flow 2024–2025 AstraZeneca case study). Likewise, the very nature of these products means that, after the long wait, the product may be an instant ‘home run’, with a ten-fold increase in the stock price, or the market’s reaction may be more muted. However, there is a need to articulate to current and prospective investors where HUTCHMED’s model differs.

Improving cancer drugs

The firm’s particular expertise lies in targeted therapies: small molecules that inhibit very specific pathways in cancer to stop a particular mutation from working for the cancer. The company has a strong focus on developing drugs within this field that aim to minimise toxicity and improve safety.

“With chemotherapy and many other novel injectables, the statistically improved survivability is great, but the experience is very much not,” Ng observes. This is why HUTCHMED is working to improve on current antibody-drug conjugate (ADC) medicines that use cytotoxic drugs as their ‘payloads’. Instead, HUTCHMED’s antibody-targeted therapy conjugates (ATTCs) take newly created targeted therapy drug

candidates and attach them to an antibody, which can then be administered. That improves the tolerability of the medicine because it is more targeted, and not going all around the body, while still remaining potent.

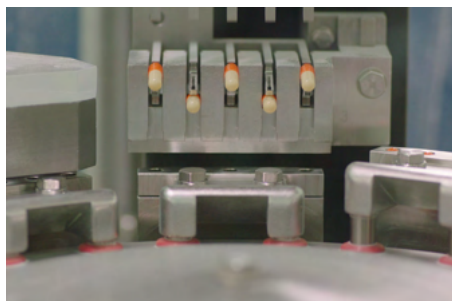
Recently, HUTCHMED has remained relatively quiet about its extensive research and development (R&D) efforts, but Ng notes that it is important to remind investors about the novel product R&D that is in the pipeline: “The future of the company – its five- to 10-year growth line – will be coming from what is currently in the lab, and how that cash [from the disposal earlier in 2025] is going to be invested.”

In 2025, HUTCHMED is looking to launch its first product for haematological malignancy (blood cancer) in China, and plans to move the first candidates from the ATTCs platform into clinical trials. As the company develops further, it is seeking to extend the use of its targeted therapies and boost its manufacturing capability. Regarding potential acquisitions, HUTCHMED’s business development, external relations, IR and management teams are keeping an eye out for complementary partners within this space.

Financial self-sufficiency and resilience

That question of ‘where is the money coming from?’ often triggers quick thinking and agility in firms. Ng points out that 10–20 years ago, and certainly before the advent of Hong Kong SAR’s pro-biotech regulatory regime, “The volume of funding for biotech companies coming out of China was not so abundant, so we had to think on our feet and devise supplemental businesses to ensure sufficient cash flow.”

One solution is HUTCHMED’s history of successfully partnering on its products. It has partnered with AstraZeneca and Eli Lilly for more than a dozen years, Takeda for a couple, and also with Ipsen as well as a number of other biotech companies from China. Such collaboration requires HUTCHMED’s IR team (and external relations and business development colleagues) to coordinate communication with investors and the public in general. It also, according to Ng, makes HUTCHMED “less reliant on the ebb and flow of investor interest and market sentiment, and less beholden to fluctuating stock prices to raise money at times (and at prices) that the company does not deem attractive”.



HUTCHMED favours a model of “financial self-sufficiency” to provide investors with a sense of comfort that, as a maturing biopharmaceutical company graduating to the next level, it does not need to constantly rely on external financing to keep growing and that its R&D work and commercialisation will continue, come what may. Ng points to the past two years of positive earnings, which were “supported by several different revenue and income drivers, not necessarily just from HUTCHMED’s innovative drugs”.

All of this is just as well, given the increasing cost of debt and volatility in capital markets since the start of the Russia/Ukraine conflict, and a new tariff landscape. But developing such resilience was the result of prescience. HUTCHMED was an outlier in rejecting a previously held industry assumption that biotech companies only tend to generate cash after 15-plus years, while its decision to ensure an ongoing supply of capital by growing organic revenues means it is well placed to navigate geopolitical headwinds.

Growing sales and partnerships

Ng explains that the company commercialises drugs itself, with its large commercial team marketing its suite of existing cancer drugs – currently the focus is on colorectal and other gastrointestinal cancers – to around 3,000 hospitals across China. This existing infrastructure will also provide the launchpad for HUTCHMED’s new haematology drug, which will be released in 2025. There may also be opportunities to combine and test the company’s existing medicines with partners in the field, to improve efficacy, which in turn presents other avenues for commercialisation.

While HUTCHMED’s financials feature product sales, this is different from the top-line numbers on the financial reports. Partner companies sell HUTCHMED’s products for them, and so these are categorised as royalties, licensing agreements, milestone payments and

other collaboration-type payments. These are a big driver of its profits.

New investors and modes of communication

Just as the content of HUTCHMED’s messaging has evolved, so too have its recipients and the technology used to do so. As a triple-listed company, HUTCHMED’s team has dealt with an ever-changing mix of investors, and has done so alongside Deutsche Bank from its early days. Although it first listed on London’s AIM exchange in 2006, “the reality was that the investor base was not as broad as it could have been and, given our rather unique profile and industry, we required a wider base,” Lee says.

