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Payments innovation

Payments innovation keeps moving at an impressive pace. The path of development often starts with the consumer: what does this really mean for treasurers?

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CFO

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Trade wars aside, opportunities are there for the taking. Treasurers be prepared!

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Question Answered

Consumer vs treasury

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Global economy under threat as politicians lose the plot

Corporate treasurers are no strangers to managing risks to financial and liquidity management but with fears growing that the global economy is heading for another downturn, they are coming under pressure to monitor an increasingly wide array of threats.

There are several potential financial triggers for another recession. Among the most notable are rising US interest rates threatening to call time on emerging market debt – the experience of Turkey being a case in point.

China's debt of around 250% of GDP is seen by some as an even bigger threat. Yet with China's debt overwhelmingly attributable to state-owned enterprises and banks and local government, Beijing is well placed to rewrite its national balance sheet.

Beijing is certainly not averse to such action: three such major restructurings have been actioned since 1980, while its central bank bailed out a number of lenders in the 2000s after they had become saddled with bad loans. Furthermore, risks to the global economy from any such debt restructuring should be limited by China's relatively closed banking system and current account surplus, and high domestic savings rate.

But while financial risks to the global economy are palpable, it's arguably geopolitics and trade policies that are increasingly driving them, or at the very least exacerbating them. The IMF in its latest Financial Stability Report, one of the most detailed analysis of global banking and markets since the financial crisis, warns that "dangerous undercurrents" are now a rising threat to the world economy.

Trump's trade wars and the undermining of global co-operation by nationalist policies have become a real threat to global growth, with the likes of Brexit, the crisis in Argentina and Turkey and the US standoff with Iran over its nuclear programme adding to the turmoil.

The global synchronised upswing of 2017 is over, with the IMF predicting 45 of the least wealthy countries – accounting for 10% of the global economy – will see their living standards fall further behind those of rich countries over the next five years.

Ten years ago, politicians and institutions like the IMF placed the blame for the crisis squarely on the shoulders of "irresponsible" banks and "weak" regulators. This time around it looks like it will be more the result of geopolitical miscalculation and misguided trade policies, leaving us, oddly enough, to rely on central bankers, to pick up the pieces again.

IN THIS ISSUE

CASH FLOW FORECASTING

A WORK IN PROGRESS

Fintech has brought efficiencies and cost savings across many treasury operations but many believe that cash flow forecasting has lagged in sharing the benefits. Is that situation about to change?

BNP Paribas is the latest to partner with a fintech with the aim of improving cash flow forecasting by digitising the process. The bank recently announced a collaboration with Cashforce and said that the partnership to offer digital forecasting services will "allow a cross-integration of corporate treasurers' existing accounts and functions for a more holistic, streamlined view of cash positions".

"Forming agile partnerships with innovative fintechs, which leverage new technologies such as artificial intelligence (AI), helps us to significantly accelerate the digitalisation of our customer journey in the area of transaction banking," said Jacques Levet, BNP Paribas' Head of EMEA Transaction Banking.

Accurate and efficient cash flow analytics and cash forecasting solutions also offered corporates and their treasury departments the opportunity to expand internationally, added Cashforce's CEO, Nicolas Christiaen.

Among those optimistic that cash flow forecasting is about to make a major advance is Mike Zack, Pre-Sales Manager for GTreasury, who believes that fintech will pave the way for greater progress over the next five years than has been achieved over the previous two decades.

"We're living in interesting times as many fintech start-ups come to market and people become more comfortable with using the new technologies," says Zack. "Convincing people to adapt to change is an important and necessary task – if you're able to do it, life becomes much easier."

Rise of the CDO

"The proliferation of data means that a growing number of organisations are hiring a chief data officer (CDO). "Understanding data is more of an art than a science and you need to understand the data in your business before applying any API tools or robotics as otherwise it's meaningless," says Zack. "There has also been a growing tendency for people to spend more of their time attempting to validate data rather than actually analysing it."

Digitising cash flow forecasting means that the fintech is primarily focused on the collection of data and making it easier to bring data together. It can then be leveraged by other tools such as AI, to explain the data. "Another benefit from tech is that it allows you to test your hypotheses and use the lessons learned," Zack suggests. "You can afford to fail multiple times and learn from your mistakes."

"The problem with AI is that it's not simply a case of pressing a button to provide an instant answer – you still need individuals providing high quality input. Some companies have purchased AI and robotic tools and summarily dismissed them as a wasted investment, simply because they haven't allowed time for them to evolve and learn. AI is a powerful tool, but only as good as the individuals using it."

Businesses are constantly shifting and changing, particularly those engaged in M&A activity. As data changes so do forecasts – and businesses need time to adapt to and learn from the changes.

This also creates a need within organisations for a central unit to bring the activities of all its various departments together. Treasury can't afford to work in a silo separate from all the other departments: in a siloed organisation, each department only understands its own data.

"The danger of silos was demonstrated a decade ago by the financial crisis, but the walls have yet to be fully broken down," says Zack. "That's why a CDO should be at the top of all these various activities and the data produced by each department – he/she will be one of the most important individuals within the organisations of the future."

SUSTAINABILITY

STILL FAILING TO IGNITE INSTITUTIONAL INVESTOR INTEREST

Despite the volume of chatter around matters of sustainability, when it comes to investment decisions it remains low on the list of priorities, says a recent survey.

Sustainability is still of limited interest for institutional investors when making their investment decisions, according to the second annual Schroders Institutional Investor Study 2018.

The study – which surveyed a global panel of 650 investors, covering around US$24trn in assets – showed that there is still a gap between the institutions' perceptions of the importance of sustainability and how it translates into their investment decisions.

With 32% of respondents saying that sustainability had little to no influence on their investment decision-making, traditional factors such as strategic asset allocation, fund manager track record, anticipated return and risk tolerance remain higher on their list of priorities.

Of all respondents, 77% said they found sustainable investing to be at least somewhat challenging. Their main concern was investment performance, with 51% naming this as an obstacle, up on 44% a year ago. Lack of transparency and difficulty measuring risk were also cited as impediments.

For 34% globally, greater confidence could be achieved by demonstrating that investing sustainably delivers better returns. This figure rose to 49% for investors in North America.

Longer-term

Of those investors who did place a greater emphasis on sustainability, there was a tendency towards longer-term investment horizons, more investment confidence and prioritised risk-adjusted returns.

Of those with holding periods of at least five years or more, 32% stated that sustainability was a significant influence. Only 23% of investors whose investment horizon was between three and five years cited its importance.

> "Empowering investors to think longer term and avoid making short-term, knee-jerk investment decisions has been a growing focus of policymakers globally."
>
> Jessica Ground, Global Head of Stewardship, Schroders

Where there was a greater focus on sustainability, 59% were at least reasonably confident of meeting their expectations, compared to just 37% of investors who did not prioritise sustainable investing.

For investors who did consider sustainability as an influencing factor, 66% were also focused on generating risk-adjusted returns, compared to 53% who were less focused on sustainability.

Raising allocations

Despite the seemingly low uptake, interest in sustainability factors is mounting. Of all respondents, 74% believed that investing sustainably would grow in importance over the next five years. Some 47% reported that they had increased their allocations to investing sustainably over the last five years.

"Empowering investors to think longer term and avoid making short-term, knee-jerk investment decisions has been a growing focus of policymakers globally," commented Jessica Ground, Global Head of Stewardship, Schroders. "This study highlights that sustainability is going to increasingly sit alongside institutional investors' more long-standing investment priorities, although there still remain barriers to overcome to achieve this in the near term."

Great expectations: making the most of payments innovation

The payments space has for some time been a hotbed of innovation. Much of what has been brought to market is consumer-driven so should treasurers watch and wait or act now?

It's hardly surprising that most of what is written and spoken about in terms of payments innovation eventually boils down to delivering the right 'customer experience'. And why shouldn't it? Giving customers the best possible user experience when it comes to meeting the fundamental need for every business – being paid – makes perfect sense. An effective payments experience may not be the main reason for using one business over another, but frustrate that process with poor technology and, rest assured, customers will go elsewhere.

Increasingly, there is a blurring of the distinction between the user experience expected by consumers, where most new technology is launched and proven (or killed off), and that of the corporate community. After all, every commercial user is at some point a consumer and will have a view on what is good and what is not. As consumer-style payments innovation reaches further into the corporate space, so expectations rise amongst companies and their customers of a similar experience.

Consumer and business needs "for a better experience, for simplicity and security" are commonly in the driving seat, with regulations such as PSD2, initiatives such as the UK's New Payments Architecture (NPA), and the roll-out of more real time gross settlement systems globally, propelling the market forwards. For Dino Nicolaides, MD, Head of Treasury Advisory UK&I, Redbridge Debt & Treasury Advisory, companies that keep pace with the right innovations will be dodging a bullet marked 'competition'.

The kind of innovation that is meeting this need is rarely a bolt from the blue. Instead, it is typically the result of evolution, notes Nicolaides. It is the adaptation of existing technology and knowledge "to provide something extra that serves or creates a need".

In practice, this usually means being able to offer corporate customers a tailored version of mobile, online and real-time payments services and, vitally, the user-friendly experience they have come to expect in the consumer space.

Mark of success

There is no shortage of new payments products vying for corporate attention. For Nicolaides, meeting the wants and needs of customers through these systems seems like a "no-brainer" given the competitive nature of most commercial sectors. If a solution "ticks all of the boxes" then its success is, or should be, inevitable.

However, he recognises that not all innovations tick all the boxes. Sometimes new solutions fall foul of over-complexity or lack end-user confidence, the latter despite the emergence of new 'RegTech' solutions to help businesses combat fraud and comply with KYC and AML requirements. But for corporates, he reports persistent concerns over how a new solution will be adapted and integrated into an existing infrastructure.

For vendors, it is a hard market to penetrate, and uptake of any innovation depends on many other factors, not least cost of ownership and the degree of need it is satisfying. Some solutions manage to create their own need but for most, the future is uncertain, notes Nicolaides. "If it is a nice-to-have, then it is competing with many others and may struggle. If it meets a real need that nobody has satisfied before, only then will it become a no-brainer."

The agile fintech community has a hard time getting innovation accepted, but banks are not immune. For Phil Beck, Head of Treasury Management at Capital One Commercial Bank, there are three main issues that can hold back progress, at least from a commercial banking standpoint. The first is the age of the underlying technology across many institutions. Legacy mainframe technology (which in most cases is over 20 years old) was not built for the demands of mobile channel provision and real-time data access, he says.

Secondly, the needs of corporate clients are vastly more complicated than for individual consumers. "When an individual logs into a banking platform, generally speaking, they have full authority to do everything they need to do. In the corporate environment, different people have different access rights and processes span across organisational boundaries. That complexity makes the development and adoption of innovation a challenge."

Thirdly, there is often an end-user change management challenge. Modernisation can sometimes be slower or less comprehensive than users expect, especially given the underlying technologies many institutions are working with and the relatively simple consumer experience most critics use as their reference point.

Fit for purpose

Of course, the threat of cybercrime is never underplayed in the corporate space and innovation in fraud prevention is developing in parallel with payments solutions. "Solution providers have to keep one step ahead of the fraudsters," says Marcus Hughes, Head of Strategic Business Development, Bottomline Technologies. "By using machine learning and artificial intelligence (AI), they are making sure both banks and corporates have the means of monitoring transactions and behaviours, looking for anomalies."

> Blockchain too has great potential but the agenda is so full there is almost project-overload, meaning delivery of some of the opportunities for treasurers are still years away.
>
> Marcus Hughes, Head of Strategic Business Development, Bottomline Technologies

In what appears to be a difficult set of circumstances for most commercial payment providers, Beck says services being delivered today are "adequate" and rarely of the quality a corporate might expect, given the raised expectations they have from their experience as consumers.

For Nicolaides, the notion of whether current tools are fit-for-purpose is not so clear cut. What may be unsuitable for one business, sector or even country, may be perfect for another. It may be that hard currency is the only appropriate payment type in countries where there is black economy and little trust in the banking system.

Mindful of the constraints on progress, treasurers still want their own payments experience to be as simple and as easy as possible. Having the fingerprint or face ID-type log-ons that make life easier in the consumer world are being used in the commercial space "but nowhere near as broadly as they could be", Beck notes.

Having the ability to log into one platform and see all account activity across an entire enterprise – versus the painful reality of using multiple tokens (50 or more is not uncommon in a large treasury) – is another 'emerging' corporate user experience. The relatively slow progress here suggests that current corporate solutions have some way to go, but Hughes rightly points out that the adoption of cloud technology "has brought major benefits" in terms of a quicker go-live, lower cost of entry and ownership, and indeed of future-proofing the organisation.

People-driven

When it comes to innovation, the starting point is finding a genuine need for end-users, notes Nicolaides. Most innovations then require those users to adapt to how they will be used. So, is technology driving the way people think about their payments experience? Or is the way people think about payments driving technology?

"There are definitely some solutions out there – mostly on the periphery – that are looking for problems," notes Hughes. The idea of using cryptocurrencies for cross-border payments being one example – one that he says already has regulators pondering the implications. "Blockchain too has great potential but the agenda is so full there is almost project-overload, meaning delivery of some of the opportunities for treasurers are still years away."

Beck shares this view of blockchain. "Look at the amount of publicity that it receives; it is a great example of how technology is trying to drive an agenda," he says.

In most cases (blockchain may be the exception), Beck feels this 'innovation-first' approach has limited success. "Despite a lot of hype, the impact is usually much more muted than what people might think is happening out there." On the other hand, he believes there is a "significant amount of business-led innovation" that is pulling technology into leveraging change in the customer experience.

Real time processing sits somewhere in the middle. Instant payments tools have been successful in the consumer space, but for corporates, "the jury is still out", says Hughes. Many treasurers are content with batch processing for most payments (and the three-day cycle in the UK will be ending over the next few years under NPA; other jurisdictions will surely follow just as they have with instant payments).

What treasurers really want, he notes, is real-time information. "It is more important to get the data showing what the payment relates to, and to know the payment is on its way or has been received by the beneficiary," he explains. SWIFT's gpi seems to answer the 'track and trace' need for certainty and visibility in single bank-to-bank transactions: its function in a multi-banking context is understood to be on the SWIFT agenda.

Expectations

If, within a new technology, its security is a given (and it should be), it offers a genuine and easily realisable benefit to the user, and there is a realistic cost of ownership, the other key requirement for corporates has to be ease of deployment, says Nicolaides. Any new system needs to integrate straightforwardly into existing business operations, not demand that its users undergo major technical surgery and process change. Indeed, Beck notes that "our customers want software to fit their needs now; they don't want to have to build new processes for where a solution falls short".

However, notes Hughes, it is possible that the deployment in the banking sector of certain technologies, notably APIs, will lead to the commoditisation of some processes. Standardisation will be great for corporate efficiency – especially when allied with AI and data aggregation tools to give vastly improved data sharing and analytics – but it does raise a question around service provider differentiation.

"If connectivity becomes commoditised, it will be the value-adding solutions that count," he suggests. "That means processes such as cash flow forecasting, netting, spend analysis, cash allocation and bank fee analysis will need to become easier and quicker for treasurers."

Of course, in reality, not all technologies are created equal and it is the adoption of the right technology that makes the difference, adds Beck. Backing the wrong horse is never good for business (Betamax anyone?). As such, it may seem

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>
> Phil Beck, Head of Treasury Management, Capital One Commercial Bank

counterintuitive, but competition and collaboration must become the norm.

