May/June 2019

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Trade wars

Tariff disputes, trade wars and the global trend away from multilateralism is presenting new challenges for treasurers that need addressing.

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Jonas Falk

Managing Director

SKF Treasury Centre Asia & Pacific

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Promising future for bank – fintech collaborations

When fintechs first began to appear ten years ago, born out of the maelstrom that was the Great Recession, they were seen almost purely in terms of their potential for taking away business from banks.

Payments has proved an especially strong hunting ground for them versus the banks, especially with retail end solutions for cross-border transfers, micropayments and card payments, where incumbents have accumulated the most glaring shortcomings, often resulting in inefficient and overpriced products.

It's arguably been tougher going for fintechs in providing solutions for corporates due to the higher barriers to entry but that hasn't stopped them tackling the space with gusto, particularly across corporate payments, working capital management and peer-to-peer lending.

In recent years though banks and fintechs have grown to recognise that there are considerable merits in their working more closely together through collaborations and formal partnerships. As our article on fintechs and banks in this issue shows, after years of warily circling each other, both now recognise each other's strengths, with agile fintechs contributing innovative platforms and solutions, and banks the equally important client relationships, global footprints and regulatory and licensing expertise and know-how.

There is an awful lot of mileage left yet in the two parties working together to provide novel solutions for existing retail and corporate pain points. But, as we note in this issue, what might cement the relationship between the two even more going forwards is the relatively new and fast-growing phenomena of multi-sector collaborations that have begun to pop up globally. These are webs of collaborating and competing firms that offer connected products and services and include the industrial ecosystems forming around autonomous vehicles, connected cars and car sharing services.

Another example is Microsoft and the BMW Group launching last month an initiative aimed at speeding up innovation in the manufacturing sector and making it more cost-effective. Their "Open Manufacturing Platform" is designed to break down barriers caused by proprietary systems, and to create an open technology framework backed by a cross-industry community.

The future, it seems, will be co-created and as such could open up many new, rich opportunities for banks and fintechs to tap into. With such a win-win proposition to aim for, it will be surprising if we do not see an acceleration in collaborative efforts.

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Production	+44 (0)13 0462 9019

Annual Membership Rate £285
memberservices@treasurytoday.com

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Shifting sands

Following the introduction of trade tariffs in 2018, continuing trade tensions between the US and China have major implications for global trade. What do treasurers need to be aware of in this challenging new environment?

The significance of trade across Asia Pacific cannot be overstated. As Steven Beck, Head of Trade and Supply Chain Finance at Asian Development Bank (ADB) explains, "We've seen trade lift millions out of poverty over the past few decades. People forget the critical role trade played, and continues to play, in Asia's transformation."

But the last couple of years have brought considerable uncertainty about trading relationships, not least due to escalating trade tensions between the US and China. In 2018, the US imposed hefty trade tariffs on goods from China, with trade worth over US$250bn already affected – and further tariffs have been threatened. China has already retaliated with tariffs to US$110bn of US goods ranging from soya beans to bourbon. While talks between the two nations are ongoing, the situation is far from resolved – and despite the tariffs introduced last year, the trade deficit grew to record levels in 2018.

"Trade tensions over the past 18-24 months have had an impact on client activity," observes Ajay Sharma, Regional Head of Global Trade and Receivables Finance, Asia Pacific at HSBC. "Many initially thought it was a storm in a teacup, but they now realise it's something far more structural. Hong Kong and Singapore, the bellwethers of Asian trade, have reported a fall in trade figures, which in turn has impacted trade finance markets."

Shifting supply chains

One major consideration is the impact of protectionist measures on supply chains. "Given the interconnectivity of global supply chains, assessing the impact of protectionism is even more complicated than in the past," comments Sonam Donkar, Group CFO – Commercial Organisation at Vedanta Group. "This puts at risk the real economic gains that have come through closer trade and investment links evolved over decades of partnering."

Agatha Lee, Head of Global Trade and Loan Products, Asia Pacific at J.P. Morgan, notes that Asian exports are vulnerable to the US-China trade dispute on two fronts: changes to global supply chains and slowing Chinese domestic demand. "The shift in supply chains – away from China – inevitably comes with costs, especially around logistics and expected risks involved with new suppliers," she says. Lee adds that slowing domestic consumption in China will impact regional neighbours, which have seen direct exports to China rise exponentially in recent years.

Looking further ahead, the implications could be even more significant. "According to views by J.P. Morgan's research team, the US-China tensions have the potential to trigger the existing manufacturing supply chains to permanently shift out of China," says Lee, noting that ASEAN countries, which have fairly low-cost wage structures and large, relatively young working populations, stand to benefit the most.

Countries that are heavily dependent on shipments to China may see a negative impact, however. "In Asia, we view Taiwan to be most vulnerable, given both China and US are Taiwan's top trading partners, and the Taiwanese economy is heavily reliant on global trade," says Lee. "While South Korea and China are also big exporters to China, we view them to be fairly immune."

Planning for multiple eventualities

Corporates in the region are watching the situation closely. Donkar says organisations are far more exposed to protectionist measures than in the past and are consequently monitoring the impact of these measures closely. She adds that with G20 countries doubling trade restrictions in recent months, "it has become imperative for organisations to have dedicated think tanks to assess the impact of potential scenarios impacting short-term and long-term profitability." When it comes to engaging with the situation and insulating themselves against a potentially adverse trade environment, Donkar says organisations are focusing on being alert and using advocacy forums to share opinions.