A US listing on Nasdaq using American Depositary Receipts (ADRs) in 2016 was able to provide this, he explains. Deutsche Bank acted as underwriter and ADR depository bank for this listing. After HKEX courted biotech sector investment, a listing there also made sense. Ng explains that with the triple listing, “Investors need to have confidence that the UK, US and Hong Kong SAR listings are fully fungible – it allows them to have confidence in the whole system.” He adds that HUTCHMED is “very committed” to the disclosure and corporate governance requirements for each of its respective exchanges and investor bases. He notes, for example, that Hong Kong SAR’s emphasis on ESG to differentiate itself from competitor exchanges in London, Frankfurt and New York is aligned with HUTCHMED’s own award-winning ESG efforts.

Like regulators, investors also differ, ranging from the ‘cool and patient’ long-term

capital of Western pension funds to the ‘hot’ money of Chinese retail investors. For example, from 2022 to the present, Chinese investors through the Southbound Stock Connect have gone from holding zero to 25% of HUTCHMED’s outstanding shares. Hanging on every announcement, these institutional investors attend in-person conferences across China in droves and are also “very online”. Ng’s IR team has embraced this adoption of technology to enhance communication with institutional investors: “Investors might take three days to reply to an email, but only 30 seconds to reply via WeChat.” HUTCHMED has been closely engaged with Deutsche Bank’s Depositary Receipts IR Advisory team on a number of value-added initiatives. In particular, HUTCHMED has presented on Deutsche Bank’s ADR Virtual Investor Conference (dbVIC) a total of 13 times, allowing the company to reach a broad base of investors.

But while the ‘what’, ‘how’ and ‘to whom’ of the IR team’s messaging may evolve, one constant remains: HUTCHMED’s focus on R&D. As Lee puts it, “We are an innovative drug company down to our DNA.” This focus has driven the company’s product successes, which in turn have raised its profile, global commercialisation and ability to craft good deals with multinationals. Another constant is that R&D, product development and commercialisation (including of the next-generation technology ATTCs) is all done in-house, enabling HUTCHMED to drive its own future and ensure financial strength for its investors and – the end beneficiaries of all of this – a better experience for patients.



How AI is reshaping the energy transition

As artificial intelligence (AI) drives innovation across sectors, it is not only fuelling technological progress, but also significantly increasing electricity demand. Deutsche Bank's Lavinia Bauerochse describes how this development is transforming the global energy transition – and why investments in grid expansion and transition finance are taking centre stage

AI is revolutionising how industries operate – from optimising engineering to accelerating scientific discovery. In manufacturing, for example, Siemens is deploying AI-powered robotics to enhance automation and improve the usage of data in manufacturing. At its Electronics Factory in Erlangen, the German technology company is working with AI-trained robots that pick and place unsorted parts from crates autonomously. The company reports that this has reduced the need for quality inspections by up to 95%.

In pharmaceuticals, AstraZeneca is deploying AI to transform drug development. According to Jim Fox, Vice President



Image: iStock

Sweden Operations, generative AI (GenAI), machine learning and large language models are already helping to reduce development lead times by 50% and to reduce the use of active pharmaceutical ingredients in experiments by 75%.

Beyond manufacturing and pharma, AI is also making agriculture more efficient; US-based agricultural machinery manufacturer John Deere has developed AI-equipped robot sprayers that can reduce herbicide usage by only targeting weeds. The company says this helps farmers grow food more efficiently and increases sustainability.

These examples highlight a broader trend: AI is rapidly driving innovation across industries by automating tasks, enhancing decision-making and enabling personalised solutions. While there are still hurdles for corporate adoption, the use of AI continues to build momentum. A McKinsey survey found that 78% of companies are now using AI in at least one business function, with the adoption of GenAI in particular accelerating over the past few months (see Figure 1). Moreover, compared with the previous survey in early 2024, a larger share of respondents report that their organisation's GenAI use cases have increased revenue within the business units deploying them – suggesting that AI is becoming important to competitiveness.

But as the digital transformation picks up speed, a bottleneck is emerging – energy infrastructure.