The more payments systems and carrier channels are connected, the better the user experience. But as technology becomes more interdependent and complex, providers will have to accept that they cannot do everything, notes Nicolaides.

Amazon's Alexa can automate home lighting, heating or entertainments systems but Amazon does not make these systems; it leaves that to the experts in their fields. The positive outcome is one of necessary collaboration, because offering a better user-experience is only possible when specialists work together. "It is an analogy that applies to payments because to work well, payments need to integrate with ERPs and TMSs and be compatible with a host of other corporate systems, each built by specialists. That can only come from collaboration."

Disintermediation

That banks can differentiate through the adoption of the right technology is going to become more important. Regulatory change is paving the way for new payment providers to fundamentally transform the way this industry works and banks need to up the game.

Open banking, for example, is going to make multi-banking easier, especially for the midcap corporates, says Hughes. "Most of the news so far about open banking has been consumer-focused. There is a big opportunity for corporates here but more education is needed as not everyone is fully aware of the possibilities."

With the roll-out of the APIs that facilitate open banking making headway (many banks at least have some programme in place), the idea that banks would somehow be disintermediated by the onset of PSD2-fuelled non-bank payment service providers is perhaps misguided. In fact, for Hughes, the early hype that promised a new breed of fast-moving fintechs "so innovative that they would eat the lunch of the incumbent banks" has largely dissipated.

Banks do not have the agility to develop cutting-edge solutions but they remain largely well-trusted. Fintechs have that agility but are yet to earn the trust. Herein lies the basis of a perfect partnership (one often resulting in the bank's acquisition of the fintech). For Beck then, the future "will be nothing like how the market seemed to think it would be, with banks relegated to being relatively dumb back-end pipelines".

Most banks today also understand that any business that is marginalised to the point where it cannot directly engage with its customers, or collaborate with them to drive innovation, is in trouble. They know that disintermediation from their customers is bad for them, obviously, but also for their corporate customers.

Long-standing relationships would be weakened. In treasury, these relationships extend way beyond just the transaction banking components; think about the impact on credit facilities and access to liquidity in stressed times. Clearly there is cost-benefit analysis to be undertaken when considering service portability versus strength of relationship.

"In most sound business relationships, technology is only ever an enabler," states Beck. "It should be driving tighter collaboration. For treasurers, I see a future where innovation actually brings the parties closer together."

Early adopter

By implementing the right tools, corporates and their treasuries have an opportunity to become part of an ecosystem where the whole is greater than the sum of its parts.

Although some of the current crop of innovations could be transformative, potentially having an immediate broad appeal (blockchain, for instance, if it gets past the hype phase), most new ideas will initially find their place in a retail or consumer context before transferring to the B2B environment. Request-to-pay, for example, will likely evolve into an e-invoicing system for business, with essential add-ons such as multiple levels of approval and access to supply chain finance helping to automate the financial supply chain with the integration of payments and documents.

The 'consumer before corporate' pathway is no bad thing. Taking this route allows each innovation to organically take root and build scale before being migrated into the vastly more complicated and far less homogenous corporate environment. Business users, including treasurers, will know what works for them as consumers, and they can see new technologies rise to the top or fall by the wayside under this harsh real-world scrutiny.

The providers of these technologies – banks, fintechs and vendors – are naturally keeping close tabs on every outcome. Where a corporate use case can be found, the need for every provider to differentiate in this competitive market will ensure innovation continues to be delivered.

But 'innovation' status doesn't last forever. Treasurers need to stay alert to movements in the consumer payments space and know when the time is right to move. Customers have great expectations and stealing a march on the competition with the best payments experience is a good way to keep those paydays coming.

Making the most of intraregional trade

A number of initiatives are set to support the growth of intraregional trade over the coming years. Where are the opportunities, and how can treasurers support their organisations in reaping the rewards in this evolving landscape?

Where trade is concerned, the last 12 months have brought their fair share of challenges. Eleven Asia Pacific countries signed the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) in May, paving the way for better trading conditions across the region. However, other factors have also been at play – not least of all the brewing global trade war sparked by trade tariffs imposed by the US on Chinese exports.

So far, the impact of these measures has been limited: despite the scale of the tariffs announced earlier this year Chinese exports rose by almost 15% year-on-year in September, resulting in a record trade surplus with the US. However, the recent depreciation of the renminbi may have played a part in this increase, and it is also likely that many companies have chosen to expedite orders before tariffs kick in. Meanwhile, further tariffs on US$200bn of Chinese exports were announced at the end of September – meaning that around half of all Chinese exports to the US will be covered by tariffs.

While the longer-term impact of the trade war could be considerable, Asia's external trading relationships are only part of the picture. Intraregional trade accounts for 50% of total trade in East Asia and the Pacific, according to research published by the World Bank. And while intraregional trade only accounts for 5% of South Asia's total at present, the World Bank report noted that there is plenty of room for improvement: "Gravity models show that total goods trade within South Asia could be worth US$67bn rather than the

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>
> Rakshith Kundha, head of Trade and Supply Chain Solutions, South East Asia and India, Global Transaction Services, Bank of America Merrill Lynch

actual trade of only US$23bn." The report notes that trade amongst South Asia countries is continuing to grow, with much scope for future improvement – India and Pakistan, for example, "have merely scratched the surface of their bilateral trade potential".

Driving growth

Looking at the region as a whole, a number of factors are expected to drive intraregional trade in the coming years. "Asia is the engine of global trade growth," says Ajay Sharma, Regional Head of Global Trade and Receivables Finance, Asia Pacific at HSBC, noting that the value of intra-Asian trade is already equal to that of Asia's trade with Europe and North America combined. He adds that intra-Asian trade growth will be driven by the region's continuing urbanisation and its burgeoning middle class. "It's projected that by 2030 44% of the population in Asia will live in cities, and that they will contribute to over 85% of the region's GDP," Sharma says. "Also by 2030, Asia will be home to 1.2 billion middle-class households and account for two-thirds of the world's middle-class population."

Other notable drivers of growth include China's Belt and Road Initiative: as well as improving physical infrastructure in more than 60 countries, the projects included within the initiative could bring a range of other benefits across the region. "These infrastructure projects – and the trade they enable – will provide a commercial boost to contractors and supply chains, and create wealth in communities along the routes," comments Sharma.

Another notable development is the Regional Comprehensive Economic Partnership (RCEP), a free trade agreement between the ten ASEAN countries (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam) together with six partners (Australia, China, India, Japan, South Korea and New Zealand). The agreement, which could incorporate 3.4 billion people and 30% of global trade, is intended to lower trade barriers and improve market access for goods and services for Asian businesses.

In addition to the RCEP, Sharma notes that Asia as a whole "will benefit from the region's collective efforts to further liberalise trade, which also include the economic integration of ASEAN and the pending ratification of the CPTPP".

Likewise, Vivek Gupta, Head of Trade and Supply Chain for Greater China and North Asia at ANZ notes that a number of regulator-sponsored trade-related initiatives are progressing well, including the Hong Kong Monetary Authority (HKMA) sponsored Trade Finance Blockchain Project set to go live in the fourth quarter of 2018, the Singapore National Trade Platform (NTP) and the Global Trade and Connectivity Network (GTCN) project which is jointly sponsored by the HKMA and the Monetary Authority of Singapore (MAS).

Rising stars

Alongside these initiatives, there may be space for some of the less prominent players in the region to make headway in intra-regional trade. "In the last couple of years, we've seen the gradual movement away from 'Made in China'," comments Aziz Parvez, head of Trade and Supply Chain Finance, Asia Pacific, Global Transaction Services at Bank of America Merrill Lynch. "Benefiting from lower labour costs, land and resources, businesses – particularly consumption-driven industries – are relocating their manufacturing centres into ASEAN and South Asia."

Parvez notes that manufacturing is increasingly tilting towards countries such as Vietnam, Indonesia, India, Sri Lanka and Bangladesh. "Evolving patterns of consumption in Asia are also altering existing supply chain designs," he observes. "We are seeing the emergence of Asian economies being major consumers of industrial and commercial goods. The above developments, combined with changes that may occur if the trade dispute extends, would require businesses to closely partner with their banks as they look to rework their supply chains."

That's not to say that the big players will be falling by the wayside. Agatha Lee, Head of Global Trade and Loan Products for Asia Pacific at J.P. Morgan predicts that traditionally strong contributors – namely China, Korea and Japan – will maintain their stronghold on intra-Asia trade. "Not only have Japanese, Korean and Chinese corporates evolved into MNCs, expanding their manufacturing outside home markets starting with APAC countries, there has also been increasing demand for 'made-in' Japan, Korea and China goods across the region," she explains. "But the rising stars are the fast-growing ASEAN economies – the likes of Vietnam, Cambodia, Philippines and Indonesia – which have seen a significant uptick in the production and exports of consumer items including clothing, electronics, perishables and general goods to the region."

Challenges and headwinds

Alongside these opportunities, there are also a number of challenges for companies operating in this environment. "Consumption economies in Asia tend to be heterogeneous and diversified," comments Rakshith Kundha, head of Trade and Supply Chain Solutions, South East Asia and India, Global Transaction Services at Bank of America Merrill Lynch. "Apart from different rules, legal constructs and regulations, each differs in its consumption preferences, language and market practices." He notes that companies need to navigate different financial markets with varied rates of financing, as well as dealing with a larger number of currencies – and, consequently, increasingly complex foreign exchange risk management.

Trade costs can also be an obstacle for trade within the region. "The UN reports that average intra-Asian trade costs, excluding tariffs, can range from 51% to 130% of the value of the goods, depending on the source and destination," notes Sharma, adding that intra-EU represents 'best practice' as trade costs are 42%.

Looking ahead, ANZ's Gupta cites several headwinds affecting trade finance in the region. These include the possibility of US and China tariffs reducing demand down the line as costs to the ultimate consumer increase, as well as the depreciation of emerging market currencies and the possibility of rising domestic interest rates as emerging market central banks increase their interest rates.

This could lead to higher working capital costs for companies and their supply chains, alongside potential long-term structural impact of tariffs on supply chains. Gupta also cites the prospect of "rapid regulatory changes in Asian countries impacting access to trade finance", and the resulting importance of remaining close to key trade banking relationships.

But alongside these challenges, trade barriers arising from protectionism can sometimes have a different effect. J.P. Morgan's Lee observes that protectionist measures "sometimes have the potential to bring trading partners closer, and in turn drive more intra-regional activity". She notes that an agribusiness conglomerate significantly boosted shipments from Australia to China earlier this year after Beijing imposed tariffs on US agricultural products, adding: "We expect similar such activities, which would bolster regional trade."

Lee notes that other factors can act as a barrier to intra-Asia trade. She notes that World Bank figures show that South Asia's rate of intra-regional trade remains among the lowest in the world. She also notes that a lack of funding options can inhibit trade in developing markets. "In markets like Cambodia, Myanmar and Laos, local financing can be challenging given their less developed financial infrastructure," she comments.

How can treasurers help?

As treasurers take on an increasingly strategic role within their organisations, there is much that they can do to support their companies' trading activities in this environment. First and foremost, it is important to understand that strategies that may be effective in other regions are not always suitable in Asia.

"Given the different regulatory and legal constructs in various Asian markets, treasurers would need to plan carefully for future growth," comments Bank of America Merrill Lynch's Kundha. "A model geared towards centralisation of cash flow, procurement and sales may bring tremendous efficiencies in open markets, but may not always work across heterogeneous markets."

In addition, there are a number of other ways in which treasurers can support their organisations in this climate:

- **Understand procurement patterns.** Kundha advises that treasurers should consider current procurement and sales patterns, taking into account factors such as the locations of shared service centres and pool headers, the technology solutions deployed and the entities through which sales are routed.
- **Contingency planning.** Lee points out that contingency planning is key in this environment: "Treasurers will be relied upon to take a holistic view and ensure the business is well-prepared regardless of scenarios and outcomes," she says, adding that strategies around FX hedging, cash flow forecasting, risk mitigation and ensuring sufficient credit and funding "will be critical".
- **Staying close to regulators.** Lee also notes the importance of staying close to regulators. "Maintaining frequent and open dialogues with regulators will be key to ensuring clear understanding of government's objectives around trade policy changes that impact corporates, and for both sides to work towards a mutual solution," she says.
- **Leverage supply chain finance.** Kundha points out that supply chain finance "can be an important tool to ensure funding across a physical supply chain that is spread over several geographies". And Gupta notes that some fintechs are now offering niche supply chain finance (SCF) solutions, which have the potential to accelerate supplier onboarding and the fuller utilisation of SCF programmes.
- **Engage with the industry.** Lee observes that engaging with industry organisations, forums and conferences can help treasurers keep abreast of best practices and gain insights from their peers.
- **Work with the right banks.** Also important is choosing banking partners which have detailed knowledge of the relevant local markets, from business culture to the regulatory climate, and taking advantage of their support.

Looking to the future

Predicting the future is never straightforward, but it seems likely that initiatives currently under way could play an important role in reshaping Asia's trade patterns in the future. "We see increasing engagement among the Asian governments to intensify the economic integration; the proposed free trade agreement between ASEAN member states, or Regional Comprehensive Economic Partnership (RCEP), is a good example," comments Lee. "This should help boost to intra-Asia trade volumes going forward."

Parvez, likewise, predicts that intra-Asia trade is set to grow, supported by initiatives such as the CPTPP. "Supply chains will continue to shift, given lower cost manufacturing locations and new centres of consumption," he says. "Apart from large corporates, both Asian and global, who will look to manufacture and sell within Asia, we are also likely to see a lot of activity in the MME space."

In the meantime, Parvez notes that there is already a high volume of manufactured goods coming from the Chinese MME segment to different Asian markets. "While they clearly have the advantage of scale, we may in future see some of them also shifting manufacturing bases, a trend already playing out in the large corporate space," he concludes.

Hubert J.P. Jolly

Global Head of Financing and Channels, Global Transaction Services, Bank of America Merrill Lynch

Hubert J.P. Jolly, Global Head of Financing and Channels, Global Transaction Services Bank of America Merrill Lynch, puts innovation in treasury under the microscope.

Tell me what innovation means to Bank of America Merrill Lynch and how you approach development.

Number one: we have to ensure innovation in transaction services remains relevant to our clients. They want us to make it easier for them to use our transaction services. That means working with all of our clients, not just learning and understanding what areas of innovation they want us to work on, but also where they see the pain points in their own ecosystems and how the treasury function can best evolve within that structure for the success of all.

We need to know where to provide new services, and how to enhance our existing services; that way we enable our clients to be both relevant to their corporation and successful from a transaction services standpoint.

> Our innovation funnel gives every team member in transaction services an overview of each project that is under way. This means we get to think through every step of development from all angles.

To deliver, it is essential that innovation is driven by collaboration with clients, their third-party providers such as TMS and ERP vendors, and, increasingly, with the fintech community. In fact, if a fintech solution can resolve a pain point for our clients, we have the ability to onboard them as a supplier, and even invest in them with us as a development partner, integrating their solution within our own technical environment. This enables clients to comfortably procure highly innovative services through us, not through an unknown provider.

Ultimately, if our client experience is better, then we know that we remain relevant to them and that we are supporting their growth.

You use an 'innovation funnel'. What is it and how does it help your development work?

We manage innovation across all of our geographies and products. Our innovation funnel gives every team member in transaction services an overview of each project that is under way. This means we get to think through every step of development from all angles.