"I am seeing lots of clients focus more time on planning for multiple eventualities so they can position themselves to make changes, should the landscape change," says Peter Jameson, head of Asia Pacific Trade and Supply Chain Finance, Global Transaction Services at Bank of America Merrill Lynch (BofAML). "For example, we are seeing clients ask more questions around how we could support them in new markets (eg Bangladesh, Vietnam). So they are clearly considering alternative options in terms of where they might source or manufacture for their supply chains."

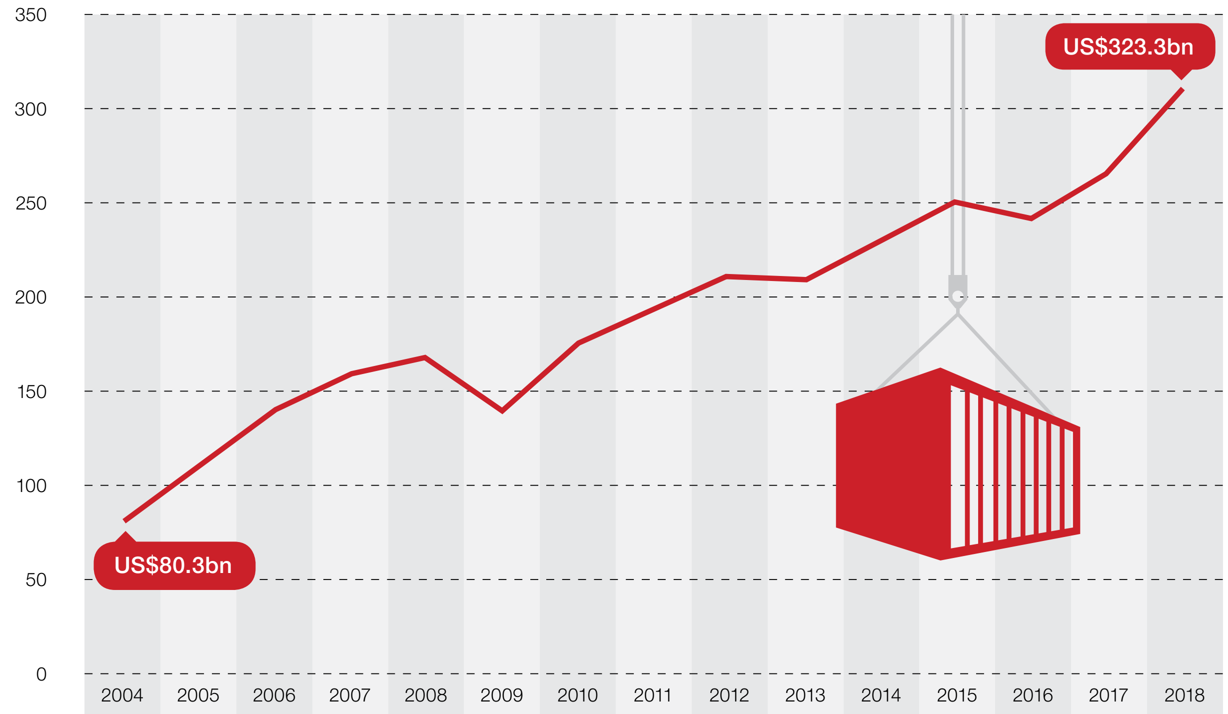
Jameson says that this is a logical approach, as the cost implications of shifting supply chains – for example, on-boarding new suppliers or building new production facilities – are significant, and "not something they would seek to do until the long-term outcome of the geopolitical situation is clear."

This clarity may not be forthcoming, however. Jameson notes that "the only certainty is uncertainty": with the geopolitical landscape continuing to shift, it is likely that other trade relationships globally will likewise shift in line with domestic/foreign policy agendas. Consequently, "as no set of outcomes can really be predicted we are seeing clients planning for the broadest possible range of eventualities."

Companies are therefore adopting a wait and see approach. For example, Jameson says that where the US/China discussions are concerned, "rather than react to the latest sound-bite or policy announcement, many clients choose not

US China trade defecit keeps growing

Chinese trade surplus with the US 2004-2018 (in US$bn)



Source: Chinese Customs Administration, National Bureau of Statistics of China

to react quickly but to wait to see how things play out." He adds that companies are striking a balance between the fear of not being prepared, and the fear of moving quickly and investing significantly in new infrastructure that might end up not being needed.

HSBC's Sharma likewise emphasises the impact of uncertainty on clients in the current market. "They like to have stability when they make long-term decisions, so the main impact we're seeing is a state of inertia among clients – they're waiting to see how the trade truce pans out," he says.

Intra-regional growth

But despite the uncertainty, the current market also has plenty of opportunities. Beck notes that against the headwinds, "we continue to see resilience and growth in developing Asia – truly the engine for global economic growth and trade growth."