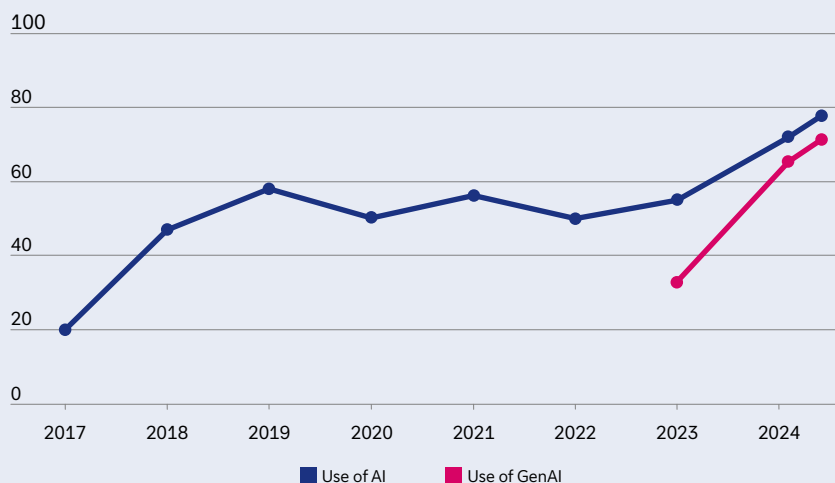
AI's growing appetite for energy

As AI accelerates, so does the demand for energy – and not just any energy. It needs to be available 24/7, clean and affordable. AI applications, particularly GenAI, require substantial computing power and continuous access to electricity. This is driving a sharp increase in demand for data centre capacity and, with it, a surge in electricity demand. One estimate expects data centre-related electricity consumption to grow from approximately 1% of global electricity demand today to over 2% by 2026, potentially reaching 3% by 2030 if forecasted growth continues (see Figure 2). AI-related electricity consumption alone is expected to grow by as much as 50% annually from 2023 to 2030 globally.

According to the International Energy Agency (IEA), data centres already account for around 2–4% of total electricity consumption in large economies such as the US, China and the European Union. In at least five US states, that share has

Figure 1: Increase in organisations' use of AI

Organisations that use AI in at least one business function, % of respondents¹



¹In 2017, the definition for AI use was using AI in a core part of the organisation's business or at scale. In 2018–2019, the definition was embedding at least one AI capability in business processes or products. Since 2020, the definition has been that the organisation has adopted AI in at least one function

Source: McKinsey global surveys on *The State of AI*

AI is not just a driver of energy demand – it is also part of the solution

already surpassed 10%, while in Ireland, data centres now consume more than 20% of the nation's electricity output.

This trend places growing pressure on electricity grids, particularly in regions where AI infrastructure is rapidly expanding. The IEA warns that “the growth of data centres could therefore lead to considerable strain on local power networks, exacerbated by the huge mismatch between rapid data centre construction times and the often sluggish pace of expanding and strengthening grids and generation capacity”.

The grid: backbone of the energy transition

This is placing a new urgency on transforming our electricity infrastructure. Today's power grids are ill suited to the needs of decentralised renewables and AI-driven digital economies. Currently, our grids are designed for centralised fossil fuel plants and struggling to

accommodate the variable and distributed nature of solar and wind energy. Thus, the global energy transition hinges on a significant transformation of our power grids. According to energy providers Siemens Energy and AES, over 400,000km of transmission networks need to be upgraded or newly constructed to alleviate bottlenecks. Currently, nearly three terawatts of renewable energy projects are delayed due to grid constraints.

Here, AI is not just a driver of energy demand – it is also part of the solution. Smart grids powered by AI are helping utilities to optimise electricity flows in real time, reduce transmission losses and manage growing complexity. AI-enhanced forecasting tools analyse weather, consumption and industrial activity to fine-tune the balancing of supply and demand.

For any region aspiring to become an attractive business location for future technologies and industrial production, access to computing power, i.e. data centres, will be vital. Data centres require access to cheap – ultimately, renewable – energy, and thus the relevance of renewable energy goes way beyond sustainability aspects alone: it is determining competitive advantage, attractiveness as a business location, prosperity and economic growth.

In 2024, energy transition investments reached US\$2trn – and a further uptake of renewables is expected. Recognising the urgency of fully realising the potential of renewables, investment in transmission has started to pick up as many countries make grid infrastructure a key priority in their national energy plans. Europe, the US, China, India and parts of Latin America are leading the way, and global investment in power transmission grew by 10% in 2023 to reach US\$140bn. Under today's policy settings, this spending would need to exceed US\$200bn per year by the mid-2030s to meet rising needs for electricity, and to reach US\$250–300bn in scenarios that achieve national and global emissions goals in full.

Nuclear renaissance

With AI-powered services running around the clock, the appetite for stable baseload power is surging again – and that is one reason nuclear energy is back on the agenda. Between 2020 and 2023, annual global investment in nuclear – encompassing both new plants and lifetime extensions of existing ones – rose by almost 50%, and now exceeds US\$60bn. Today, nearly 420 reactors worldwide provide just under 10% of global power generation, making nuclear the second-largest source of low-emissions electricity today after hydropower (see Figure 3).

According to the International Atomic Energy Agency (IAEA), nuclear power has prevented around 70 gigatonnes (Gt) of CO₂ emissions over the past five decades and continues to avoid more than 1Gt of CO₂ annually.

At COP28 in Dubai in December 2023, more than 20 countries – including the US, Japan, the UK and France – pledged to triple nuclear capacity by 2050. Since then, that number has grown to 31 countries. In March 2025, big tech companies such as Amazon, Google and Meta joined the initiative, recognising nuclear's role in powering digital infrastructure sustainably – with the pledge expected to gain more support in the coming months from industries such as maritime, aviation, and oil and gas. As of early 2025, according to the IEA, 63 reactors are under construction globally, representing more than 70 gigawatts of new capacity, one of the highest levels seen since 1990. But despite all this, the long-term viability of nuclear power remains challenged by the unresolved issue of final repository solutions for radioactive waste.