This essentially ensures that if we are collaborating with a set of clients, we can think through the development of the solution and deliver working prototypes that demonstrate to them how the solution would work within our ecosystem. They can then provide us with a response on its suitability.

By securing active client feedback, we can fail fast, learn from the experience and rework it. The funnel allows us to expose the solution to multiple viewpoints, right across the bank. By the time we are ready to commercialise it, not only will it meet the needs of the majority of clients but also, through their input, everyone from our sales teams to our service teams is equipped to help the clients get the most from it.

Tell us about your current points of focus on innovation and what your pipeline looks like.

From an innovation standpoint, the focus is always on the client experience. We want to make sure that our solutions are the easiest to use in the industry. There can be a gap between the complexity of our products and the ease of their use, especially as many clients expect something similar to the everyday experience they have in their consumer lives. We have to fill that gap.

> “Client delight is our primary goal so we measure every one of our transactions from that standpoint. Our clients are afforded a number of ways of letting us know whether they are pleased with their experience – and we always respond, often using innovation, to keep that score as high as it can be.

As part of our response to this need, we were the first bank to roll out a Siri- or Alexa-style assistant in the transaction services space. The launch of CashPro® Assistant on our online portal is all about rapid self-service, helping clients to carry out their everyday activities when they login to CashPro® online.

Because innovation is also about giving clients information more easily when they go into CashPro®, we were one of the first transaction banks to roll out APIs. We asked the enterprise platform and treasury work station providers to connect to us via APIs. By making these connections more seamless, we are enabling many more clients to transact for the first time in real-time rather than through batch processing. We have several clients who have been leveraging these APIs to enable them to initiate payments and receive the information on the reporting that they need on the back of those transactions.

Another key focus in terms of innovation at Bank of America Merrill Lynch is adding to the types or payments that we offer to our clients today.

A number of clients were curious about person-to-person payments that have been evolving around the world. We see them as an opportunity for corporates and in the US, for example, we now enable our clients to initiate payments via Zelle, a platform that allows US consumers to link their bank account to their cell phone number and email address. As I said, it’s all about remaining relevant to our clients, giving them a choice of innovative payment tools.

All banks innovate. How does Bank of America Merrill Lynch differentiate itself from other institutions?

We look at innovation in terms of how we can improve upon the client experience. Client delight is our primary goal so we measure every one of our transactions from that standpoint. Our clients are afforded a number of ways of letting us know whether they are pleased with their experience – and we always respond, often using innovation, to keep that score as high as it can be.

Of course, we aim to make it as easy as possible for clients to transact with us. But we are also open to clients working with us, to let us know what they want, and how they want it. We encourage them to reflect on their experiences: how quickly they can open an account with Bank of America Merrill Lynch, whether it was a seamless process and if they were able to use electronic signatures, for example.

I would say that our differentiator is all the things that we are working on to make sure that every new client’s first experience with us is going to give them the same high level of client delight that we see every day from our existing clients who transact with us across 34 countries.

We take great pride in delivering the right client experience and remaining relevant for them as they grow, from a business standpoint. The ongoing challenge for us of course is how we leverage innovation to sustain that high ‘delight’ score with our clients. As I said at the beginning, innovation must be driven by collaboration, and this is exactly how we keep delivering.

Matthew Davies

Head of Global Transaction Services EMEA,
Bank of America Merrill Lynch

Matthew Davies, Head of Global Transaction Services EMEA, Bank of America Merrill Lynch, explores the implications of doing business internationally.

What are the main concerns for your clients at the moment?

One of the unavoidable challenges for many clients at the moment is Brexit. It is generating market uncertainty. Companies are worried about whether they have the right structure in place for a post-Brexit environment. They are concerned too about its impact on their banking relationships.

The frustrating thing is that there are no clear answers. No bank can say with any certainty to a corporate treasurer that they know exactly what Brexit is going to be and what they are going to need to do in order to be ready for it.

But we've been working closely with clients, explaining what we understand to date, and thinking through different scenarios and options and what the advice would be for each. It is about planning, responding as more information becomes available, and continuing to guide clients.

Cost and efficiency are additional key treasury themes. I don't think you will find a corporate treasury anywhere in the world that says that they have got all of the staff they need to be able to fully do everything that they would like to do. The day job gets done but that value-add that we all talk about is harder to achieve if you don't have the right resourcing.

Anything that can drive efficiency – whether that is through automation or new technologies such as robotics or artificial intelligence (AI) – can help make the treasury more efficient, freeing up resources to focus on value-adding activities.

Regulation is a constant challenge too. Some are seen as being purely for the banks, but the banks must ensure their clients understand what that regulation is and why it is happening because the effects vary, especially something like know your customer (KYC) and anti-money laundering (AML).

On this matter, open banking, particularly from a European perspective, is generating a lot of discussion. Traditionally, whichever institution held the bank accounts also provided the services linked to those bank accounts. PSD2 essentially enables that connection to be broken. Banks have to open up their infrastructure to third parties to be able to develop and provide services from those bank accounts.

Open banking has ostensibly been driven by consumer needs, offering them more services, more differentiation, more competition and more choice. It was not rolled out with corporates in mind. But what starts in the consumer space often leaches into the corporate space. Treasurers are very aware of that, so we spend time talking to them about the impacts of regulation such as PSD2.

We should not forget the power of data here. Think about how reconciliation is greatly aided by better data, and then consider the huge opportunity that arises as we move towards real-time clearing and get more information to accompany payments; this is leading to straight through reconciliations.

Corporates sit on a huge amount of data. If they can collect that in one place and use it in a more meaningful way, there is so much more that can be achieved in many different areas.

If, in the way a company runs its credit process against its key customers, it uses its own and third-party data to run a more efficient process, it has an opportunity to create more appropriate limits, potentially selling more product. There's a lot that corporates and their banks can do to help source that data.

> Innovating is about more than just spending money on building new solutions. It is about collaboration with partners to bring new capabilities to market but, perhaps as a differentiator, it is also about innovating with what we already have in-house.

Of course, any talk about data should consider the regulatory challenge that comes in the form of GDPR compliance. This has global implications. Regardless of where in the world they are, any organisation holding data on an EU citizen must comply or face stringent penalties.

How are these challenges affecting the day-to-day operations of treasury?

It is interesting to see how different corporate treasurers are responding. The core functions of treasury remain as they ever have. However, the capacity to add value and take a more prominent role in the organisation is as never before. But it takes diligence to carve out the time and resources to focus on what can be achieved from an efficiency perspective. Only through doing that can treasurers really free-up that capacity further down the line. The most effective treasurers make sure they can draw a line between BAU and adding value.

How are treasurers staying ahead of the curve?

These are interesting times. Within transaction banking, nothing much changed for about 30 years. We are now in a period where a number of elements are coming together at the same time in terms of pace of regulatory and technological change. Treasurers have got to stay ahead of the curve in this period of great change.

They have to have the right relationships with the right banks and consulting firms to ensure they are getting the right advice and information, especially on the international stage where needs will be diverse. Treasurers must also possess an intellectual curiosity to seek out new ways, and, I believe, it is incumbent upon all of us to be open to change.

How are these areas of treasury concern affecting relationships with banks?

Banks often touch a number of different areas within the client's organisation and so can be effective at offering a holistic view of the organisation, from a group, regional and domestic entity level. Banks are also taking on a more advisory role than they have in the past, where the ability to tackle local issues from a global perspective is key.

Where transaction banking used to be about selling bank accounts and payments and liquidity structures, it has become one where technology is offered to make our clients' financial lives easier, most notably at an international level where centralised operations can be removed from local activities.

We recently partnered with a fintech to bring 'intelligent receivables' to market, using AI to help clients automate their reconciliation processes, sometimes with automated match rates as high as 90%.

The impact of improved efficiency is felt throughout the organisation, allowing the redeployment of resources to more value-added functions. But quicker cash applications also help credit teams to free up capacity for the sales team to sell more to that client.

What drives your creative approach to meeting international client needs?

For us, innovating is about more than just spending money on building new solutions. It is about collaboration with partners to bring new capabilities to market but, perhaps as a differentiator, it is also about innovating with what we already have in-house.

We recently launched Liquidity Express, where we took our global liquidity platform and combined it with our virtual account management platform and our CashPro® front-end online banking application. From this combination, we are able to offer a more streamlined, easier to use liquidity management solution for a core segment of our client base.

In fact, at Bank of America Merrill Lynch, we have spent quite a lot of time thinking about our clients' needs, thinking about what we already have within the bank that we can put together in different ways to meet those client needs, whether it is driven by home or overseas market concerns about regulation, cost and efficiency optimisation or adding value.

Stephanie Wolf

Global Head of Financial Institutions & Public Sector Banking for Global Transaction Services, Bank of America Merrill Lynch

Stephanie Wolf, Global Head of Financial Institutions & Public Sector Banking for Global Transaction Services, Bank of America Merrill Lynch, takes a close look at how KYC and AML affect corporate treasuries.

How are know your customer (KYC) and anti-money laundering (AML) regulations affecting treasurers?

KYC, or client due diligence, is a process that may seem relatively new for treasurers, yet the process has been in existence for as long as people have been doing business: you have to know who your clients are.

From a regulatory perspective though, this undertaking has been elevated to such a level of importance over the years that documentary evidence related to this is comprehensive. It also varies by country, and sometimes even by type of client.

From a client's perspective, KYC is one drawn out process where the provider asks a lot of questions that are increasingly detailed and personal. But it can help in understanding what is required if we break KYC down into three stages.

First, there is onboarding where, for every new relationship, comprehensive due diligence is required. Next, that relationship has to be periodically assessed to ensure any changes are captured. This is called 'renewal'. The third stage is 'remediation' where, in between onboarding and renewal, regulatory changes may demand that more or new information is recorded.

Part of KYC and client due diligence is related to the increased risk of money laundering, terrorist-financing and other criminal activities. It therefore involves gathering information to make sure that money-laundering risk is managed; it is our regulatory duty as banking services providers to ensure that funds do not move to support criminal activity.

Often KYC and AML are wrapped into a single comprehensive set of questions that your service provider must ask. Treasurers should know that we are trying to protect the safety and soundness of the financial system and that we are helping the regulators around the world ensure that financial crime does not occur under our watch.

To what extent is the process being streamlined?

I would like to say that the entire globe has consistent regulatory objectives and consistent means of evidencing those objectives. Unfortunately, that is not the world that we live in. Different countries place a greater or lesser emphasis on aspects of KYC and AML and its fulfilment by banks. As such, the regulations and their execution are not the same everywhere.

That said, I often tell clients who say, "you all ask for different things" that we really aren't asking for different things because we are all following the same laws but may do so in a slightly different way.

From bank to bank, KYC is finding a high degree of consistency. The banking community has discussed what questions really need to be answered from a KYC/AML perspective and has tried to agree on one set of questions that we are going to hold ourselves to as the standard.

That has now been accomplished; I signed Bank of America Merrill Lynch's due diligence questionnaire recently. Now, when a client asks for our AML/KYC due diligence questionnaire, it will be my signature on the back!

Another aspect that Bank of America Merrill Lynch is very supportive of – and I would like the entire industry and all of our clients to be supportive of too – is using databases utilities to store the information.

The due diligence questionnaire responses that we have at Bank of America Merrill Lynch are stored in a shared utility administered by a third party. We do that because we want our other counterparties to have an easier time getting information from us.

I ask all of my clients "is there a database or a utility that you use to store your information?" If so, I will go there first, get that information, and then come back to fill in any gaps that might exist. It's all part of the industry effort to make it easier for clients.

In terms of the regulations and the regulators, there are now industry organisations working to develop common standards. For example, BAFT, the Bankers' Association for Finance and Trade, represents financial institutions, providing feedback on proposed changes in rules and regulations that impact KYC and AML. Aligned with other similar bodies, its aim is to make it easier for the industry and customers to comply by providing information.

"We have created a system that will search every document storage system that we have across the firm. It can look for a particular document, grab it and use it for the purposes of KYC. We are also increasingly using artificial intelligence (AI) to scan responses that clients give to questions, and then auto-populate a system so that there is less manual keying.

The more governments work together to create standards, the more utilities enable databases of answers to be created, and the more banks agree to a common set of standards, the easier it will become. Until then, it can be hard to keep up, for all of us.

How is technology helping with this journey?

The perfect solution for KYC/AML would be that the moment a regulation changes, it could be implemented from a single screen for all customers around the world instantly. Sadly, it doesn't work like that.

Where standards are constantly evolving, technology is always going to be behind. You cannot build it while it is changing. We are investing technology dollars as fast as we can and I know our clients are trying as much as they can to automate their processes. The only solution is for change to happen at a slower pace, just so we can all keep up.

If there was one utility where all KYC information was stored globally, then I could build one pipe in to get the information, populate my system and all would be good for another year or two until I had to refresh. But there isn't one utility; there are many. We can't build a pipe to every single utility, so we end up with lots of manual processes.

There needs to be a narrowing of the set of regulations into a common standard. That doesn't mean fewer questions, that doesn't mean less information. What it means is that with fewer standards, and fewer places for those standards to be maintained, technology will not only be able to catch up, it will finally leapfrog the flow of rules.

In the meantime, at Bank of America Merrill Lynch we have created a system that will search every document storage system that we have across the firm. It can look for a particular document, grab it and use it for the purposes of KYC. We are also increasingly using artificial intelligence (AI) to scan responses that clients give to questions, and then auto-populate a system so that there is less manual keying.

Do you foresee change for the better?

I do but it will happen by evolution, not revolution. I am optimistic that within five years we will not consider KYC the burden, from a client perspective, that it is today.

All of the work that we are doing now around KYC/AML – thinking about the questions that we ask, where the information is stored, how it is used, how we comply with regulations – we are doing to make our clients' lives easier and make it easier for them to do business with Bank of America Merrill Lynch. Easier, simpler KYC/AML is in our future. Getting there allows us more time to focus on what our clients consider more value-added and that is helping them run their businesses more efficiently.

Four million rooms with a view

Dheeraj 'Raj' Chadha
CFO

teleadapt
Keeping Your World Connected™

From Malaysia, to the UK, to China, to the Middle East, for almost 20 years, Dheeraj 'Raj' Chadha has overseen the financial activities of global connectivity solutions group, TeleAdapt. With the business having secured approved-supplier status with some of the world's best-known hotel brands across Asia and the rest of the world, his approach is clearly paying off. Treasury Today Asia learns the secret of his success.

Founded in 1992, UK-headquartered TeleAdapt has under its belt a quarter of a century of experience in designing, manufacturing and supplying connectivity products to the global hospitality industry. From the smallest boutique hotels to the largest multinational groups, the firm has delivered high-speed internet, power, docking and multi-media products to over four million hotel rooms worldwide. It has operations in the UK, USA, China, Hong Kong, Singapore, UAE and South Korea.

In almost two decades in the finance function of TeleAdapt, CFO Dheeraj 'Raj' Chadha has seen his role "change dramatically". But then that is hardly surprising. Despite its global outlook, the business retains its compactness, which tends to expose Chadha to a lot of different and rapidly evolving areas within the business, way beyond the usual finance remit. Close involvement in manufacturing, operations and sales and marketing, for example, brings the kind of perspective, understanding and connection that finance professionals in much larger companies are only now actively seeking.

Indeed, the degree of diversity experienced by Chadha in his working life leads him to suggest his daily routine is "similar to running a business by yourself". Not that it is routine. "It's a good challenge," he states, "every day is different so it can be like firefighting".