For one thing, he notes that China's shift to a consumer-led economy is presenting more opportunities for growth and connectivity. "Intra-regional supply chains are strengthening," he says. "We live in an inter-connected world, where contagion and 'knock-on' is real; but the notion of an intra-Asian buffer, with increasingly inter-dependent economies less reliant on the West, is trending. The global financial crisis accelerated this trend, and it continues unabated."

Free trade deals also have a significant role to play in supporting trade within the region. The Trans-Pacific Partnership (TPP) suffered a setback when the US withdrew from the partnership in early 2017. But the remaining 11 countries went ahead with the agreement, and in March 2018 the TPP's successor, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), was signed. The deal is already in force for seven of the participating markets.

"Even without the US, the CPTPP will be among the largest multilateral trade deals enacted, covering 11 economies which constitute 14% of the world GDP," says J.P. Morgan's Lee. "Beyond lowering trade barriers and boosting trade flows amongst the countries, the agreement also includes greater protection of intellectual property rights and provisions to increase minimum labour standards for workers in participating countries." Consequently, she says the deal is broadly "trade positive" – albeit on a smaller scale than the previous TPP agreement.

Beyond the CPTPP, other trade deals are also playing a role in helping trade to become freer across the region. HSBC's Sharma notes that last year the EU signed agreements with both Japan and Singapore, adding that "the EU-Japan deal is the world's largest bilateral trade agreement." Other recent developments include deals signed by Australia with Indonesia and Hong Kong. "It's encouraging to see all these positive trade developments coming out of Asia which will reduce the friction in trade," Sharma says.

Infrastructure

Meanwhile, China's Belt and Road Initiative (BRI) continues apace. The initiative, which is expected to cost a total of more than US$1trn, is intended to improve trade routes between

China and over 70 countries across Asia, Europe, the Middle East and North Africa. Its wide scope includes road, rail and maritime infrastructure, as well as power projects and manufacturing plants. Lee says that in principle, the initiative "should be a positive sum game for all players along the New Silk Road Economic Belt, which will connect China with Europe through Central and Western Asia, as well as the 21st Century Maritime Silk Road which connects China with Southeast Asian countries, Africa and Europe."

"Infrastructure investments underway, whether they're called One Belt or by another name, promise to create stronger links to underpin the trend toward greater intra-regional trade and cooperation," says Beck. "Asian Development Bank (ADB) is playing an important role in some of these projects, closing the infrastructure financing gap, bringing expertise, project management as well as environmental and social safeguards to many of these projects."

BofAML's Jameson points out that while BRI is designed to promote and facilitate trade – as well as being an important foreign policy tool – it is not a new concept. "It has been referred to as the 'new Silk Road', which reminds us that trading and creating connectivity between markets is centuries old," he comments. "It is also a two-way benefit – not just facilitating goods manufactured in China to reach new markets overseas, but with the increasing middle class in China, it aims to facilitate the flow of imports of consumer goods in the other direction, opening up this important new export market to overseas countries."

Consequently, Jameson says that while the initiative won't really resolve the issues around protectionism, "it will help China (in particular) diversify its trading hinterland by providing greater connectivity for trade and FDI. This will help diversify its trading partners, in the event any particular relationship becomes increasingly protectionist."

Nevertheless, the initiative is not without controversy. Lee notes that while the initiative was intended to boost productivity and infrastructure among BRI host countries, "concerns have grown about both corporate and political governance. The initiative is hampered by concerns about debt sustainability of host countries and producing low economic returns to China, even as it pays political dividends."

Five challenges – and how to manage them

Peter Jameson, head of Asia Pacific Trade and Supply Chain Finance, Global Transaction Services at Bank of America Merrill Lynch, recommends that treasurers in the region should take note of the following challenges, and prepare accordingly:

1. **Uncertainty.** Plan and prepare – the landscape is changing fast, so be flexible and ready to adapt.
2. **Managing risk.** Explore options for new sourcing/procurement in other markets, or new client bases in new markets. As well as developing the physical flows, consider how to ensure your bank can support the financial flows.
3. **Continued regulation.** Be aware of regulatory developments and challenges, from regulatory convergence in developed markets to local regulatory complexity in developing markets. This is not new, but the situation continues to evolve.
4. **Rising interest rates.** At least in USD, this is driving up attention on yield. As rates rise, pressure for efficiency and sourcing liquidity from inside the company's supply chain will be key.
5. **Environment, social and governance.** This is rising up the agenda for corporates and treasurers, while investors are increasingly focused on this topic. Moreover, with diversification into new emerging markets, the importance of understanding your supply chain, the ethics of your suppliers, and the reputational risk of getting it wrong, ESG is an increasingly important component of doing business.

Boosting trade

Beyond these developments, there are several key themes that may help to boost trade in the current climate. For one thing, Jameson says that digitisation is playing a role in driving globalisation, by providing faster access to new markets and clients. "It also drives down the costs of supply chains, including entry into new markets, hence helping companies diversify more easily, should they need to," he adds.

"We also see the rise of e-commerce in Asia as a driver of shipments in the region as more consumers take to shopping online," says J.P. Morgan's Lee, adding that Asia Pacific today accounts for about 50% of global ecommerce activity, "which is expected to be worth US$2trn in three years". She adds that cross-border purchases are estimated to dominate one in five transactions done via e-commerce worldwide by 2022, compared with one in seven today. "With more Asia-based merchants joining the online marketplace, this could mean a huge boon to intra-Asia trade," she says.