Figure 2: Data centre demand: non-AI vs AI

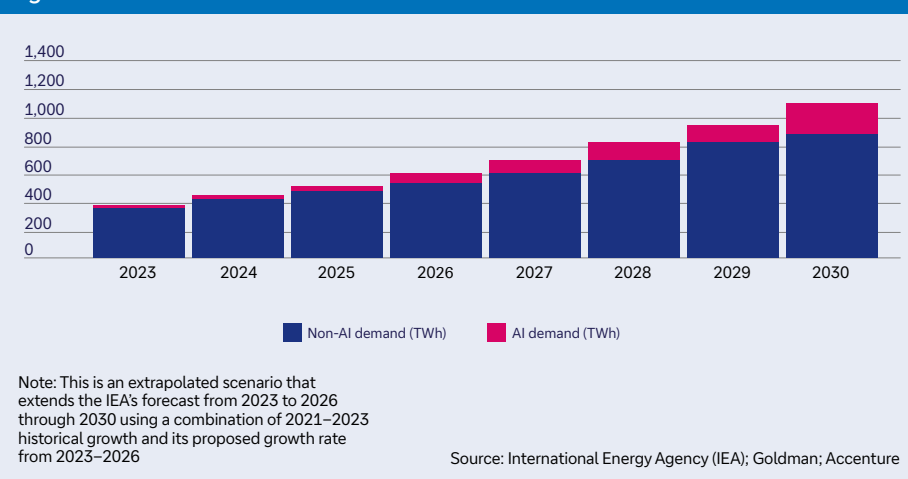
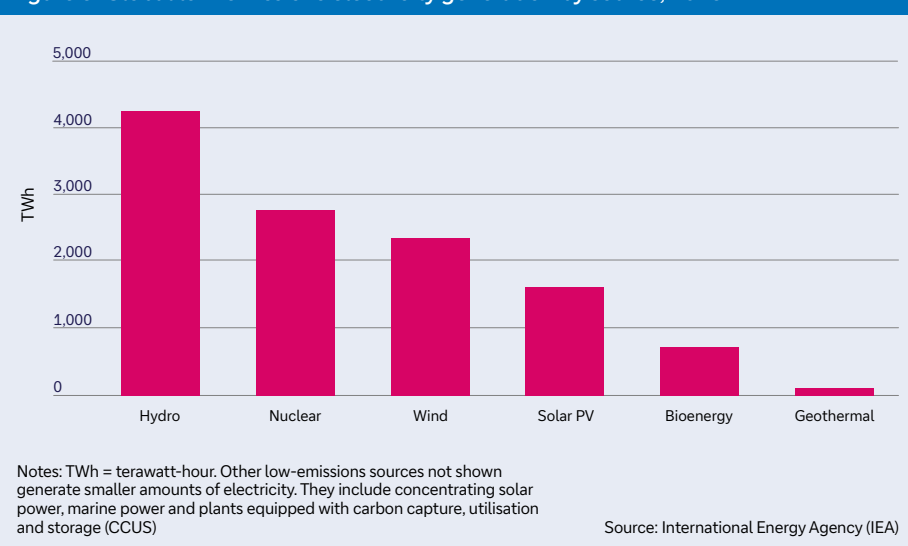


Figure 3: Global low-emissions electricity generation by source, 2023



Transition finance: enabling the shift

Powering the AI era sustainably requires more than just technology – it requires capital. The energy transition is not only an environmental challenge, but also a massive economic shift that requires large amounts of private capital to be mobilised. Industries face significant capital expenditure as they adapt business models to a new energy and regulatory landscape. Transition finance is about enabling corporates to adapt to these fundamental shifts that are driven by digitalisation, geopolitics and regulation.

Closing the capital gap to decarbonise high-emitting sectors such as steel and chemicals – and, increasingly, IT – requires a gradual transformation. We need to think about and approach transition more broadly.

Transition goes beyond the dark green assets captured by Green Finance. Transition Finance supports the adoption of business models in the form of a transition plan or transitional economic activities. It is essential for closing the capital gap and achieving a successful transition of economies.

AI is poised to be one of the defining forces of the 21st century, but its benefits will only be fully realised if the underlying infrastructure keeps pace. That means investing not just in AI, but also in grids, clean power, storage – and financial mechanisms that ensure industries can evolve.

Lavinia Bauerochse is Global Head of Sustainable Finance Corporate Bank, Deutsche Bank

The invisible engine of modern finance

Bernd Leukert explains how the right technology ensures enterprise-wide efficiency, interoperability and scalability, whatever the geopolitical climate might bring



Banking has always been about trust, relationships and capital, but it has equally always been about technology. Since our 1870 founding, technological progress has been vital in driving our business, enabling more effective and efficient client service.

Today, computing power is the invisible engine of modern finance, crucial for everything from mobile app logins to international trade executions. Daily, we handle millions of transactions, manage billions in liquidity and deliver real-time risk assessments. This relies on advanced computing infrastructure, including high-performance data centres and analytics driven by artificial intelligence (AI). All our services, from hedging strategies to liquidity management, depend on our capability to process, analyse and act on data at scale.