With Brexit looming, there is no shortage of fuel. "When you do most of your buying and selling in US dollars but you are headquartered and consolidated in the UK, and your biggest expenses – director and executive salaries – are paid out of the UK, that referendum has painted a whole new picture for us in terms of currency management."

It is as well that Chadha has the drive to keep ahead of the game. He arrived in the UK in 1994 via Malaysia, where he worked for the former Coopers Lybrand (now PwC). His initial goal was to complete his Association of Chartered Certified Accountants (ACCA) qualifications (he is now a Fellow Member) before embarking on an MSc in Finance.

He gained practical accountancy experience with a number of firms in different sectors before spotting an opening for UK financial controller at TeleAdapt in late 1999. He has since taken on the roles of Group Financial Controller and Group Financial Director, alighting on his current position of CFO in 2007.

Cash management is king: emails are a curse

Today, as a key player in a global concern, Chadha's morning activities are principally around core cash management. This flurry of activity is always preceded by a wave of emails. With up to 300 a day, "it's the bane of my life", he says.

Many are relatively simple, merely seeking approvals for expenditure. There is an opportunity for the adoption of new technology here, admits Chadha. He envisions some kind of automation, exploiting the connectivity of his predominantly Microsoft-based global unified finance architecture. It is far from a done deal though.

"I could spend thousands developing a new system to avoid a few emails, or I could spend it developing a new product which will generate new revenues," he muses. "When you are a small company, you have to make decisions like that – and the product is almost always more important and eventually we hope we can make enough from that to afford new systems."

In the meantime, whilst he accepts everybody is distracted by emails and other electronic communications, he is on a mission to persuade people to 'cut to the chase', making their point clearly and quickly. It's a simple request that would benefit most time-poor CFOs and treasurers.

Involvement in other everyday financial processes is kept to a minimum for Chadha. "I don't even look at the accounts, except when I'm presenting to the board," he says. To assist with day-to-day processes, he has a trusted team of nine, with some additional operational support, in locations throughout the world, one of its most noteworthy outposts today being China.

Chinese puzzle

The nature of TeleAdapt's business has seen most of its manufacturing shifted to Dongguan, an industrial city in China's Pearl River Delta. Despite the significant sales opportunity that TeleAdapt China presents, the all-too-common issue of product copying needs an experienced hand to keep matters on track. Chadha spends a lot of time here.

Much of the copying is carried out not by competitors but by local customers and resellers of TeleAdapt's products. "There is a level of trust when a contract is signed with a reseller in any country, that they possess a high level of integrity and won't take your product and copy it," says Chadha. "But sometimes that trust is abused."

Counterfeit products use the cheapest components and lack any kind of certification so can be sold at a fraction of the price. This has been an issue for a long time and certainly since the early 2000s when China started opening up. Whilst more stringently applied legislation on copyright and patent has been introduced, taking on a lawyer and going through what will be a long drawn out process risks "exorbitant costs". For this reason, Chadha resignedly says that "if someone wants to steal a little bit of your market share, let them".

It is not possible to stop people copying products anywhere, and certainly not in China. But Chadha is naturally more upset by those who choose to abuse the relationship. "They will sell it to customers [hotels] to which we have done all the marketing, they will use our resources and contacts, taking away our bread and butter."

Somewhat sanguine about the affair, he understands that the costs in legal fees and management time can usually be made up by new sales elsewhere. With China likely to become the biggest hospitality market in the world in the next decade, TeleAdapt directs its effort towards this more positive approach, keeping ahead of the crooks.

It's not entirely a free play though, says Chadha. China is a difficult market to penetrate because away from the large international chains, its hospitality communications sector is driven largely by price and 'who you know, not what you know'.

Indeed, the peculiarities and cultural mores of the Chinese market are something that must be learnt and cannot be easily side-stepped by foreign businesses. "Having worked in China for so long, I have come to the conclusion that you just go with the flow," he says. "It has evolved a lot over the years and it still has a long way to go. But the money is there."

Cash management in China comes with its own concerns too, not least around fraud, admits Chadha. "We have to be very wary of suppliers changing their bank details and telling us to pay somewhere else; it happens quite frequently."

To try to mitigate the risk, TeleAdapt carries out a lot of research on everyone it deals with. Information is available through its contacts in the international banking system. Working mainly with HSBC and, to a lesser extent, Bank of China, these institutions actually expect a high level of due diligence and a co-operative approach from clients when seeking to legitimise transactions.

But as highly regulated institutions, they offer a high degree of transparency in a sometimes-cloudy market, Chadha saying he tries not to use the smaller domestic Chinese banks. He also steers clear of cash transactions wherever possible. This too is not always easy, as China is "a lot more cash-based than anywhere else we operate".

Middle Eastern promise

With an operational base in Dubai, Chadha says the Middle East region can also be "tough", especially when sending monies from abroad. In Saudi Arabia, for example, the legislative approach to fraud and corruption has been re-invigorated with the passing of a Royal Decree on 4th November 2017. "If you send a commercial payment in the Western world, the banks will generally not ask questions. In the Middle East, you now have to state the purpose of payment or it will just bounce."

With the assessment that the region's banking system is "a bit outdated", Chadha explains that many banks have "a different view on time management". The expectation that something will be done quickly will often lead to disappointment, he says. For a small company this can be a problem.

It would not be unreasonable to expect that a bank guarantee, for example, should be turned around in a few days by a Western bank. "In a UAE bank, it might take three weeks. If it is for a sizeable amount that delay could affect your cash flow position and the health of the business." In trying to avoid the risk, some companies in the region still use post-dated cheques or partial deposits. TeleAdapt has learnt that it is best not to offer credit to any business outside of UAE. "It's hard to turn away business but you have to protect yourself."

As with China, the business opportunities in the Middle East are plentiful, says Chadha. But in a tough economic environment, where margins are squeezed, it is essential to go into every deal with your eyes wide open. "You might never recover your money. We have been bitten across the years; unless you want to spend a long time in the courts, throwing good money after bad, there is no point chasing it so we don't let it get that far."

A good CFO is…

The demanding nature of the CFO role requires dynamism and creativity. To be truly effective, it also requires the incumbent "to get out there as much as possible", says Chadha. This means a lot of networking and membership of relevant associations. He regularly goes to seminars and conferences because by meeting and talking with new people, the possibility of learning new ideas and ways of working increases exponentially.

In fact, Chadha believes that everything you do, both personally and professionally, can have an impact on the way you approach your work. Creating an industry presence attracts invites to events, from which more experiences and learning may be gained. "It's entirely possible to creatively integrate ideas from other sectors and industries into my work, helping me to think through problems and to evolve the business," he says. "Getting out and about enhances your creativity; staying in the office will not give you the exposure and the opportunity to learn."

Learning confidence

Formal education has an important role to play for all financial professionals. "It gives you a reliable structure and a first foothold in your career that you can always come back to," Chadha says. But he feels that education should never stop and is an advocate of Continuing Professional Development. This uses skills, knowledge and experience, gained both formally and informally, to help evolve a career path, even for those at the most senior levels.

Topics such as regulation and legislation, technology and treasury practice should be regularly updated anyway, but for senior finance executives keeping the team up to speed is also important. "I like them to keep an open mind, to go to events and to get out there too," says Chadha. "It helps build confidence; if you are confident in what you say and do, people are more likely to buy into it."

> "Getting out and about enhances your creativity; staying in the office will not give you the exposure and the opportunity to learn.

With a firm belief that people should have recognition for a job well done, he keeps the TeleAdapt finance team in regular contact, with a call at least once a week. "And I make sure I listen to what they say and not just bark at them," he reports.

Soft skills

As a global business there are many language and cultural hurdles to overcome. Although he speaks English, Cantonese, Mandarin, Hindi and Malay, he feels that well-developed 'soft skills' are essential to keep staff motivated and happy. "As CFO, I rely heavily on them. I want them to feel responsible and be part of the business because if it grows and does well, we all grow and do well!" But he is adamant that the ability to read people and make good judgements does not come from sitting behind a desk: "it comes from travelling and meeting people".

Having been nominated for the UK FD of the Year 2016, Growing Business Category, Chadha feels that formal awards such as this – and Treasury Today's own Adam Smith Awards – offer the kind of industry recognition that further builds confidence and adds to overall satisfaction.

Keep it real

With almost 20 years in the same company, some people may stagnate. But Chadha still has a thirst for knowledge and driving ambition, feeling that he is in the perfect training ground to one day run the entire business.

For those just starting out, the advice from one who knows is to always be honest and retain your integrity. "Actions will always speak louder than words so if you promise something, you do it." Feeling that so-called millennials are often too absorbed with technology, he argues that it will be "your presence and personality" that will win through in the end.

Beyond the world of work, Chadha is a serious tennis fan, a movie buff (with an aversion to the horror genre) and, as a hospitality professional with regular trips to Vegas and Macau, likes the occasional visit to the tables. But he is first and foremost the bon viveur. He enjoys good food, fine wine and meeting people from all walks of life.

For the past 20 years he has been a principal player in a business that helps people keep in touch when they are far from home. With Chadha's obvious vision and energy to keep things moving forward, there is clearly room for another 20 years at the helm.

Thinking big

Big data has much to offer corporate treasurers – but at this early stage, most of the possible benefits have yet to be realised. Treasury Today Asia reviews the current state of affairs, the possible applications of this technology, and the pitfalls that treasurers should be aware of.

How big is big data? The short answer: not as big as it's going to be. A report published by big data consultancy WHISHWORKS found that while only 18% of UK companies have fully adopted big data, 47% have tentatively started initiatives and 29% are actively investigating the opportunities. Meanwhile, Wikibon predicts the worldwide big data market will reach US$103bn by 2027, up from about US$40bn currently.

As far as treasurers are concerned, big data has plenty to offer. Research by the Economist Intelligence Unit on behalf of Deutsche Bank found that over half (56%) of treasurers believe big data analytics systems will be beneficial to their organisation in the future, ahead of AI/ML systems, instant payments, RPA and blockchain solutions.

Where specific areas of interest are concerned, a 2017 survey by Euromoney and J.P. Morgan asked which areas of treasury big data would impact the most. In first place was customer behaviour insights, cited by 30% of respondents, while 27% opted for cash forecasting. Other areas of interest included real-time visibility/tracking of payments (18%) and reporting (14%).

The story so far

In practice, though, most of the potential benefits are yet to be realised. "'Big data' is certainly a real buzz word," comments Andrew Marshall, Managing Partner at Covarius. "But treasurers aren't really aware how it can be utilised and how it can benefit their organisation."

There is certainly plenty of talk around this topic. "I really think we are just scratching the surface in terms of what could be done with data in the treasury space," notes Peter Fox, head of Data and Insights for GTS at Bank of America Merrill Lynch. "We have been involved in hundreds of conversations with treasury team members – this topic tends to come up in strategic reviews with customers and is a very common topic at our advisory boards."

Where practical applications are concerned, progress is happening, albeit more gradually. "Where progress has been made so far by treasurers is in automating certain processes," says Magdalena Mielcarz, EMEA Head Channel and Enterprise Services, Treasury and Trade Solutions at Citi. "So

> It's about using artificial intelligence and machine learning to deliver insights, predict the future or detect certain future risks.
>
> Magdalena Mielcarz, EMEA Head Channel and Enterprise Services, Treasury and Trade Solutions, Citi

I've been hearing a lot from the clients about deploying robotic process automation (RPA) into processes. But when we think about big data, what we are talking about is taking this to the next level."

Mielcarz explains this is not just a question of robotising repetitive steps that are already being carried out by a human – "it's about using artificial intelligence and machine learning to deliver insights, predict the future or detect certain future risks".

"We think the low hanging fruit lies in the area of operational efficiency," adds Fox. "In our interactions with customers, we have been able to see first-hand the power of sitting down with a broad set of individuals within a client's organisation, aggregating their data into one dashboard and benchmarking against similar companies. The conversations that can lead to, and the immediate actions that customers are able to take, are frankly astounding."

The next frontier, Fox adds, will be to look at activities that are characterised by underlying patterns. "So when you think about cash forecasting, understanding the underlying pattern of when you get money and when you pay it out is an area that is very ripe for data analysis. Fraud detection and error recognition are other areas that data analysis is very well suited to solve."

Practical applications

Where practical applications are concerned, Mielcarz cites the example of Citi Payment Outlier Detection (CPOD), which uses AI to detect transactions that are outliers compared to clients' historical flows, so that clients can confirm whether or not a transaction is legitimate.

"We also deploy big data analytics into our current processes at Citi," she says. "For example, we use certain biometric-related features that can indicate suspicious activity." This could include analysing different users' typing patterns and judging whether the person currently using a computer is the same person who has been enabled on the system.

In addition, Mielcarz says the bank draws upon big data to generate client relationship insights and thereby help clients optimise their treasury operations. "For example, we can analyse clients' existing cash management structures with Citi alongside external or public sources," she says. "This enables us to advise the customer that in the context of Brexit, for example, we would make certain recommendations for an efficient structure in the future, based on the company's account structure, currencies and flows."

She explains that these insights could be based on different topics such as accounts structure, liquidity structure, working capital analytics or transaction flow optimisation. Benchmarking can also be deployed to provide further recommendations. "While we can't include every type of data in light of the current regulatory framework – especially GDPR – we can still provide some benchmarking and peer analytics, comparing certain structures, flows or corridors to those of the customer's peer group," she comments.

Too much data?

Embracing the power of big data can bring many benefits, but treasurers also need to understand the risks. Fox notes there is a real risk of spreading a particular team's focus too thinly across too many objectives. He adds, "There is a lot you can do with data that can be a double-edged sword – so it makes sense to find the problems you really want to focus on and resolve these."

Treasurers should also consider some other possible pitfalls:

- **Losing focus on business problems.** For example, Fox says that while there is a lot of attention on data infrastructure development and the use of data lakes to collect data, this should not come at the expense of focusing on new processes and new data products.
- **Losing sight of the human element.** In addition, Fox says it can be easy to lose sight of the human element of big data. "In many cases, your new dashboard, product or analysis will change how other people do their jobs," he says. "So it's important to recognise that these developments bring changes, and address this via good management processes and excellent storytelling."
- **Poor quality data.** Data quality is another consideration. The data that companies use is of little value unless it is complete and accurate – which can be a challenge in some cases. "You have to make every effort to improve the quality of the data you are using in order to get the right outputs in the future," notes Mielcarz. "That's a challenge that everybody faces, which can be tackled by identifying the lower quality elements and improving quality over time."

Meanwhile, Enrico Camerinelli, Senior Analyst at Aite Group, highlights another possible barrier to adoption: "Ironically, the companies that could benefit the most from this are the ones that may not have the budget needed to afford the necessary investments."

Where to start?

Given the potential benefits, what should treasurers be doing now to take advantage of big data?

1. Focus on a specific business problem

Fox notes the importance of focusing on a specific business problem in the first instance. "Pick out a moderately sized

Plunging into data lakes

One challenge where big data is concerned is for treasurers to be able to access data in a way that is genuinely useful. Data lakes may provide an opportunity to achieve this.

Simply put, a data lake is a repository of raw data which can provide more flexibility than a more traditional data warehouse. Andrew Marshall, Managing Partner at Covarius, observes that the "big data dream" is typically driven by IT, and that it tends to involve creating large, accessible data lakes which treasurers can use to extract data – in contrast to ERP data sources, which are typically locked down.

"This may give the treasurer visibility across historic and future data (such as invoices) running to millions of transactions, which in theory can be used in all manner of ways to provide forecasts and predictive analytics," comments Marshall. "However, the role of IT usually stops at the data lake/reporting level. This puts serious limitations on the value of the data to the treasurer."