Risk mitigation is another key area when it comes to supporting trade. "From a banking point of view, we see companies leaning towards capabilities that help them manage risk in their supplier chains," says Jameson. He adds that these include traditional trade capabilities, as well as supply chain finance as a tool for providing liquidity to important supply chains and support smaller customers.

Also important is focusing on opportunities in new markets. Jameson says that while protectionist agendas are a western phenomenon, paradoxically economic growth potential lies in emerging economies. "Therefore, it's natural we should see a shift away from protectionist markets (which offer slower economic growth) into new markets that are perceived to be more open, and with more potential."

In order to maximise opportunities in the current market, Jameson says there are several steps that treasurers should be taking. He underlines the importance of knowing where the company's cash is and what the supply chain looks like. Treasurers should also know how they would move their assets, including capital, supply chains and customers, in light of uncertainty – "and be prepared to do so". Finally, he comments that none of these actions should be at the expense of efficiency, "as that drives margin – and hence the ability to compete."

Seeking resilience

From trade-related risks to regulatory change, the current market has many challenges from an investment point of view. How can treasurers in Asia structure their liquidity portfolios in such a way that they can maximise resiliency and achieve the flexibility needed to react to changing circumstances?

For corporate investors, achieving portfolio resilience is particularly important in the current market, given the challenges and risks currently shaping the region's investment landscape. But what does portfolio resilience really look like – and how can treasurers achieve it?

Challenges and risks in the current market

The current market certainly has plenty of challenges, risks and pressures for treasurers to consider. Venkat ES, Head of Asia Treasury Product, Global Transaction Services at Bank of America Merrill Lynch (BofAML), says that treasurers currently have to consider two key factors when looking to manage liquidity in Asia.

"For one thing, ever since the US dollar rate started rising, we have seen local central banks trying to reduce interest rates on local currencies to offset any major capital outflow and manage their own monetary position," he says, noting that treasurers in Asia face challenges in moving cash out of some countries with stricter regulatory frameworks. Nevertheless, many treasurers are seeking to take advantage of rising interest rates in more liberal markets, while some are looking to repatriate cash in order to take advantage of tax reforms in the US.

The second factor Venkat cites is the constant search for yield optimisation – a particular challenge when treasurers need to hold negative yielding currencies, like Japanese yen, in order to meet day-to-day operational and liquidity management needs. "Treasurers are constantly asking banks if there are any structures or strategies that will help them work on this challenge," he says.

Uncertainty abounds

At the same time, treasurers are also keeping tabs on developing trade-related risks. In December, for example, China's exports fell by 4.4% compared to the previous year – the biggest drop in two years. Meanwhile, China's trade surplus with the US widened to US$323.32bn, stoking fears of further developments in the ongoing trade war.

These issues have a knock-on effect for other countries in the region. In March, Taiwan's exports contracted for the fifth consecutive month alongside weakening demand from China. Singapore and Hong Kong likewise stand to lose out as a result as the US-China trade war continues to affect exports.

Aidan Shevlin, Head of Asia Pacific Liquidity Fund Management at J.P. Morgan Asset Management, points out that concern about economic, trading and geopolitical uncertainty are "feeding into investor and business confidence – that's where we see people worried about portfolio resiliency." Alongside these factors, other regional considerations include debt levels in China, as well as FX volatility and interest rate volatility.

So far this year, Shevlin notes that Chinese markets have been broadly stable, to an extent, "because the government has been proactive in trying to stabilise them." He says that the current focus on economic stability has included fiscal measures such as tax cuts and increased spending on infrastructure investment, as well as interest rate cuts by the PBOC. These measures may have reduced the likelihood that portfolio resiliency will be tested – but nevertheless, Shevlin notes that achieving resiliency is still an important goal for companies in the region.

The need for resilience

"In my mind, resilience is incredibly important," says Anton Abraham, Head of International Advisory, Global Transaction Services at Bank of America Merrill Lynch. He emphasises that treasurers should – and do – focus closely on their ability to respond to changing circumstances, from market turbulence to M&A opportunities. "The question is, how do you structure your liquidity portfolio in such a way that you have the flexibility to respond to these events?"

As such, he argues that effective cash flow forecasting is a prerequisite for portfolio resilience. "That might mean doing some stress testing, running models and understanding seasonal variances," he says. "Once the organisation's future liquidity requirements are well understood, it is much easier for the treasurer to diversify instruments across different investment classes, risks and levels of liquidity."

What does resilience look like in practice? At its most basic level, corporates need security and access to liquidity – and to achieve this, investors should diversify and invest in a range of assets. "So even if you are dealing in the highest quality assets, you shouldn't put all your eggs in one basket," explains Shevlin. "You shouldn't just buy all of one type of bond, in case of a specific event relating to that bond, or a specific type of volatility within the market which makes it very difficult to liquidate that bond."