Beyond powering our operations, technology helps us understand and support our clients' needs, including by integrating our financial services into their digital business models.

Managing a volatile environment

Our clients are faced with a new era of unprecedented uncertainty and volatility. Geopolitical shifts, supply chain disruptions and fluctuating market conditions demand agility and foresight like never before.

In this environment, our clients are looking for faster and better insights into how to run their businesses. They want flexibility – including on financing – so they can adapt to unexpected events. And above all, they want to better understand their risks so they can protect themselves accordingly.

International trade serves as a key example. Recent developments are reshaping global trade patterns, increasing costs and introducing new risks that challenge commerce's logistics and

financing. Consequently, corporate clients seek our support for de-risking and restructuring their global supply chains.

A second example is market volatility. For instance, in April this year, we saw substantial volume increases of 25–50% in segments such as global FX. Clients depended on our stable systems, which ensured seamless service, underscoring our operational excellence and reinforcing their trust.

Technologies such as the cloud, AI, automation and data-driven decision-making are reshaping our operations amid rising client expectations and play a key role in navigating uncertainty and volatility. Particularly in uncertain times, clients demand stable services, faster and safer transactions, seamless experiences and personalised offerings.

'Concept of One'

To meet these evolving demands and to harness the power of new technologies effectively, a coherent and forward-looking technology strategy is paramount. The foundation of our approach is a standardised, cloud-based infrastructure.

Our 'Concept of One' is key: all units operate according to consistent standards, based on a shared architecture, and use technologies jointly. This unified approach ensures efficiency, interoperability and scalability across the entire organisation.

The cloud forms the technological foundation of our transformation, offering a highly standardised, up-to-date environment with scalable capacity. This flexibility prevents infrastructure from bottlenecking innovation, allowing quicker implementation of new products or client improvements. Moreover, the cloud delivers scalable computing resources essential for sophisticated AI models and

experimentation with the latest AI and machine learning tools.

Building on this, a modular technology architecture is vital. Decoupling transaction processing from banking services via application programming interfaces provides greater flexibility and faster execution of new client functionalities. This technology allows us to rethink financial service delivery, embedding finance at the customer's point of need – from payments and instant loans to wallets, deposit accounts and insurance.

Powering the Global Hausbank

Our commitment to technological advancement is intrinsically linked to our role as a Global Hausbank. It means helping clients navigate geopolitical and macroeconomic shifts and accelerating their transition to a more sustainable and digitised economy.

We believe that our technology-driven approach, underpinned by the 'Concept of One' and a robust cloud strategy, is proving effective in a fast-changing environment. It is enabling us to:

- Support clients through market volatility with resilient and scalable systems.
- Provide enhanced risk management capabilities and data-driven advisory.
- Deliver stable returns and reliable services despite global uncertainty.

By continuously investing in and evolving our technological capabilities, we are not just adapting to the future of finance; we are actively shaping it, ensuring we remain the trusted partner our clients need in an ever-changing world.

Bernd Leukert is Chief Technology, Data and Innovation Officer and Member of the Management Board at Deutsche Bank



What makes a champion?

Deutsche Bank's vision is clear: to be "the European champion and first choice for our clients". But what does being a champion really mean? Gurdon Wattles talks to Deutsche Bank Brand Ambassador Olli Zeidler about his path to becoming a world and Olympic champion



Olli Zeidler is one of the greatest rowers in the world today. After starting his sporting career as an elite swimmer, he switched to rowing and, after just three years, became world single sculls champion in 2019. In 2024, he won a gold medal at the Paris Olympics, smashing the Olympic single sculls record by more than four seconds – and that was in the semi-final. Olli, who holds a Master of Law degree in tax sciences, is also a Brand Ambassador for Deutsche Bank and an Ambassador for Stiftung Leben mit Krebs (Living with Cancer Foundation). On a visit to Deutsche Bank's 21 Moorfields offices in London at the end of his Olympic year, Olli shared his thoughts on what makes a champion.

Tapping into deep roots...

Olli comes from a distinguished family of rowers. Both his grandfather and his aunt won Olympic gold for Germany and his

father, Heino, was a champion oarsman too. Heino is also Olli's coach. Olli recalls, "Switching to rowing was a good way to spend more time with my Dad."

However, rowing at the highest level requires maximum effort, and coaches can and must be demanding. Is it hard to strike the balance between being a coach and being a dad? Olli says that father and son have found very effective ways of combining the discipline and challenge of top-level coaching with strong family bonds – adding, with a smile, "My Dad's job is tougher than mine."

... and deep dedication

Having switched from swimming to sculling in his teens, Olli was up against established oarsmen with more experience than him. He needed to learn the hard way. Olli's custom-built sculling boat is more than 7m long but weighs only 14kg, so combining power with balance – in other words, being fast while keeping the boat stable – is tougher than it looks. Olli remarks, "Falling into a German river during the winter isn't the fun part." His reward came with the rapid progress he made, and seeing improvements day by day.