More recently, Marshall says that bigger players in the TMS space are beginning to invest in bringing data across from the data lake and into their reporting and analytics tools. "This will enable some seriously impressive and powerful output, from which the treasurer can make complex decisions," he adds.

However, one obstacle around the data lake model is that static models may mean that changes to the underlying data in the ERP system will not flow quickly across the data lake, meaning the treasurer may be using out-of-date information. Such changes could include corrections for inputting errors, updates based on trading performance and changes to credit terms.

"To combat this, TMS vendors are looking to build real-time connectivity – for example, via APIs – between the ERP, data lake and TMS such that changes to underlying data are instantly updated in the TMS, with status codes updated via messaging services to reflect the changes," explains Marshall. "This gives the treasurer that level of confidence that the data is good to work with and never out of date."

pain point and start to use different data visualisation tools and different data science tools within your own organisation to chip away at that problem," he suggests. "I think people will be surprised at how quickly you can get momentum if you bring the tools and the people together around the common problem to try and solve it."

2. Translate initiatives into actionable data

Likewise, treasurers should ensure that any big data initiatives result in actionable data. "For example, a company may always have problems with specific suppliers when they send invoices, resulting in delays in accounts payable," says Camerinelli. "You can carry out an intelligent analysis to find out which suppliers are the best and worst performance – but then you have to translate this into actionable items that someone else has to follow through on."

3. Appoint a data champion

Mielcarz, meanwhile, emphasises the importance of having the right people available to test new opportunities. "At Citi, we have data scientists in our labs – and we also identify data champions across our current teams to ideate and feedback from discussions with clients about what types of insights clients are interested in seeing."

She recommends that corporate treasurers should likewise appoint data champions within their organisations in order to provide insights from a data perspective.

4. Engage with partners and the treasury community

In addition, treasurers can engage with technology and banking partners to discuss the problems they are trying to solve and learn more about the relevant opportunities. There is also much to be gained by engaging with the treasury community and finding out how different groups are currently using data to tackle similar challenges.

Future developments

Looking forward, it will be important to monitor the impact of the evolving regulatory climate and the expectations regarding privacy and data security. While GDPR is a European regulation, other jurisdictions are beginning to follow a similar approach – California, for example, has adopted a similar law covering data privacy. "We need to be mindful of the fact that we need to keep embedding an infrastructure that makes it easy for us to comply with all those regulations, existing and upcoming," Mielcarz notes.

Where future opportunities are concerned, another notable area of opportunity is the way in which different data sets can be combined. "From having conversations with clients and studying the industry more broadly, some of the more interesting developments in the data space have come from unique combinations of data sets that are related but distinct," says Fox. "So that might include GPS data in the logistics space, or weather data in the farming space. It's one thing to mine your own data, but being able to combine your data with related third-party data could lead to tremendous insights."

Fox says that marrying bank data with a company's internal accounts receivable data, for example – and potentially layering in external data – could lead to greater efficiencies and automation within customers' systems. This could also result in a situation where treasurers increasingly adopt different workflows and 'manage by exception'.

"In the future, we think that leveraging data could help automate a significant number of repeated activities – freeing up the treasury team to focus on exceptions and contribute more to the broader strategic objectives of the organisation," he concludes.

Digitising treasury for the real world

The core treasury practices around cash, liquidity and trade are increasingly demanding. The notion that technology is some kind of cure-all is prevalent today, but there is more to optimising performance in each of these areas than simply implementing the latest tools. Subject matter experts from Citi discuss the role of digitisation in the real world and assess the anticipated benefits of innovation for the global treasury community.

Kanika Thakur

Director, Head of Asia Trade Finance, Citi

When working with corporate clients and their extended supply chains to meet trade financing needs, Kanika Thakur, Director, Head of Asia Trade Finance, explains that Citi takes a holistic view, encompassing the full spectrum of product and service offerings.

A major area of client focus today is the creation of more balance-sheet efficient liquidity to optimise their working capital across both buy and sell sides. If the bank can help extend payables, decrease sales outstanding and reduce inventory held, clients could benefit significantly from improved working capital metrics, with liquidity and balance sheet health boosted, and counterparty risk and relationships better managed.

At a macro level, clients are also challenged by the current fractious nature of politics in global trade. Citi is primed to monitor the space closely. It understands how trade tensions impact clients and the resultant geographical diversification of trade flows; it is ready to advise on the most appropriate response.

Tech key

Arguably, technology holds the key to unlocking required efficiencies. The volume of conversation has risen notably in recent times around innovations such as artificial intelligence (AI), robotic process automation (RPA), big data analytics and distributed ledger technologies (DLT) such as blockchain. The number of fintechs surfacing has increased options massively, creating a real buzz of excitement. In Citi's trade team, there is now a strong focus on moving towards an integrated digitised future, not just for clients but for the whole ecosystem.

This creates a digital agenda aimed both at streamlining client interactions, and the bank's own operations. With Citi currently one of the few banks using optical character recognition (OCR) to automatically extract data from trade documentation, it has led to a stepping stone for the wider adoption of AI and the extended roll-out of RPA.

The nature of trade though is that there is a significant dependence within the ecosystem on third parties such as shippers, logistics firms and customs agents. This is where solutions such as blockchain will become critical, at least in the medium term. Enabling all parties to access a common secure platform is essential for the digitisation – and thus optimisation – of the ecosystem.

Collaborative approach

Citi has established trade sector projects to promote interest and uptake amongst its own corporate and institutional clients, as well as engaging with wider industry collaborative efforts. It also has three innovation labs for its Treasury and Trade Solutions (TTS) business to stimulate innovation and help identify potential partnerships in the fintech community.

The reason for such involvement is clear: an ecosystem of partners has to take the digital pathway if it is to be successful; it cannot be a unilateral effort. The immediate benefits of doing so include easier and quicker transacting and enhanced risk management and controls, this paving the way for the application of AI and increased automation.

Differentiation

Of course, the movement of the entire ecosystem to intelligent digital processing suggests bank services will be largely commoditised. For Citi, differentiation comes in part through its scale, with a footprint in over 100 countries. The need is to harmonise across these locations and the bank has been diligent in rolling out universal offerings on its global platforms.

With Centres of Excellence built around financial hubs, clients are afforded commonality in terms of user experience. As the digital journey continues, the strength of client relationships will not diminish as Citi's consultative approach seeks out what is really needed across its full suite of products and services; digitisation in trade will increasingly deliver a more holistic and tailored view of the client's own ecosystem.

Deep dive

Understanding clients' trade ecosystems, drivers and goals is key to delivering real-world digital solutions. Citi's 'co-creation' process engages fully with its wide network, setting up whiteboarding sessions, for example, to deep dive into specific client, sector and industry needs. From here it will leverage its pan-industry understanding to offer best practice coaching and the most appropriate solutions going forward.

With access to its vast TTS network, Citi's trade function draws heavily on curated data and statistics to bring industry KPIs to the attention of individual clients. At the sharp end, this may help them, for example, reduce their DPO whilst simultaneously helping their own suppliers' cash flows by introducing supplier finance programmes.

One bank

As the transformative power of digital rolls out across the trade space in the next few years, integrated products and services that have a familiar 'look and feel' will become critical to the success of trade ecosystems across Asia (especially along the Belt and Road corridors).

Citi's role as a trusted partner is seeing it bring real-world solutions to bear as it continues to monitor and respond to the shifting macro environment in which clients operate.

Morgan McKenney

MD, Head of Core Cash Management, Asia Pacific, Citi

Three words capture the combined focus of Citi's cash management clients, according to Morgan McKenney, MD, Head of Core Cash Management, Asia Pacific. These are Instant, Intelligent and Personal.

The development of an 'Instant' backbone for Citi has seen it plugging into each new instant payment scheme as it is rolled-out. This is making bank account-to-account transactions for low-value domestic payments achievable anytime, on demand.

The 'always on' commercial imperative has also seen Citi launch a suite of API connectors facilitating 'instant' processing. In addition, Citi has extended its virtual card accounts footprint, using existing credit card rails, which is already garnering favour with Asia's burgeoning online travel agency players who use it to pay hotel and airline suppliers.

The theme of 'Intelligent' plays out through Citi's global data lake, itself built around the trillions in value of payments transactions it processes daily. Each can be tracked via SWIFT's gpi to give treasurers transparency over payment status and the conditions under which they are being processed (such as fees and FX rates applied). Data from gpi is being embedded into the CitiDirect BE® front-end for pilot clients today, with broad commercial release shortly.

Pipeline

Data and AI are also being brought to clients in new solutions to help them better manage their payments activity with the upcoming launch of Citi's Payment Outlier Detection service. This configurable AI-based solution, built in Citi's Dublin Innovation Lab, monitors customer transaction behaviours, detecting and reporting outliers in advance of the payments being sent. Applied across a shared service centre environment for example, this could prove invaluable in screening industrial-scale payments activity.

Emerging from Citi's investment in the fintech, HighRadius, Smart Match applies third-party AI know-how to help customers reconcile incoming payments, using intelligent software to significantly increase the efficiency of processing even the most 'data-challenged' of receivables.

Related to the 'Personal' theme, with digital disruption impacting almost every industry, Citi's corporate clients are increasingly able to reach their retail customers directly, leveraging Citi's instant payments and collections capabilities globally. Using wrappers such as digital wallets and now QR codes, businesses can now reach retail consumers how they want to pay in a specific market while immediately associating each transaction with the relevant individual customer, creating automatic and immediate reconciliation in their system of record.

New models

The shift from traditional B2B-only to include B2C and C2B marks an important shift in the cash space. It is shaping Citi's product development areas of focus and enabling treasurers to become the sales enabler for their business.

Whether working in-house or with fintech partners, embedding innovations such as AI, RPA and DLT into Citi's solutions and deploying an internal 'data horizontal' model (covering the broadest sweep of functions) enables the bank to deliver competitively differentiated solutions and great customer experience for their clients. This includes facilitating a customised approach to optimising balance sheets, data-driven decision-making, optimising treasury, powering sales growth and supporting clients' digitisation efforts to respond successfully to digital disruption.

Innovating in this space requires early prototyping with clients as well as co-creating with customers to make innovation mainstream. Citi co-creation workshops with clients are providing innovation insights to support how customers are re-imagining business models and processes end-to-end.

Treasury has been the traditional buying centre for cash-focused solutions. As new business models are necessarily being created to meet the onset of digital, Citi is now engaging more with operations, product, marketing and sales teams. Treasury is now at the heart of a much deeper and broader ecosystem and the cash management products being offered by Citi – and the way they are collaboratively developed with fintechs and clients who are often disruptors in their own space – reflect this.

The need to differentiate in the cash space, where digital could arguably commoditise processes, has seen Citi adopt a 'digital delight' programme. In essence, digital must be executed better than the competition.

Consumers know when something works well; treasurers are no different. Delivering the right experience is therefore Citi's differentiator both for new digital natives operating solely in the e-commerce space as well as for existing 'traditional' clients.

Having an innovation ecosystem that reaches across Citi's network of over 100 markets, which itself represents a depth of experience and knowledge of customer behaviours, is a source of ideas around the newer technologies that can be shared and leveraged for clients right across the board, from commercial, to consumer, to institutional.

Future state

Cash management in the future will continue to reflect the disruptor-driven reshaping of business models. No industry will be spared.

The next decade or so will be about connecting devices and using AI to automate flows. The Internet of Things (IoT) will become the source of information and status about almost anything, from healthcare to car care.

In the treasury management space, Citi's strategy is thus set on building a connected financial ecosystem for global commerce to support its clients. In cash management terms, intelligent and real-time payments network connectivity, and simplicity and optionality for customers is driving innovation to the point of becoming 'business-as-usual'.

Sandip Patil

MD, Regional Head, Liquidity Management Services and Financial Institutions, Citi

Digital disruption is impacting practically every industry and it is becoming a key factor for every treasurer and CFO to navigate, says Sandip Patil, MD, Regional Head, Liquidity Management Services and Financial Institutions.

To this can be added the currently heated nature of geopolitics and the impact of ongoing market volatility. The problem is that not every finance professional has the time nor the resources to fully manage these obstacles as they assist in expanding the business in this disruptive environment.

In a liquidity management context, treasurers always need delivery on the fundamental KPIs. With the changing environment meaning this is not always easy to achieve, Citi's solution focus is set on helping realise these goals. Indeed, by establishing a parametrised universal platform within which treasury clients can automate responses to many of the external and policy variables, the challenge of assisting growth is solved.

Shifting surplus funding and matching currency needs of different entities within a group, for example, is being handled automatically (even across different banks), ensuring treasury is only using bank liquidity when needed and is always optimising their own internal surplus. Doing so ensures treasury's policy and KPIs are met as a matter of course; assisting growth now becomes the focus, not worries about the day-to-day liquidity of operating entities.

To the cutting-edge

Even with a core platform capable of controlling group liquidity, there is still a vital role to play for cutting-edge technologies such as AI, machine learning, blockchain and advanced data analytics.

Take the latter, for example. Within Citi's vast global transaction banking network, it is harvesting huge amounts of data from customer activities and cash flows. This activity is now being mapped and presented as one ecosystem to a client. This helps in the visualisation of their banking structures and patterns of liquidity within, enabling existing cash flow forecasting methods to be applied as inputs.

Treasury policy and governance programmes associated with liquidity data can then be fine-tuned. Perhaps more important is the industry benchmarking opportunity – for a host of KPIs including liquidity and forecasting efficiency – that this data presents.

Treasury always has an internal target but having access to sector and industry best practice – at a national, regional or global level – drawn from Citi's client analytics, takes each of those KPIs to a new level of delivery.

However, even with Citi now engaging in various pilots and projects that are exploring the possibilities of AI, blockchain, data sharing and open architectures, the banking sector in general is only just scratching the surface of their potential. Collaborative development is the key.

Building bridges

Having long since developed a culture that promotes innovation as an inclusive activity, Citi works broadly with clients and other institutions (including 'outliers' such as the insurance sector) to turn possibilities into real-world solutions.

The bank understands that creating an industry-wide ecosystem based on new technologies will provide maximum benefit for all. Although many innovations are active across the sector, seeking to build such an expansive ecosystem will generate some tension between the collaborative and the competitive and this must be overcome. Naturally, players with demonstrable success in this space will lead the experimentation towards this end.

For Citi, by working with partners that are not in direct competition – those in non-overlapping regions or those in other sectors such as insurance, for example – progress is evident as it continues to integrate innovation within its own ecosystem.

Predicting the shifts of the regulatory landscape as new technologies emerge, and responding accordingly, is the next challenge. Having access to the authorities is advantageous in that it helps shape the future landscape in line with real client needs.

"Citi has always played a critical partnership role with regulators across all our markets eg in China's journey of liberalising its economy, we have partnered closely with the Chinese regulators from free trade zone establishment to changing documentary processes. We continue to represent our clients' current and emerging needs proactively. It has helped us bring a positive change in the regulatory paradigm and also helped our clients deploy the right solutions to benefit from the regulatory changes using digital tools."

Futurescape

For treasurers, one of the most likely future scenarios is the dominance of real-time ecosystem from payments to foreign exchange and liquidity. In liquidity terms, value dates will become 'value moments' as treasuries become 'just-in-time' providers of liquidity across the group entities. Further, treasurers are looking forward to the expansion of open banking. By leveraging APIs, banks will be able to support customers with pooled data drawn from across the industry; bank-as-silo will no longer be sufficient. Citi continues to help its clients with multi-banking solutions. With the rise of AI and robotics in a changing and volatile world, it will similarly enable companies to attain an otherwise impossible near-perfect imagination of, and response to the future.