Actions that may help to achieve a resilient portfolio include the following:

- **Diversifying investments.** By diversifying across issuers and instrument types, companies can minimise the likelihood of a disruption relating to a specific issuer or asset class. Companies may also seek to diversify across the maturity spectrum in order to achieve a range of different maturities.
- **Due diligence.** When it comes to achieving resilience, Shevlin emphasises the importance of carrying out sufficient due diligence on the investments a company is investing into. "For direct investments, do you understand the counterparty risks you are facing on these? If you are buying a fund, are you comfortable with both the fund itself and with the fund manager? Have they got the experience and ability you are looking for – and are they prepared to explain their investment philosophy and underlying investments? Asking these questions beforehand, and being satisfied with the answers, is a very important step in making sure your investments are resilient during times of stress."
- **Being prepared for regulatory change.** Also key to achieving resilience is the need to protect the company from regulatory changes, particularly in large markets like China and India. Again, stress testing and scenario planning can be a valuable tool in managing these risks. "Several years back, regulations changed and companies weren't able to move liquidity out of China cross-border to include in regional or global cash pools," recalls Abraham. "Treasurers who had planned for this scenario – and modelled what the impact might be for their investments or general banking facilities – were in a better position."
- **Segmenting cash.** Achieving portfolio resilience isn't just a question of making suitable investment choices – treasurers also need to make sure mechanisms are in place to identify which funds are available for investment, and at which tenor. Venkat notes that treasurers typically distinguish between their operating surplus and investment surplus. The former includes cash needed for day-to-day liquidity needs, as well as cash earmarked for obligations such as tax payments or loan repayments that can be invested at a longer tenor. For the investment surplus, meanwhile, Venkat says that where feasible, companies typically pull funds into a tax-friendly location with better yield opportunities.

Investment strategies and instruments

Of course, there is no one-size-fits-all when it comes to choosing an investment strategy. "The strategy will absolutely depend on the nature of the organisation and the industry they operate in," says BofAML's Abraham. "For example, a commodity trading company will have a very different strategy versus a car manufacturer." He also points out that different companies' view of risk can vary considerably – and that companies in the same industry may have very different risk appetites.

Risk appetite is a major factor in determining individual companies' investment strategies. Adhitya Wisesa, Director, Head of Institutional Liquidity Management APAC Global Coverage Group of DWS, says that investors who are concerned about rising risk in financial markets may consider decreasing their allocation to higher-risk assets such as stocks, and increasing their allocation to lower-risk assets such as cash.

"Money market mutual funds represent a popular cash option for investors, particularly corporates," Wisesa adds. "Such funds typically provide higher yields than bank deposits by investing in highly liquid short-term debt securities that have minimal credit risk." He comments that in today's interest rate environment, money market funds have been becoming a more attractive investment option relative to current account positions that earn little to no interest.

In practice, most treasuries stick with bank deposits, money market funds and, in some cases, government securities, adds David Blair, an independent treasury consultant based in Singapore. "Anything else is rare outside of large cash-rich tech companies, which generally outsource such investment anyway," he notes.

Seeking yield

J.P. Morgan Asset Management's Shevlin says that while he hasn't seen a significant change in terms of the instruments used by companies, higher yields in the US are helping to "drag yields around the world higher" in markets including Hong Kong and Singapore – and this is giving companies more opportunities to invest cash effectively.

Where time deposits are concerned, Shevlin points out that banks are trying to come up with new structures to help adjust for Basel III. "Banks much prefer to have deposits which are longer term in nature, so if investors can dissect their money into short-term and long-term buckets, they can take advantage of the longer-term instruments that banks are now offering," he says.

With greater opportunities for yield, companies have more incentive to consider placing cash that is not immediately needed further out the maturity curve – thereby giving up liquidity, and potentially taking more credit risk, in return for a higher return. Consequently, Shevlin says that treasurers should not just focus on short-term time deposits and money market funds, "but invest across the spectrum in terms of different levels of credit risk, different maturities and different levels of liquidity."

Investment policy

A robust investment policy is a crucial tool when it comes to achieving portfolio resiliency, but not all companies have a policy in place. Shevlin says that an investment policy should be broad and wide enough in scope to cover a lot of eventualities. "If it's too narrow in focus and too detailed, it may curtail your ability to do things which could improve your flexibility," he comments. "It's also important to make sure the policy is suitable for the markets you are operating in."

Companies based in the US or Europe may have a policy which is closely tuned to conditions in their home market – but when those companies move into Asian markets, they may find the policy is no longer a good fit for the market composition and the instruments available. For example, the policy may stipulate that the company can only invest in a money market fund that is over a certain size in order to avoid representing too great a percentage of the fund's total investments. While this may be a prudent decision in a market such as the US, younger markets may have a limited number of funds available that are large enough to qualify. Likewise, stipulating that investments must be AAA-rated may be an effective strategy in some markets, but impractical in others.

Investment policies therefore need to be a good fit for the market the company is operating in – and they also need to be adjusted as market conditions evolve. Developments such as regulatory change and rising interest rates may prompt a review to check whether the company's investment policy is still suitable – in Europe and the US, for example, recent money market fund reform would mean that an investment policy stipulating constant net asset value funds would no longer be fit for purpose.

Changes to the company may also prompt an investment policy review. BofAML's Abraham says that while companies do not typically review their policies more often than every 18-24 months, events such as M&A activity, a significant change in the organisation or the appointment of a new CFO could prompt a review. "In such cases companies may take the opportunity to make sure the policy is still aligned with the business strategy," he says.