Olli is clear about what makes a champion: it is all about discipline. He has been prepared to train every day, summer and winter, even when conditions are tough: "Unless the lake was actually frozen, I would go out on it." On winter days, he adds, "The first four kilometres are hard because you can still feel your hands. After that it gets easier, because your hands are numb." Going the extra mile was key to Olli's success – he was prepared to go out in tough conditions when other

competitors would not. This enabled him to build his feel for the boat, which can make a crucial difference.

Coming back stronger

Olli's sculling career took off remarkably quickly, but his progress was not always smooth; he met setbacks along the way. As world champion, he went to the 2020 Tokyo Olympics as a firm favourite to win a medal, but finished outside the top three – a deep disappointment, as the Olympics is the biggest prize for him.

Olli took some time off, and then, looking at the medals won by members of his family, decided to keep his Olympic dream alive. He was convinced that the key to fulfilling his dream was to work on his weaknesses, turn his Tokyo experience into a learning opportunity and come back stronger.

The importance of purpose

For Olli, the Paris Olympics in 2024 became a North Star – a goal he worked towards and prepared for. He reflects, "It's important to have a guiding light, because there will be days when you feel down. You need that goal." Olli even had the Olympic rings tattooed on his back – risky, perhaps, after Tokyo, but a sign of his commitment and focus on his goal.

Success and teamwork

Olli describes the almost physical feeling of elation after winning the gold medal in Paris: "It feels like you're flying." For a single sculler, this is an individual success, but Olli is keen to share that success with those around him. "This was not just a reward for myself. It was for my team, for the friends I didn't see enough of during the months



Olli with his father and coach, Heino

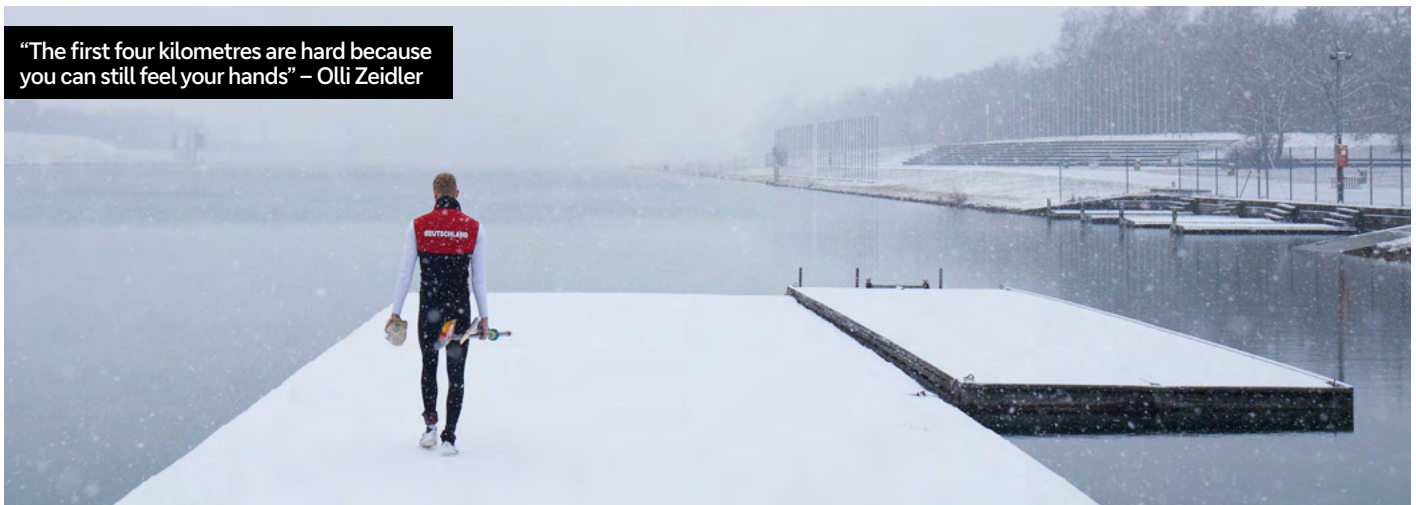
and years of training and preparation, and for the Living with Cancer Foundation."

What makes a champion?

Olli sums up succinctly what, in his view, makes a champion: "It's about going the extra mile. It's about working on your weaknesses. It's about working out what you can do better after upsets. It's about always improving – and in particular, it's about trying to continue to get better, even when you have reached the top."

Gurdon Wattles is Managing Director, Communications Business Partner at Deutsche Bank

"The first four kilometres are hard because you can still feel your hands" – Olli Zeidler



Images: Olli Zeidler

Forward-thinking philanthropy

flow's Will Monroe catches up with Sam Marks, the CEO of non-profit FJC, to find out how creative philanthropic financing is providing some of the answers to New York's housing crisis



Residents enjoying the Sky Garden at the Castle Gardens housing development, West Harlem

New York, the US's most populous city, enjoys a well-earned reputation as a vibrant social, cultural and economic hub. But its housing supply is falling short. The chronic shortage of affordable housing in New York City (NYC) has been well documented, with the problem affecting New Yorkers from all demographics.