Blockchain is being lined up as the secure system of record for many different applications, and online marketplace-based economies will eventually allow investors and borrowers to create new private and public liquidity marketplaces. This will enable corporates to become participants in the secondary markets. Citi continues to incubate such ideas in its innovation centres.

Treasurers and CFOs need to be even more capable of operating in a dynamic world, staying alert to the possibilities of innovation as well as digital disruption. Citi's strategy is about preparing such stakeholders for this environment, offering ideas and insights and, through effective collaboration with its partners and the industry, the means of future-proofing client business models with innovative real-world solutions. The future is here!

Smooth operators: hedging in a volatile world

When it comes to currencies and commodities, the markets are unusually volatile. In attempting to smooth the ride, hedging can be a useful tool for treasurers. But what are the common mistakes and what constitutes best practice when using this risk management strategy?

In today's volatile currency and commodities markets, treasurers crave certainty from both a cash flow and a P&L perspective (even if with full certainty the job would cease to exist). To hedge or not should never be a foregone conclusion, especially under the current circumstances, so now is a good time to review strategy and policy.

Doing so should ensure the approach taken is fit for purpose, not least in light of the hedge accounting changes implemented under IFRS 9 that became effective for annual periods beginning on or after 1st January 2018 at least for those corporates that have elected to adopt it.

But there is an even more pressing reason for treasurers to rethink hedging. Although the profession typically errs towards the vanilla end of the hedging spectrum, doing it badly still risks destroying more value than was originally at risk.

Alignment

"When we help companies review hedging strategies, it is not uncommon to find that decisions are not aligned with the company's claimed hedging objectives," notes Ian Farrar, Partner, Corporate Treasury Leader at PwC China & HK. "Equally, a closer look at these strategies may reveal that they are only optimal at certain points in the range of commodity or currency rates."

An example of this would be where the use of certain instruments might be a sound strategy when oil prices are low, but not further up the curve. "We often find there is also an element of commodity basis risk," continues Farrar. "Corporates often do not hedge their entire exposure – frequently on the grounds of availability of suitable instruments, a lack of clarity where they might uplift bunkers, or because the cost of a matching instrument is prohibitive."

For hedging strategies in currency markets, the practice can generally be split into two main areas: FX exposures arising from trading, and exposures arising due to foreign currency debt. "Historically, many Asian companies have not hedged, or, for those that have hedged, under-hedged their FX exposure from trading activities," notes Farrar.

In some cases, this was because these companies were actively taking a position on future currency movements. In others it was due to inadequate forecasting capabilities. Indeed, if a corporate cannot reliably estimate the extent of their currency exposure in any period, it is often prudent to scale back hedging activities.

Treasurers that have hedged tend to use simple instruments – swaps and forwards. But in the past few years more are now considering options-based products; in Asia this is particularly the case for those dealing with RMB, says Farrar.

A new view

When first engaging with hedging, the tendency is to judge the success of efforts based on whether or not a better rate was achieved, notes Farrar. Instead, he says, "treasurers need to measure their hedging strategy based on whether it achieved their objectives, regardless of whether a hedge 'won' or 'lost'." A 'win' in this respect therefore might mean the company managed to fix its cash flows successfully, giving it certainty.

"There is a lot that can be done to manage ongoing volatility," comments Farrar. "It's largely a question of making sure decisions made in the name of risk management are being made for the right reasons."

Underlying effects

Joseph Braunhofer, Deputy Group Treasurer at Smith & Nephew, notes that often the transactional exposures hedged do not appropriately represent the full risk a company is exposed to. However, when seeking to establish the most effective hedging approach, he sees the basic structure of the organisation and the contracts it has entered into as having the defining role.

For Smith & Nephew, FX risk is for the most part concentrated in hubs, effectively centralising it and making it easier to manage. "If you are managing it on an individual basis across lots of decentralised entities you may be winning on one side but losing on another," he warns.

Ideally, before implementing any FX hedging strategy, Braunhofer advises examining the fundamental economic risks within the company. "When you are analysing the economic risks underlying a business, sometimes it is not always immediately apparent what the FX risk is," he notes.

"Contracting and procurement may have negotiated a contract in GBP, however this could be linked to an underlying USD market price. This could create an underlying FX risk within that contract that you don't know about – or you may be transferring FX risk to one of your suppliers which you will ultimately pay for," he explains.

To overcome this situation, he says it is vital to get into the detail in the first instance, "in order to fully understand what's happening all the way through the chain". For this to be possible, he adds that finance and other teams need to support treasury in getting the best available data.

From here it will be useful to assess and compare those risks versus industry peers, making a judgement on what certain FX movements will do to the company's overall competitiveness in its market. Braunhofer accepts that it can be difficult to get competitor information of this nature and urges treasurers to be "a little bit more creative" here, exploiting other sources where possible.

Having created a view of the underlying risks, and benchmarked them, another useful step is to build in a view of the prevailing business environment. "In a business where margins are typically over 20%, Braunhofer believes that the treasurer might feel that doing less FX hedging may be entirely acceptable "because the worst possible outcome of all currencies moving against the business might only knock 1% off the overall margin".

In any given year, this will still dent profitability. But for the high-margin player, it is unlikely to tip the business over the edge in terms of complying with any bank covenants, for example. However, for low margin businesses, the potential for losses and risks related to covenant compliance alone may dictate the decision to hedge or not.

Accurate forecasting

As a hedging programme is implemented, it is important to looking at the accuracy of cash forecasts and underlying flows for it to be effective. "Typically, companies are hedging 12 or 24 months out so it is vital to know they are not doing so on the basis of flawed data and then having to unravel that as the maturity date approaches," comments Braunhofer.

The starting point of accuracy here is a matter of attending to the cash forecasting basics. "Most corporate treasurers recognise that this can be very difficult but if you are not doing some form of variance analysis on your cash forecasting, then it's probably not going to get any better and you'll never know how accurate you are."

There are various systems and processes that can be used to improve cash forecasting, depending on whether it is for operational, tactical or strategic purposes (short, medium or long term). These include the receipts and disbursements method, distribution modelling, exponential smoothing and regression analysis.

Modelling

It is useful for treasurers to develop an approach to modelling risk in the context of hedging. In recent times, Braunhofer notes that the portfolio value at risk (VaR) approach has become the leading edge in hedging practice.

VaR calculations come in many forms (and complexities) and can be estimated by multiplying 'market value' by 'price volatility'. Portfolio VaR essentially enables risk to be equated across products and for the aggregation of that risk on a portfolio basis.

A VaR model might, for example, measure the confidence (as a percentage) of the worst-case loss, under normal market conditions, across the base currency, over a given period due to adverse price moves. This calculation can be used to calculate VaR of individual positions and, subsequently, portfolio VaR.

Risk modelling can quickly become a complex proposition and adopting the more arcane techniques is not for everyone. "I would prefer to keep things as simple as possible," states Braunhofer. Some market-data tools available to treasurers have modelling functionality built into them, allowing "anyone with a good handle on their exposures" to overlay concepts such as portfolio VaR with "relative ease".

Flexibility and framework

With more extreme market movements than would otherwise have been anticipated, companies that are increasingly global in reach and connection, and the positive effects of having easier access to more accurate, relevant and timely data, companies are better able to understand the underlying elements.

Best effort now needs to be, and can be, better. As such, says Desiree Pires, Co-Head Corporate Sales, UK Financial Markets at Standard Chartered, "it is no longer prudent to have a one-size-fits all treasury hedging policy, and nor is it sensible to continue using a policy that was written a decade ago".

The current trading environment and market volatilities are dictating the need for a more flexible hedging approach. Indeed, rigidity in today's environment can create exposure to additional risk or cost.

With EUR and GBP forward points close to record highs, for EUR or GBP sellers it may be worth extending tenor of hedges to lock in the attractive forward points. For commodity purchasers, hedging for example base metal or energy in EUR rather than USD terms may mitigate the impact of higher commodity prices, says Pires.

"The record lows we have had in interest rates over the last few years encouraged many treasuries to fix their debt costs for longer term. Brexit GBP-related weakness may also bring opportunities for UK companies with foreign earnings or foreign companies with UK costs to lock these in for a longer period." Being able to lock-in that cost gives the predictability that companies and stakeholders crave. This only comes from policy flexibility.

There may be certain accounting or finance considerations around the timing of a hedge, but Pires says treasurers should generally be striving to create market awareness across the organisation, up to board level, to try to reshape outmoded policy in the most appropriate manner.

Indeed, there must be an understanding of the nuances that exist, for example, between certain currency pairs, or at certain times in the market cycle, in order that the right degree of flexibility is sanctioned. And it needs to be sanctioned because shifting back and forth on tenor, for example, might, as Braunhofer notes, "look a little like speculation".

Allowing treasury to do something different where necessary, possibly even look at FX options, as PwC China & HK's Farrar suggests above some Asian businesses exposed to RMB are now doing, is clearly foresighted.

However, policy flexibility to the point of allowing ad hoc decisions is effectively no policy at all, cautions Pires. "When hedging, there will always be a need for a framework and guidelines," she declares. "These typically warn against speculation but also provide certain tolerances within which treasury can operate."

With more data available to build a better picture of the business and its risks, setting and fine-tuning limits, and understanding where the pain-points are, is now entirely possible.

Practical measures

In beginning to mitigate exposure risks, it should be apparent that treasurers should start by examining market conditions before taking the plunge. However, warns Pires, "spend too long studying the markets, or wait too long for it to reach a good level, and it might run away from you". Setting time guidelines can avoid 'paralysis by analysis'.

The cost of hedging should be a consideration too. It needs to be balanced by the benefits and the value of the underlying business; certain (usually emerging market) currencies, for example, may not be worth hedging because they are simply too expensive.

When adopting a hedging methodology, a 'rolling layered approach' is often advised as a practical means of reducing cash flow volatility. With a two or three-year horizon, for example, the treasurer would hedge a larger percentage of FX for the first six months (policy suggesting perhaps between 50% and 80%), reducing the percentage progressively to perhaps a tail hedge towards maturity.

The liquidity of the market will often dictate tenor; commodities tend not to be overly liquid beyond 18-months to two years, making a longer tenor unlikely. That said, an airline might take a different stance to a food manufacturer, so policy might dictate a very different approach.

But perhaps hedging can be approached in a different way altogether. As Farrar says, it may now be time for treasurers to look closer at options. Indeed, in certain cases, especially where there is uncertainty around the underlying, Pires says the 'insurance' of a simple option (as opposed to more complex derivatives, which are unlikely to gain acceptance amongst treasurers) "can outperform a rolling forward hedging programme", giving lower volatility on the balance sheet.

It is worth noting too that where at an individual entity level, hedging may seem like the right thing to do, across a group, there may be natural – and therefore more cost effective – offsets that can be used instead, notes Jacqui Drew, Director, ION Treasury and Chairperson of ION's Hedge Accounting Technical Taskforce.

Information is key here, she says. It is imperative that a company can identify all inflows and outflows across a company and across the asset classes including FX and commodities. The company can then identify any natural offsets in the first instance which would significantly reduce the volume of hedging and therefore the hedging costs.

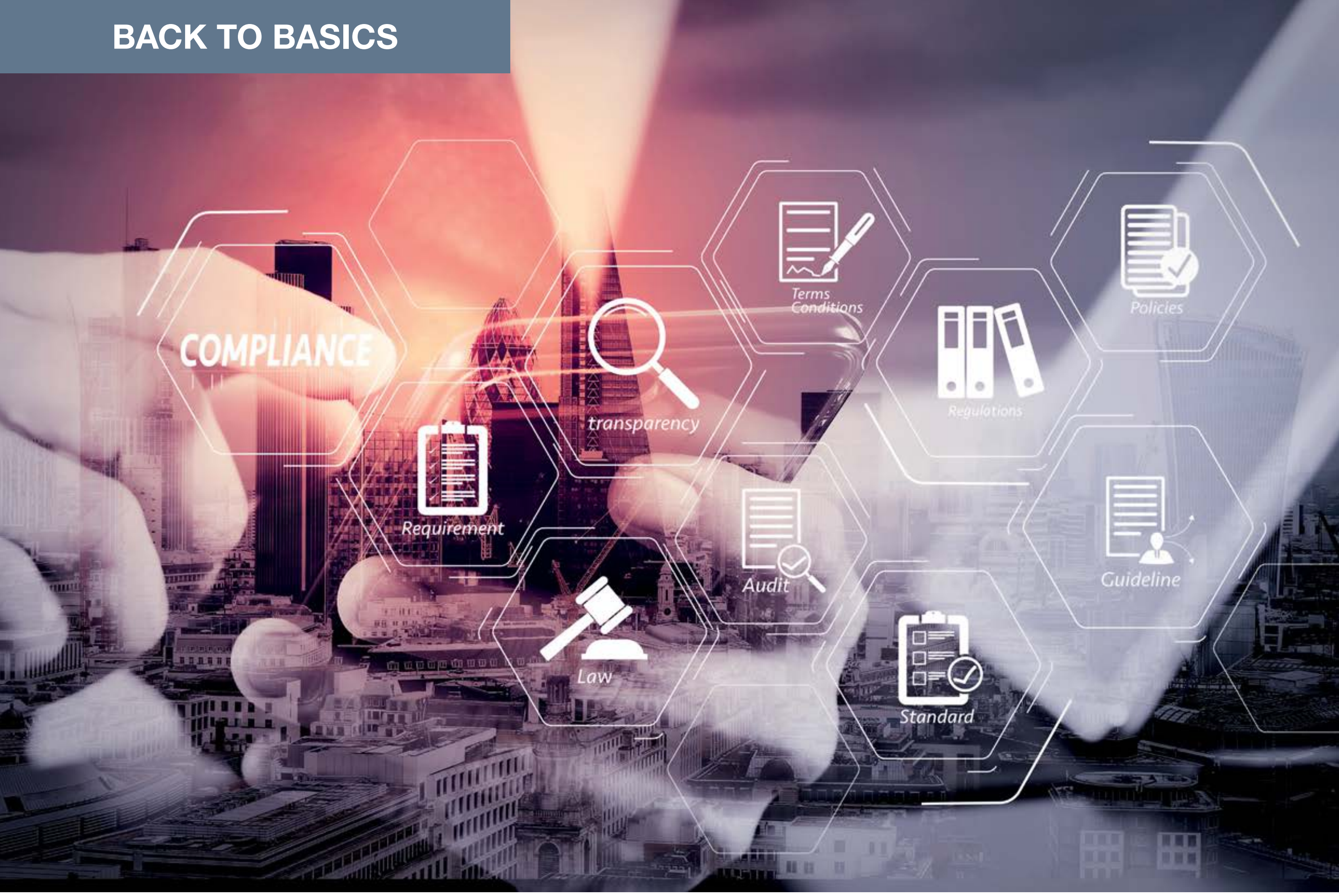
Looking at exposures in siloes, where commodities and FX trades are treated entirely separately, is inefficient. "A more advanced treasury will be able to look at these exposures across the portfolio and gain an understanding of the correlation and potential offset of the different risks," she notes. "We have worked with companies who have noted a 40-50% reduction in risk when considering the correlations across asset classes by using advanced risk functionality like Cash Flow at Risk. Cash Flow at Risk is relevant to corporates who are not looking to trade out of their hedging positions immediately and are looking to manage cash flows rather than balance sheet value."