In order to avoid frequent updates, it may be advantageous to build a more flexible policy which is able to accommodate certain developments. "Rather than focusing on whether a fund has to be stable net asset value or variable net asset value, you should be thinking more holistically about what the risk level is, how much risk tolerance you want in the fund, how much liquidity you are looking for and how much security you need," says Shevlin. "These are the things you would want to think about, rather than specifying numbers or allocations in a way that makes the policy less flexible over time."

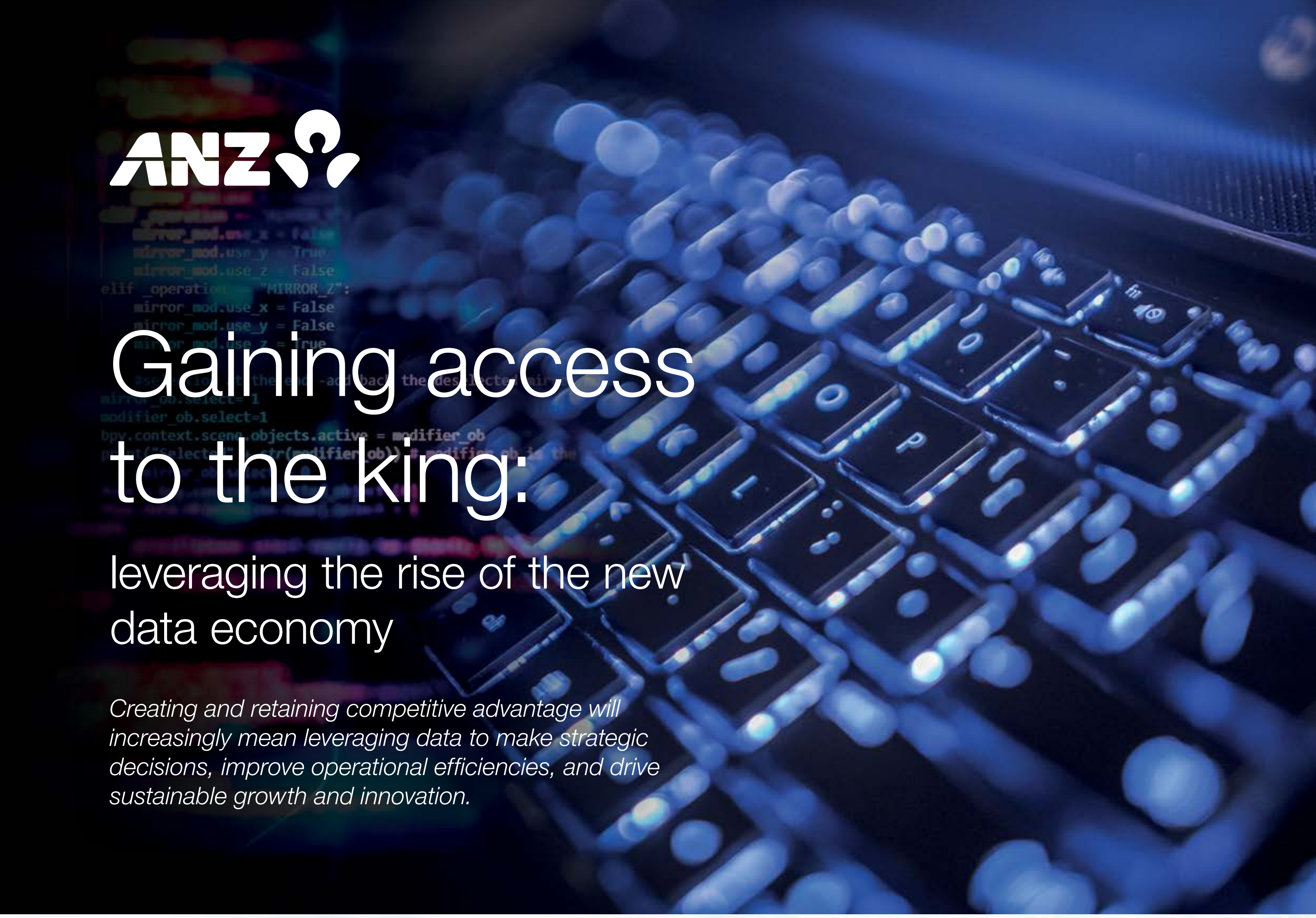
Money market funds in China

China's money market fund industry may be relatively young – but the market has grown rapidly in the last 15 years. It also has the world's largest money market fund in its Yu'E Bao platform, which is run by Alibaba Group's Ant Financial Services Group. While Yu'E Bao's assets under management had reached over RMB1.7trn by the end of March 2018, the size of the fund had shrunk to RMB1.13trn by the end of the year amid pressure from Chinese regulators and concerns about liquidity risk and systemic instability. That said, the fund attracted 114 million new investors in 2018 – and in March, the Wall Street Journal reported in March that over a third of China's population was invested in the fund.

China may not have gone as far as replicating the types of money market fund reforms introduced in the US in 2016, and in Europe last year. Nevertheless, the China Securities Regulatory Commission (CSRC) has introduced new rules to keep the burgeoning money market fund industry in check. These included limiting instant redemptions from a single money market fund to RMB10,000 per day.