According to the Coalition for the Homeless, an organisation that provides support for homeless individuals and families in NYC, homelessness is at its highest level since the Great Depression of the 1930s. In February 2025, official statistics show that 115,000 people slept each night in shelters, although the Coalition estimates the true figure is much higher, with 350,000-plus New Yorkers likely to have been without homes in the month.

Tackling the housing challenge

Efforts to tackle the problem are ongoing. In November 2024, the long-awaited City of Yes for Housing Opportunity proposal was passed, which will see a further US\$5bn put towards housing and other critical infrastructure. This initiative comes after the 2014 Housing New York Plan, which aimed to create – and preserve – 200,000 high-quality, affordable homes over 10 years. With this target met ahead of schedule, an expanded plan, Housing New York 2.0, sought to construct a total of 300,000 homes by 2026.

These schemes form part of the solution, but they are not enough to fix what is an endemic problem. To meet housing demand – especially among vulnerable and low-income communities – charities,

non-profits and philanthropic donors can play a major role. As the CEO of FJC, a NYC-based charity with a mission to “amplify the impact of philanthropy”, Sam Marks is all too familiar with the challenge. “The housing affordability and homelessness issue has myriad causes, and there is no easy fix,” he says. “But part of the solution is increasing housing supply, particularly housing that’s available to low-income people and to the unhoused.”

There is a sophisticated and growing network of non-profit developers with strong track records of building and operating permanent, affordable and supportive housing for a broad mix of low-income residents in NYC. However, unlike for-profit developers, these non-profit developers are often

hampered by funding bottlenecks in the predevelopment stage. Before construction work begins, financing for upfront costs needs to be found.

Rethinking the role of philanthropy

Cue the launch of FJC's Working Capital Revolving Match Fund (Revolving Fund), which aims to fast-track philanthropic dollars in NYC to the front lines so that entrepreneurial non-profits can fund predevelopment for affordable and supportive housing projects. The Revolving Fund's unique structure sees the fund supply low-interest loan capital to non-profits over a five-year term, with the condition that they match it with contributions from their donors. The same philanthropic dollar can be used multiple times on a pipeline of development projects; a 'recyclable' model that contrasts with more traditional forms of philanthropic giving that focus on general operational support.

Deutsche Bank's Community Development Finance Group (CDFG) has made a programme-related investment (PRI) loan commitment of up to US\$1m to support the launch of the Revolving Fund. The PRI loan was made through Deutsche Bank Americas Foundation's New Initiatives Fund, an impact investing programme. Based in NYC, CDFG is responsible for delivering on the bank's obligations under the US Community Reinvestment Act and provides lending, investing and grant-making that supports organisations and social enterprises to achieve positive outcomes for low- and moderate-income communities. As *flow*'s 2019 'Community opportunity' article noted, much of CDFG's loan and investment portfolio focuses on the city's affordable housing stock.

Feona Castro, Vice President at CDFG, notes that the fund's revolving nature means that funds can be provided at scale

at the crucial predevelopment stage:

"The goal of our programme-related investments is to catalyse and scale high-impact projects that respond to NYC's most pressing needs. This investment aims to do just that by unlocking additional philanthropic capital. This can be repurposed as liquidity for non-profit developers to pursue more mission-driven real estate projects at the scale needed to address the city's affordable housing crisis."

The partnership with FJC builds on two Deutsche Bank programmes, Working Capital and Supportive Housing Acquisition and Rehabilitation Effort (SHARE) – established in 1994 and 1998 respectively – which have enabled the creation and preservation of more than 14,700 affordable homes and numerous community facilities in NYC since their inception. These programmes are cornerstone offerings delivered by the current CDFG team, who are building on this past success and amplifying their reach through expanded partnerships with groups such as FJC.

"We are thrilled to scale up and expand this long-standing programme, which will provide new capital sources for building more housing units in NYC through our partnership with FJC," says Cheryl Gladstone, Director and Head of CDFG. This effort carries forward the groundwork that was laid during Marks' time as a former Vice President on the CDFG team. Marks notes: "CDFG continues to be a springboard for innovation around complex issues, including this current effort to bring new individual donors into the fold of supporting non-profits and community development. The legacy of how Deutsche Bank thinks about innovative investments lives on."

Tangible community impact

The Revolving Fund was preceded by a 2023 pilot fund that FJC launched in partnership with the Fortune Society – a non-profit based in NYC that seeks to facilitate the successful reintegration of incarcerated or formerly incarcerated individuals. This pilot, Marks notes, was the "proof of concept" for the Revolving Fund and used a very similar format modelled on Deutsche Bank's SHARE and Working Capital programmes.

One success story from the pilot fund was the provision of predevelopment funds for the Castle Gardens initiative, a housing development in West Harlem comprising 114 apartments. Around half of these units



The goal of our programme-related investments is to catalyse and scale high-impact projects that respond to NYC's most pressing needs

Feona Castro, Vice President at Deutsche Bank CDFG

provide permanent housing for formerly incarcerated individuals, and an affordable rental component delivers low-cost housing for individuals and families who earn less than 60% of the median family income.