Technology, subject matter experts and banking partners will be a valuable source of input and of data in this respect, especially when seeking correlations and performing calculations and analysis. But where information can be shared internally, then it should be. Aside from the adoption of technologies that can facilitate sharing across the organisation – and here cloud solutions can prove beneficial – the different functions harbouring relevant data using independent market data can be helpful in treasurers adding value to the organisation.

It is here that treasurers can explain that helping to discover the different exposures being faced by the business will help level volatility and increase certainty through a better-executed hedging strategy. Ultimately though, it means driving growth and increasing profitability. Few could argue with that.

Hedging best practice: Jacqui Drew, Director, ION Treasury, offers her guidance

- Build a formal hedging strategy and policy, with appropriate controls, and align your actions with it across the organisation and to the risk appetite of the organisation.
- Allow your policy to have a degree of flexibility and ability to deal with unexpected changes in the economy.
- View policy as a work in progress: review and revise as necessary and back test.
- Stay abreast of the underlying business risks and regulatory changes.
- Know what exposures you are trying to protect and be able to accurately identify them and keep them updated.
- Hedge in good time: don't wait for the market to turn.
- Share information internally and look out for natural hedges across the organisation.
- Hedging for treasurers is a means of risk mitigation not a source of revenue.
- Invest in technology to support global and accurate capture of your exposures across your asset classes with risk management functionality to comply with your risk management policies.
- Ask a trusted expert for advice on hedging strategies or risk management techniques.



No let up for corporates on the KYC and sanctions front

Regulators globally have shown financial institutions that violate tough post-crisis compliance rules no mercy and are now, increasingly, showing a determination to also punish corporates that don't toe the line when it comes to know your customer, anti-money laundering and sanctions.

A decade on from the collapse of Lehman Brothers, regulators across the United States, Europe, Asia Pacific and the Middle East have levied an eye-watering US$26bn in monetary penalties against institutions for KYC, AML and sanctions violations, according to one of the most comprehensive studies of its kind since the financial crisis.

The research by US-based Fenergo, a provider of regulatory and compliance solution to banks and corporates, says inadequate customer due diligence procedures and the lack of cohesive, global KYC and AML compliance programmes were the most common charges levelled at penalised institutions. On the sanctions front, penalties were mostly handed out for screening processes that intentionally ignored the status of sanctioned entities.

Published in October, the Fenergo study draws on analyses of ten years of AML and KYC fines and found that at the regional level, the US accounted for over 90% or US$23.5bn of all global AML, KYC and sanctions-related fines between 2008 and 2018.

Europe followed with US$1.7bn issued in fines over the ten-year period. The current year however has already become a record year for AML fines across the region, with a total of US$903m levied, including the highest European AML fine of the past decade, totalling US$900m and levied by Dutch authorities.

Across APAC, AML-related fines totalling US$609m have been issued in the last ten years. As with Europe, fines across the region this year already amount to a new ten-year record, US$540m in penalties issued over the first eight months of the year. "There is a notably intensified appetite from Singapore and Hong Kong financial regulators to safeguard their respective financial systems by bolstering AML, KYC efforts," says the report.

In the Middle East, meanwhile, regulators are starting to find their regulatory bite in an attempt to fix a global perception of a 'light touch' regulatory regime within the region. The Dubai Financial Services Authority (DFSA) has been the most active regulator in the area, levying five fines totalling US$9.5m for AML contraventions.

As for sanctions violations, they accounted for 20% of the US$26bn issued in enforcement penalties globally on financial firms.

With the implementation of new regulations, including EU's MiFID II and GDPR; and US Treasury's FinCEN Final Rule relating to customer due diligence (CDD) over the past year alone, the expectation across the financial industry is that regulators will continue to flex their enforcement muscles. Accenture's 2018 Compliance Risk Study found that nearly 90% of 150 compliance officers surveyed across banking, capital markets and insurance are anticipating their organisations will boost investment in compliance over the next two years.

Warning for corporates

While both the Fenergo and Accenture studies are focused very much on financial institutions, their findings are a powerful signal to corporates that as clients of financial services firms they too will, inevitably, come under greater scrutiny under KYC, AML and sanctions rules.

The sanctions space has been especially lively this year thanks to US President Trump's willingness to slap new rules on not just countries like Iran, Syria, Russia and North Korea but organisations and individuals as well. Data gathered by US law firm Gibson Dunn earlier this year shows that across the full range of US sanctions programmes, nearly new 1,000 entities and individuals were blacklisted during 2017. That represented a near 30% increase over the number added during President Obama's last year in office, and a nearly three-fold increase over the number added during Obama's first year in office.

A notable recent instance of a corporate being snared by US sanctions is Chinese telecom equipment maker ZTE, which was charged with "egregious" violations of rules on Iran and North Korea. In May the company was allowed to resume operating in the US but only after paying a US$1.3bn fine. It also had to change its management and board, hire American compliance officers and provide "high-level security guarantees".

With sanctions rules there is no room for ignorance. Last year PayPal was fined over US$7m for breaking the US Weapons of Mass Destruction Proliferators Sanctions Regulations after unwittingly processing payments for a sanctioned individual. Elsewhere, US medical company Alcon Labs has been fined more than US$7m for selling medical equipment to customers in Iran and Sudan, and the PanAmerican Seed Company had to cough up US$4.3m for selling flower seeds to Iranian distributors.

Parth Desai, founder and CEO of payment compliance platform Pelican, says that, increasingly, personal executives are being held to account and individually fined by regulators following corporate non-compliance. The negative impact on business reputations of being shamed can be even more significant than the direct financial penalties imposed, he says.

"Despite these risks, there is still a reluctance among some companies to onboard proper sanctions screening processes, with many erroneously believing it is enough for their banks to do all screening," says Desai. "As many companies have learnt the hard way, there is no excuse the regulators will accept for a failure to put in place adequate systems and processes to ensure all relevant sanctions obligations are adhered to."

Desai says that while many companies around the world are either planning, implementing or already using sanctions screening and fraud prevention solutions, others are facing either compliance disaster or fraud exposure.

How companies handle their data is no longer simply about compliance – it is a competitive differentiator. Firms that fail to have a cohesive strategy and programme in place will struggle to succeed at best, or create a ticking time bomb at worst, Desai warns, adding: "Action is better than inaction – and complacency can lead to disaster."

The KYC challenge

Corporates face many challenges on the KYC front too. A Thomson Reuters global survey of 1,122 decision makers, including treasurers and finance directors in non-financial corporations, found that banks are looking to alleviate some of the regulatory pressure on them by increasing the volume of KYC information they require from companies. An indication of the much tougher regulatory climate for banks is that, according to Fenergo, between 2009 and 2012 alone, more than 50,000 regulations were published across the G20 group of countries, with almost 50,000 regulatory updates rolled out over 2015. Not surprisingly, major financial institutions are spending between US$900m and US$1.3bn a year on financial crime compliance.

The Thomson Reuters study, which surveyed firms in countries including Singapore, Hong Kong, USA, UK, France and Germany, also found that the KYC burden on companies is being magnified by their high number of banking relationships. On average, each corporate surveyed had ten global banking relationships, with bigger organisations having more banking relationships, as many as 14 in some cases. Such multiple banking relationships make managing the provision of KYC documentation to financial counterparties significantly more time-consuming and complex for corporates.

The research furthermore reveals that banks were taking longer to onboard corporate clients who in turn were not passing on a significant proportion of material changes needed for KYC processing. As a result, senior managers within corporates were spending valuable time responding to multiple requests for compliance-related information.

One of the biggest bugbears for corporates is financial institutions' lack of common KYC standards. As a result, document requests vary by bank and geography, making it difficult for corporates to predict exactly what will be required. Institutions and regulators have shown they are committed to

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>
> Parth Desai, founder and CEO, Pelican

moving towards standardised KYC requirements but there is still an awful long way to go.

Not surprisingly, third-party providers have spotted an opportunity to provide KYC solutions that address the needs of all parties. SWIFT was one of the first to spot the opening. Its KYC Registry provides banks with information on their correspondent and downstream relationships in a shared platform that manages and exchanges standardised KYC data. Other managed service providers offer more than a repository, tailoring in-depth due diligence for banks, investment managers and corporates.

Yet the Holy Grail of standardised, automated KYC, is still some way off. One reason is that banks still have their own on-boarding methods. David Fleet, Managing Director, Client On-boarding and Management at Standard Chartered Bank in Singapore explains: "There are still requirements for additional data over and above what the utility collects."

And banks cling to their own practices because ultimate KYC responsibility remains with them. "The danger is that if the provider gets it wrong, the bank remains on the hook. Banks can't outsource their responsibility," says Tom Devlin, Partner at law firm Stephen Platt & Associates. Competition amongst banks is also a factor impeding collaboration. Similarly, the proliferation of competitive KYC services chasing the same segment reduces the chance of industry-wide standards.

Some experts believe that only when regulators deliberately specify clear KYC parameters and requirements, will shared platforms or 'one-stop-shops' really work. "Regulators refuse to tell banks what constitutes adequate KYC and banks continue to dream up more and more ridiculous KYC criteria for their clients," says David Blair, Managing Director of Singapore-based Acarate Consulting.

Blockchain to the rescue?

With little sign of a resolution any time soon to the conflicting demands and priorities of financial institutions and corporates when it comes to KYC, interest is growing in blockchain technology as a potential solution. As an immutable shared digital ledger of transactions maintained by a network of computers rather than a centralised authority, blockchain could be used to safely store and share validated data such as KYC documentation amongst banks. Such a facility could help remove the need for duplication of information and enable updates to client details on the KYC ledger to be made available to all banks in close to real time. The ledger could also provide a historical record of all documents shared and compliance activities undertaken for each client, addressing the needs of the regulator.

Efforts to explore the application of blockchain to KYC have intensified over the last two years. And while any commercial exploitation of the technology for KYC remains some way off, there have been some notable advances. Last year, for instance, the R3 blockchain consortium reported that more than three dozen of its members – including BNP Paribas, China Merchants Bank and Deutsche Bank – had carried out a global trial of a KYC application built on a blockchain platform.

The four-day trial saw 39 firms carry out over 300 transactions in 19 countries across eight time zones. Banks were able to request access to customer KYC test data, whilst customers could approve requests and revoke access. Customers were also able to update their test data which was then automatically updated for all banks with permission to access it.

R3 says the system reduces duplication and costs by eliminating the need for each institution to individually attest and update KYC records. And, because only those with a need to see data have access to it, there are no data privacy and security issues.

Elsewhere, KPMG in Singapore has worked with a consortium of three banks in Singapore – HSBC, OCBC, and Mitsubishi UFJ Financial Group – as well as the Singaporean regulator Info-communications Media Development Authority to develop a proof-of-concept KYC utility on a blockchain platform. The prototype successfully passed the Monetary Authority of Singapore's test scenarios. In addition to stability, efficiency and security, the platform could, says KPMG, result in estimated cost savings of 25%-50% by reducing duplication and providing a clear audit trail.

IT giant IBM meanwhile has been working with banks around the world on early stage shared KYC projects based on blockchain. Earlier this year it announced successful completion of a proof of concept KYC blockchain platform in collaboration with Deutsche Bank and HSBC.

Although the cost of KYC is a huge part of the motivation for sharing KYC information across banks securely, for IBM the customer experience is an even bigger factor: "Banking clients are constantly asked to provide the same information, over and over again. For corporations, this can be very tedious, given the amount of certified information and documents they need to provide. By sharing KYC information across banks, the burden can be reduced, translating to faster onboarding and less work for customers."

IBM believes one of the key aspects of blockchain that fits well with these objectives is its ability to allow the customer – individual or corporate – to dictate with whom they want to share information and for what purpose, without needing the banks to be involved in the middle. Those types of capabilities are very difficult to achieve without using blockchain technology, it says.

Consumer influence

To what extent is treasury being changed by consumer behaviour?

Mina Nasif
Corporate Treasury Consultant, CTP Instructor
Beacon Consulting/
Mina Nasif & Associates

Treasury and consumer behaviour are two sides of the same coin; technology is the bridge. Within a corporate finance function, I believe treasury is the most affected by technological change because as obsolescence arises through the introduction of new consumer technologies, it falls to treasurers to bring on board new solutions to meet both the consumers' and the business' payments and collections needs.

With digitisation becoming the strategic imperative to meet these needs, companies will focus more investment on digitising their customer interfaces. But their R&D investment in digitising their back-end systems and processes should receive no less attention. This is because the back-end can be the greatest driver of profit-margin improvements for many companies; it's what makes consumer payments easier and it helps the business gather data, keeping clients loyal.

In fact, the evolution of big data retail analysis systems has made it possible to implement sophisticated pricing structures, right across the business. Such intelligence is critical to maintaining the balance between revenue and margin. It doesn't mean a race to the lowest price – not everyone can be the cheapest – but it is about pricing and stocking correctly and as often as possible.

As consumer preference for digital over physical shopping rises, we see ever-larger turnovers for Amazon, AliExpress, Best Buy and others. Technology is clearly opening up new business opportunities and channels, particularly in China where e-commerce growth is driving huge changes. But it brings a new set of challenges for businesses.

When dealing with digital payments and service providers, whether the business sets up its own account with AliPay or WeChat Pay, or it uses a service provider or distributor as an intermediary, there is a cost. Where intermediaries are used for B2C businesses, there is an additional concern in some jurisdictions about the regulation of these intermediaries and how data is protected.

With 24/7 sales via these platforms, there is also a time component to consider, both from a supply chain and a cash management perspective. Finally, there is lot of data being produced, and this must be used in the right way to develop insights that help businesses drive better consumer relationships in the face of stiff competition.

I believe that e-commerce has an impact on the entire business model. Where companies previously packaged products in pallets to go to distributors, increasingly they ship directly to consumers, demanding a rethink of the packaging and delivery model. But digitisation also demands a response to the fact that it is no longer just the company that sells; influencers on social media, bloggers, celebrities are all now playing a role. If a blogger calls out a particular beauty product, there is a spike in demand. You can't plan for a disparate host of influencers deciding to talk about your products, so it becomes very difficult to anticipate consumer behaviour and demand. Treasury needs to make sure it can support a supply chain that is becoming more difficult to predict and that means getting much closer to the business. Consumer behaviour is having a major impact on the shape of treasury!

Antti Kyyrö
Executive Director,
Treasury Solutions, Europe
Standard Chartered

Many argue that there has never been a better time to be a consumer than today. Advancements in mobile connectivity, global internet penetration and the general falling cost of technology are empowering the consumer through price and product transparency and access to marketplaces.

Disruption to businesses is set to continue, as commercial success increasingly hinges on the ability to follow rapidly shifting consumer trends. Companies need to function as cohesive teams to be able to provide seamless, personalised on-demand customer experiences available 24x7x365.

At the same time, from an external perspective, demographic shifts such as millennials' preference of experiences over products and the rising importance of emerging markets increase business complexity through the need to localise vs the traditional lift and drop approach to global business.

What does this mean to treasury? No industry or individual business function is isolated from the impact of technology and how it reshapes the interaction with customers and the wider market.

Take the typical example of a business moving from a bricks and mortar reseller model to a direct local online sales model. Treasury will now need to insource many of the treasury tasks that were previously assumed by the reseller. Among other things this requires providing a payment gateway solution to support various local payment options from traditional cards to mobile wallets to instant payment systems possibly connected to your TMS or ERP through APIs in real time. The treasurer will also need to find ways to manage the associated FX requirements and develop a liquidity management model that will allow selling an imported product to a local end consumer without material increase in costs and complexity. The online model may need to be further enhanced with various ancillary services such as customer financing or insurance that the treasury team will need to deliver.