Much of the growth of China's money market fund industry has been driven by retail investors – but as Shevlin notes, retail and institutional investors may differ somewhat in terms of their approach and their priorities. "Institutional investors' tolerance of risk is different than retail investors," he explains. "Retail investors typically focus on looking for the highest yield, whereas an institutional investor's key priorities are liquidity and security. The priority for them is to have a safe product."

Shevlin predicts that regulatory reform will lead to greater interest from institutional investors in the next couple of years. "China's regulators are quite forward looking and have tightened the regulations a number of times over the last few years," he says. "We have seen Chinese regulations for money market funds move closer to Western standards over the last few years – but there's still a gap, and in that gap there's an opportunity for AAA-rated funds which have tighter guidelines and are more in line with international standards."



ANZ

Gaining access to the king:

leveraging the rise of the new data economy

Creating and retaining competitive advantage will increasingly mean leveraging data to make strategic decisions, improve operational efficiencies, and drive sustainable growth and innovation.

With every swipe, click, like, search, stream and purchase, data is being created to the tune of 2.5 quintillion bytes every day, according to Domo, the cloud-based operating system provider. And by 2020 it reckons an astonishing 1.7 MB of data will be created every second for every person on earth.

No surprise then that leveraging data has become a major objective for both companies and governments and given rise to the 'data economy'. Consultant McKinsey estimates that better access to, in particular, open data – public information and shared data from private sources that everyone can access and use – can help unlock US$3-5trn in global economic value across seven sectors alone: education, transportation; consumer products; electricity; oil and gas; health care and consumer finance.

Flows of data now play a much bigger role in tying the global economy together, says McKinsey, pointing out that global online traffic across borders grew 18-fold between 2005 and 2012, and could increase eightfold more by 2025. It believes digital technologies and data flows are increasingly "becoming the connective tissue of the global economy".

More specifically, the European Commission reckons that in the EU alone this data-driven economy had a value of almost €300bn in 2016 and that it will more than double by 2020, reaching €749bn.

Among technologies that will support the rise of the data economy, artificial intelligence is expected to play an especially important central role. McKinsey foresees at least one type of artificial intelligence technology being utilised by 70% of businesses by 2030. That increased adoption of AI technology would be worth around US$13 trn to the global economy. AI could, furthermore, expand employment by around 5% by 2030 as well as improve productivity by about 10%.

While governments are increasingly leveraging open data for improving the quality of life of their citizens, it is corporates that have to date benefitted most from the data revolution, most spectacularly a small band of 'digital first' companies with a combined value of US$4trn: Amazon, Apple, Facebook, Google and Microsoft.

As the data revolution gathers momentum, 'physical first' companies – the overwhelming majority of corporates and financials globally – will need to learn from the success of the digital firsts as they too look to leverage data and monetise it. The challenges ahead for them are varied and many: exploiting new technologies like AI, Internet of Things (IoT) and 5G; dealing with regulations such as PSD2/Open Banking and GDPR, developing new business models; addressing the needs of millennials and native digital generations that follow as customers; and ensuring data security, to name but a few.

However, as Nigel Dobson, Banking Services Lead and Leigh Mahoney, Head of Wholesale Digital, Institutional, ANZ point out, while the challenges for organisations are many, there will also be many opportunities for them that will emerge as the data economy evolves.

> It's a new frontier, and those who are accountable for delivering the insights have a huge responsibility to get it right, reassuring all stakeholders that the boundaries within which they are operating are appropriate.
>
> Nigel Dobson, Banking Services Lead, ANZ

Creating and retaining competitive advantage will increasingly mean leveraging data to make strategic decisions, improve operational efficiencies, and drive sustainable growth and innovation.

In commercial terms, few could dismiss the importance of data; and fewer still could deny that competitive advantage awaits organisations able to quickly access, integrate, refine, analyse and share data.

"It's becoming increasingly evident that the value of data, and data analytics, as a support to business is a tremendous opportunity," says Dobson. However, he notes that for every action, there is an equal and opposite reaction.

In this instance, unbounded data analytics is met by regulatory forces acting to protect citizens – particularly measures such as the EU's GDPR, Australia's Consumer Data Right (CDR) and Singapore's Personal Data Protection Act (PDPA).

Value versus risk

These Acts are empowered to heavily penalise organisations that do not compliantly manage data storage. In GDPR's case this could be up to €10m, or 2% annual global turnover – whichever is higher. For CDR, a fine of up to AU$2.1m for businesses is possible. And for PDPA, it could mean a fine not exceeding S$100,000. They could add up to a significant disincentive for firms seeking to engage with the new data economy.

"The narrative is reaching new highs in terms of the commercial value of data and analytics, but the consequences of getting it wrong have similarly increased," notes Dobson. This, he believes, has led some organisations to adopt a more conservative approach to the handling of their data assets.

It is also unhelpful for many firms that siloed data has created for them enterprise-wide divisions. Finding a single customer-reference across a number of products can prove difficult in these circumstances, says Dobson. The customer annoyance this typically presents – explaining a case repeatedly or receiving the same information multiple times – is not uncommon.