Scaling up

Over the medium to long term, FJC's Revolving Fund is aiming to provide funds for the development and/or preservation of several hundred new units of affordable housing, with a target of US\$300,000–US\$500,000 in new philanthropic capital deployed as revolving, recyclable funds for non-profits. In turn, Marks notes that with real estate predevelopment costs covered, non-profits' operating cash can be freed up for other initiatives.

If this effort, funded with the support of Deutsche Bank, achieves its target impact outcomes, it could serve as a strong use-case for individual/private wealth donors to include affordable and supportive housing as a priority area for their charitable giving going forward, which would unlock much-needed funding to address the severe shortage of affordable housing in NYC.

Although Marks believes that creative forms of charitable giving have been largely untapped to date, he says initiatives like the Revolving Fund can also be applied beyond the affordable housing space: "We're trying to use this programme as a way to incept this idea among individual donors, non-profit board members, and other financially sophisticated stakeholders that want to advance their favourite non-profit missions."

Ultimately, while the Revolving Fund only forms one small piece of the puzzle when it comes to solving the housing crisis in NYC, it is clear that innovative and agile non-profit initiatives such as this have an integral part to play.



Part of the solution is increasing housing supply, particularly housing that's available to low-income people and to the unhoused

Sam Marks, CEO of FJC



Nobody wins from fragmentation

Heather Lee, Global Head of Payments Strategy at Swift, explains how frictionless capital flows across the world can only happen through interoperability of technologies – and implementation of standards

The future of payments will be shaped by a diverse ecosystem of players and technologies which promise to enhance the customer experience by adding more choice. At the same time, the targets set by the G20 for cross-border payments are stimulating action, with banks, payment service providers and market infrastructures alike all progressing with initiatives to improve the speed and transparency of payments across borders.

As an industry, we talk a lot about the exciting opportunities presented by technological innovation and the resulting service enhancements, but we also need to understand what could be lost. Advocates of new networks and new digital forms of value argue that their introduction will solve many of the challenges our industry is facing. While this debate will rumble on, there can be no doubt that adding more layers to the ecosystem causes fragmentation – which can harm cross-border capital flows and could ultimately lead to increased funding costs and depressed lending.

Wake-up call

A recent report from Economist Impact, commissioned by Swift (*Growth at a Crossroads*), assessed the financial impact of fragmentation. It examined probable drivers and mapped out three potential scenarios and the potential impact by 2030. The scenarios quantify the effect financial fragmentation could have on global and national GDP and employment, ranging from a reduction in global GDP of 1.2% in a best-case scenario, to a worst-case scenario of 6% of GDP being wiped

out by the end of the decade. That is the equivalent of US\$6.5trn. What is more, in this scenario, 280 million fewer jobs will be created around the world, all because of a more fragmented financial ecosystem.

These findings should serve as a wake-up call for our industry. The reality is that nobody wins from fragmentation; it will impact countries, economies, businesses, and ultimately people's lives. It's critical that we understand the consequences and take measures to address it as we build and transition to the future financial ecosystem. Which of these scenarios will play out is still to be seen, but regardless, Swift's goal remains to enable ongoing capital flow across the world through interoperability of technologies, giving the industry – and its end customers – the continued ability to securely and seamlessly transact with each other.

Interoperability

Standards are the basis for any form of interoperability, and in November 2025, cross-border payments will begin an exciting new era with the end of the co-existence period between MT and ISO 20022 standards, as the latter becomes the common language for payments worldwide. While Swift will continue to support the industry with the transition, improving the quality and richness of data in domestic and cross-border payments will help speed up the move towards greater integration of technologies across the entire payments space, improving efficiency and straight-through processing rates, as well as the effectiveness of financial crime detection.

Amid all this, we are working to ensure that traditional and digital ecosystems can interoperate. This work is vital: without it, we foresee digital islands that undo the hard work that has been put into ensuring that we have a seamless, secure and globally inclusive financial ecosystem.

Swift has been working with its members for some time on experiments that have successfully demonstrated that the network can be used for digital cross-border transactions, whether that is with digital assets, fiat currency, or interoperating the two. For instance, if a business in a country with a central bank digital currency wants to transact with a business in a country without one, they will still be able to do so using Swift. This year we have been taking these collaborative experiments out of the sandbox, starting controlled, live trials on the Swift network.

Serving the financial community

Adding new technologies and more forms of value to the global ecosystem opens exciting possibilities, but likely introduces more complexity to an already complex system. Swift was created to bring coherence to this complexity across currencies, systems and industries. We remain agnostic to technology, just as we are agnostic to currency or forms of value. How businesses and financial institutions decide to transact with each other is for them to decide. But however the future unfolds, Swift's core mission will remain the same – to serve the financial community by enabling secure connectivity, reliability and efficiency at scale across the world.

Image: Heather Lee

Corporate Bank

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¹ Communicate Magazine, Corporate Content Awards 2023, March 2023: Gold for flow app, Deutsche Bank in the category "Best use of content with an existing external community", Silver for flow app, Deutsche Bank in the category "Best use of mobile", Highly commended for flow app, Deutsche Bank in the category "Best long-term use of content"

² You can track cross-border payments that are processed through the Deutsche Bank branch network, utilising the Unique End-to-End Transaction Reference (UETR) identifier

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