For some consumers the rise in a sharing economy has taken away the need to own physical products altogether. Whilst there are various examples of this from clothes to even pets, most obvious is transportation. Ride hailing companies have shown how a seamless on-demand experience may shift consumer preference through convenience. Some even argue that the decline in young people acquiring driver's licences in the US over the past years is due to the availability of ride hailing services.

The shift from selling a physical asset to providing a service will have fundamental implications to the corporation and their treasury department. Instead of managing large collections from a few distributors, treasury now needs to set up cash and liquidity management processes for fragmented local cash flows from single service transactions via various channels. AI applications and predictive analytics are increasingly utilised by treasurers in managing this growing complexity of creditor relationships and the associated risks. In the broader finance context, treasury may also need to seek ways to optimise capital structure through SPVs and various asset light funding models to manage balance sheet size.

The above are just a few in a sea of examples of how consumer behaviour is driving end-to-end business transformation, but what they imply is clear, great products are not enough. Treasurers' role in providing the latest cash management technology to the business directly serve the overall customer experience and convenience.

Often these solutions, such as the ability to settle real-time in an online environment or providing automated FX hedging solutions, are critical to the overall sustained success of a new business model. In addition to understanding the local markets and their complexities, leveraging technology, such as APIs and predictive analytics, are key enablers in becoming a strategic partner to the business. Long gone are the days of deriving treasury success from a reactive ivory tower approach through rigid policies, processes and governance only.

Stefan Leijdekkers

Head of Regional Sales, Asia Pacific, Global Transaction Services

Bank of America Merrill Lynch

Global smartphone penetration has increased steadily in the past decade. Today, according to the Forbes article published in August 2017, "How much time do you spend using apps?", we see US consumers spending an average of five hours daily on their smartphones, carrying out most of their daily tasks.

The mass adoption of smartphones has also reinvented commerce. We've seen the growth of ecommerce in the past decade, giving rise to the change in consumers' behaviour and expectations. This has facilitated the growth of mobile wallets, contactless payment modes, payments via QR codes and so on, where consumers can simply pay by waving their smartphones across point of sale (POS)/near-field communication (NFC) terminals in retail stores.

With the widespread adoption of digital technology, educated consumers are seeking enhanced convenience in payments, with the emphasis on speed and flexibility in the way they pay for their purchases. This has urged merchants to reconsider their business model and provide payment acceptance platforms that support mobile payments.

Furthermore, the increased focus on security measures for making such digital payments has also contributed to the level of comfort, facilitating such digital payments. Treasurers need to adapt to the changes and have a mobile strategy, especially (but not only) in B2C business models.

The exponential growth in the e-commerce market over the last few years, coupled with demographic shifts and the emergence of tech-savvy millennials into the workforce, have seen a change in consumer patterns. Consumers are beginning to shop more actively in real time and on the go, as compared to traditional brick and mortars.

Retail businesses now have to revamp their business models and explore an 'omni-channel' retail model where their customers are able to enjoy a seamless shopping experience, both online and offline in the physical stores.

With increasing consumer preference for online shopping, the ability for a merchant to facilitate seamless online payments becomes crucial. Consumers are moving away from cash payments to online payments as part of the online shopping experience. As a result, it is imperative for treasurers, also beyond the typical e-commerce players to add to e-commerce channels with payment capability linked to ERP systems via application programming interfaces (APIs).

With the migration from paper to electronic payments, a payment no longer signifies the closure of a successful business transaction. On the contrary, it opens up doors to many more business opportunities by leveraging the accompanying data from aggregated payments. A digital payment allows merchants to capture payer information or details from the underlying payment transaction as compared to a cash payment where there is no personal information required or involved in the transaction. As a result, the treasury function today is no longer viewed as a utility function, but one that is able to value-add by providing a wealth of data analysis to identify business growth opportunities and formulate business strategies going forward.

Next question:

"What will be the biggest regulatory challenges for you over 2019?"

Please send your comments and responses to **qa@treasurytoday.com**

A turning of the technology tide?

Recent conferences show signs of a healthy shift from technology hype to pragmatic solution focus. Blockchain hype is giving way to practical implementation. Terminator style AI is giving way to more modest but still world-changing machine learning (ML). Fast payments and open banking are spawning bank connectivity APIs but standards are conspicuously missing.

History lessons

Recent conferences have provided plenty to think about. I noticed that several prognosticators referenced long-term historical patterns in their presentations.

Emmanuel Daniel cited David Ronstadt's "Tribes, Institutions, Markets, Networks: A Framework About Societal Evolution" which posits four phases – tribes, hierarchies, markets and networks, which neatly correlate to village, country, region and global. The key risks for each also give pause – nepotism, corruption, exploitation and deception.

Stephane Garelli pointed out that technological revolutions have been happening all along (agriculture, writing, printing, steam over 10,000 years) but that change is accelerating (PC, internet, mobile, AI over 30 years). How management responds to change is critical – in the past 60 years the average tenure in the S&P 500 has dropped from 61 years to 18 years and at current rates we can expect 75% of the current S&P 500 to have disappeared within a decade.

The World Economic Forum (WEF) has its own take on historical change, where it talks about the fourth industrial revolution. The WEF phases are steam, electricity, digital, and convergence (through ML and ubiquitous connectivity). In line with statements like "data is the new oil", many see this convergence as a major inflection point.

Chris Skinner's phases are becoming human, becoming civilised (and creating money), becoming commercial (and creating banks), and becoming digital – hence his latest book title "Digital Human". Before we are all augmented with silicon, our evolution towards "augmented intelligence" will progress from currently relying on Google as a clunky memory prosthetic to ever greater dependence on and integration with digital technology.

The US Defense Advanced Research Projects Agency (DARPA) is working on machine brain interfaces – initially to help injured soldiers with prosthetic limbs but recently to control multiple aircraft at once. So our cyborg days may not be so far away – "You will be assimilated; resistance is futile!"

Change takes longer than expected but is often more profound than expected, especially as we tend to ignore the social implications while focussing on technological changes.

Blockbust

Garelli cited Peter Drucker who warned that technology should be an enabler, not an end in itself. (The end, per Drucker: "The purpose of business is to create and keep a customer".) Recently it seems that there has been a hunt for buzzwords in treasury technology – people want to have blockchains and big data and AI on their checklists. This despite the evidence that most treasuries have not yet implemented basic functionality like straight through processing and dashboards, and many still use Excel for day-to-day processing.

From this perspective, it is good to see that conference talk is turning from technologies towards solutions. To paraphrase Deng Xiao Ping, it does not matter if the solution is blockchain or SQL so long as it works.

Taking the example of KYC, there are interesting solutions based on blockchains but they are more or less experimental. There are plenty of existing solutions using SQL databases available. The real issues are regulatory (getting the regulators to approve a given solution) and social (getting multiple parties on board). While many treasurers are waiting for blockchain solutions to go mainstream, some treasurers are reaping the benefits of current solutions by insisting that their banks go digital for KYC.

An analogous point came from a cyber-security discussion at SIBOS – most of the conversation was about social engineering (tricking humans) rather than technology. There was a strong consensus that human and social factors are most important – there is little or no cooperation between countries and generally security technology is adequate but not used properly by humans.

Fast payments

With PSD2 going live in March 2019, there is a lot of buzz around fast payments – somewhat ironically since some countries have had fast payments for decades.

The use case for fast in retail is clear – it provides a faster, cheaper and more efficient alternative to cards. For business to business, it is less clear. This is partly because, since many fast payment systems have deferred settlement, they often have transaction limits. For example, Singapore FAST recently increased to S$50,000, after MAS determined from the first few years of operation that bank liquidity management was robust enough to handle larger transactions. (Payments over US$50,000 will go through RTGS, which is also very fast but costs more.)

APIs

For use in e-commerce and retail, fast payments need fast processing. Although file upload (of instructions) and download (of statements) can be done quite quickly, APIs are a better way to communicate fast payments and status.

APIs process atomic transactions and are better suited to real-time status messaging which is required for example for e-commerce sites to provide feedback to customers on the progress in clearing payment.

This together with regulatory pressure for open banking, is driving intense interest in APIs. Just to be clear, APIs are not new – every programme (what we now call "app") uses API calls to the operating system to draw windows and buttons and access data. APIs are not even new in banking – credit card processing runs through APIs for example. APIs are the glue that hold systems together – for example e-banking front ends use APIs to communicate with core banking systems to fetch and post user data.

What is new is that regulators are pushing banks to open their systems to third-party service providers. For example, a fintech or ERP could replace the bank provided e-banking front end with something better or more convenient for the user. Another attractive use case is for a personal finance site to be able to aggregate users balances across multiple banks – something like SWIFT bank connectivity for retail. (In fact, these use cases could be done with file transfer but APIs add the real time element.)

If all this sounds too good to be true, it may well be. One major issue is that banking APIs are not standardised. When we do file transfer with banks over SWIFT we use either 50-year old FIN messages or 20-year old ISO 20022 messages, both of which are standardised. In fact, the ISO 20022 are working on applying their standards to APIs via JSON and ISO 20022 is standardising the additional messaging required for near real-time fast payments, but we also need banks to agree to standardise their APIs on ISO 20022. Currently the banks who have opened APIs have all invented their own wheels, making a mess for customers and service providers and a boom in API management.

AI

It's official – AI no longer means artificial intelligence – henceforth AI means augmented intelligence (humans doing better with help from machines). Wiser heads prefer to talk about machine learning. Machine learning will do the boring stuff while we humans do the fun stuff – like dealing with other humans.

As the technology that was previously known as AI trickles into the real world, we see that it is more about pattern matching than the magic we had imagined to be AI. And to get the most out of pattern matching, we need lots of clean and structured data – so treasurers who want to get on this bandwagon have to ditch Excel and implement a proper TMS. With decent data, treasurers can progress from data analytics (what used to be called reporting) through statistical analysis and on to machine learning.

Moving terminology from AI to ML does not diminish the changes that are coming. Yuval Noah Harari gives a great example in terms of macroeconomics: currently perhaps 1% of the population understands the economy; in 20 years when most of the economy will be run by algorithms no one will understand it; decision makers will be given policy directions by machines that cannot explain their rationale because humans do not have sufficient bandwidth to understand. The machines will not be conscious nor intelligent in the way Hollywood expects; they will not take over in the sense of pursuing their own agenda because they will have no sense of self; they will take over in the sense of making most tactical decisions because they will be much better and infinitely more consistent than human decision makers.

Of course, there are many issues with all this and as Harari points out, managing the advent of ubiquitous ML is one of the three big challenges facing humanity. A critical challenge is biases that ML may pick up from their coding and their training data sets.

If this seems far-fetched, consider the stock market "flash crash" phenomena. These are caused by algorithmic trading that we do not properly understand. We suspect it has something to do with stop loss and technical chart levels, but we do not have enough understanding to be confident of being able to manage it. So we have slowed down trading and tightened daily trading ranges to mitigate the risk.

Conclusion

Overall it seems healthy that the discourse on technology is shifting from hype to more moderate terminology and more modest expectations. Most important is the shift from technology to solutions. There really are better ways than Excel!

David Blair, Managing Director

Twenty-five years of management and treasury experience in global companies. David Blair has extensive experience managing global and diverse treasury teams, as well as playing a leading role in eCommerce standard development and in professional associations. He has counselled corporations and banks as well as governments. He trains treasury teams around the world and serves as a preferred tutor to the EuroFinance treasury and risk management training curriculum.

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INSIGHT & ANALYSIS

Real-time treasury: do treasurers need it?

There is much talk of real-time treasury operations. Is this an essential part of future-proofing the organisation or is it the next big technical headache treasurers could do without? We look at what real-time means for treasurers, explore some of the implementation issues and uncover the reality of working in the here and now.

INVESTING

Maximising intraregional FDI opportunities

FDI is now an established part of international production. But over the last few decades cross-border investment has changed. It is no longer the preserve of MNCs from industrial countries investing in developing countries; smaller companies from developing nations are now investing beyond their home countries. Because FDI is no longer just about capital but also about technology and know-how, we ask how and where Asian businesses can maximise cross-border investment opportunities.

FUNDING

Green finance and sustainability: the future of finance?

Is the pursuance of green finance and sustainability a 'nice-to-do' niche proposition for treasurers or is this a movement that can make a real difference? In the company of experts, we unpick the realities of funding with an eye on the future, asking 'is this really the future of finance?'

We always speak to a number of industry figures for background research on our articles. Among them this issue:

Dheeraj 'Raj' Chadha, CFO, TeleAdapt; Jacques Levet, BNP Paribas, Head of EMEA Transaction Banking; Nicolas Christiaen, CEO, Cashforce; Mike Zack, Pre-Sales Manager, GTreasury; Dino Nicolaides, MD, Head of Treasury Advisory UK&I, Redbridge Debt & Treasury Advisory; Phil Beck, Head of Treasury Management, Capital One Commercial Bank; Marcus Hughes, Head of Strategic Business Development, Bottomline Technologies; Ajay Sharma, Regional Head of Global Trade and Receivables Finance, Asia Pacific, HSBC; Aziz Parvez, head of Trade & Supply Chain Finance, Asia Pacific, Global Transaction Services, Bank of America Merrill Lynch; Vivek Gupta, Head of Trade and Supply Chain for Greater China and North Asia at ANZ; Rakshith Kundha, head of Trade and Supply Chain Solutions, South East Asia and India, Global Transaction Services, Bank of America Merrill Lynch; Hubert J.P. Jolly, Global Head of Financing and Channels, Bank of America Merrill Lynch; Matthew Davies, Head of Global Transaction Services EMEA, Bank of America Merrill Lynch; Stephanie Wolf, Global Head of Financial Institutions & Public Sector Banking for Global Transaction Services, Bank of America Merrill Lynch; Andrew Marshall, Managing Partner, Covarius; Peter Fox, head of Data and Insights for GTS, Bank of America Merrill Lynch; Magdalena Mielcarz, EMEA Head Channel and Enterprise Services, Treasury and Trade Solutions, Citi; Kanika Thakur, Director, Head of Asia Trade Finance, Citi; Morgan McKenney, MD, Head of Core Cash Management, Asia Pacific, Citi; Sandip Patil, MD, Region Head, Liquidity Management Services, Asia Pacific; Agatha Lee, Head of Global Trade and Loan Products for Asia Pacific, J.P. Morgan; Ian Farrar, Partner, Corporate Treasury Leader, PwC China & HK; Joseph Braunhofer, Deputy Group Treasurer, Smith & Nephew; Desiree Pires, Co-Head Corporate Sales, UK Financial Markets, Standard Chartered; Jacqui Drew, Director, ION Treasury and Chairperson of ION Hedge Accounting Technical Taskforce; Parth Desai, founder and CEO, Pelican; David Fleet, Managing Director, Client On-boarding and Management at Standard Chartered Bank; Mina Nasif, Corporate Treasury Consultant, CTP Instructor, Beacon Consulting/Mina Nasif Associates; Antti Kyyrö, Executive Director, Treasury Solutions, Europe, Standard Chartered; Stefan Leijdekkers, Head of Regional Sales, Asia Pacific, Global Transaction Services, Bank of America Merrill Lynch; David Blair, Managing Director, Acarate.