These data siloes have a negative internal impact too, he notes. In the banking sector, for example, where data management is characterised by some of the highest required levels of privacy and security, the "self-erected barriers" of product silos and customer segmentations can lead to sub-optimal performance, certainly from the perspective of additional timely customer insights.

For many banks though, the notion of providing value by using data analytics to help customers gain a deeper understanding of their own and their competitors' business activities, is a key differentiating factor. Indeed, for all regulated institutions, getting accurate data into the hands of the right customers in a manner that is timely, secure and compliant is vital.

The imperative for banks and corporate clients to find quick answers to some of their most pressing business concerns is leading to the deployment, or at least the consideration of real-time technologies, comments Mahoney. He believes this state of affairs is heralding an urgent overhaul of risk management processes.

The ability to share the vast computing power offered by providers such as Google, Amazon and Microsoft is a major benefit, but at the same time, warns Mahoney, organisations taking this huge step forward need to find a way of balancing speed of data processing with appropriate controls around security and compliance.

"Controls must be established around who has access to data, when and for how long, because across many organisations increasing processing speeds and the interconnectedness of data pools now demands it," he explains.

New responsibilities

The rise of the new data economy is made yet more complex by a simultaneous shift of focus from data about 'things' – metrics describing the movement of goods or money, for example – to data about people, notes Dobson. "As a bank, we've always had data about people, but the idea that we would do more with it other than store it is relatively new."

> Whether it's for autonomous vehicles on the roads, automated medical procedures or a host of other possibilities, improvements in data transmission could open up industries where precision-machinery communicates in ways that, today, we can only dream of.
>
> Leigh Mahoney, Head of Wholesale Digital, Institutional, ANZ

Where metrics on liquidity management or account consolidation reporting focus on aiding the banks and their clients' own needs, there is now a great interest in quantifying human activities, offering new levels of insight and understanding.

As the focal point shifts, access to cloud-based data solutions and almost unlimited computing power is delivering some highly articulate results. But concerns are rising around privacy and accuracy of the data held.

Indeed, notes Dobson, there is increasing general discomfort around organisations forming and acting upon deeper data analytics-derived insights into individuals. The opportunities for organisations to push the boundaries of what is acceptable here are a constant reminder that "technology leads and regulation lags".

Says Dobson: "It's a new frontier, and those who are accountable for delivering the insights have a huge responsibility to get it right, reassuring all stakeholders that the boundaries within which they are operating are appropriate."

Levelling the field

Of course, availability of technology is not always followed by its adoption. In this respect, the utility that corporates can gain from data, either created in-house or imported from third parties, largely correlates with an organisation's technological capacity and willingness to invest in leveraging data. The current degree of variance in technological uptake is noteworthy.

The Australian mineral and energy resources sector is particularly well-evolved in terms of technology and use of data, notes Dobson. This follows from the intensive automation programmes seen across the supply chains of major players, from extraction through to delivery. With drones and GPS-assisted self-driving trucks in remote sites, and the heavy adoption of the IoT to monitor progress, commodities could easily be considered a leader amongst all sectors in Australia. With the country's iron ore exports alone accounting for 58% of a global US$66.6bn market, it's not hard to see how optimising efficiencies can make a huge difference.

Many other sectors are just beginning their journey towards optimising data-usage. These players are not necessarily laggards and, for Dobson, "there is a correlation between sectoral appetite for data analytics, and the sensitivity of the data held by the sector".

The highly asymmetric risk faced by companies holding sensitive data – especially given the new power of the regulators – has the effect of curtailing their desire to move too far ahead of the rule-book, he explains. "These businesses are as interested in being trailblazers as any other, but the consequences of non-compliance with data regulations can be severe." As such, most ensure their investments in the area of leveraging personal data move strictly in alignment with the industry and the law, but as explained earlier, "technology leads and regulation lags" and so it is perhaps inevitable that they appear to be slow on the uptake.

Greater understanding

Where freely given personal consumer data (as might be harvested by supermarket loyalty cards) is leveraged, Mahoney notes that it can drive revealing discussions around demographics, customer behaviours and loyalty. With more accurate insight than simple 'gut feeling' or customer anecdotal evidence, the effect can be to steer better decisions on investments in product development or business expansion, for example.

Exploitation of private personal data, such as medical or employment records, crosses the regulatory boundary but businesses in this space can still use generic 'anonymised' data to gain a deeper understanding of customers.

That said, as people become more aware of the power and value of data, there is an even greater effort towards securing their own privacy. Some of the recent highly publicised data breaches and the exposure of behaviours on certain social media platforms have sounded the alarm bell for many individuals in this respect. Where once they gave their data freely, a more guarded attitude prevails; people know and understand the rights afforded them by the regulators, and why those rights exist.

The development of open banking is also driving further awareness of the value of data, says Mahoney. "With the discussion comes a greater understanding of the consent management frameworks supporting the roll-out of APIs." Increased adoption of IoT is also shifting market dynamics. This is a technology capable of generating vast amounts of highly specific data with which businesses can potentially target even the most niche areas of consumer life. Once again, as its benefits are explained, Mahoney sees it raising levels of awareness around how data is being used.

Commensurate with this greater understanding are the policy-driven initiatives designed to return rights to the individual. This is changing the dynamics of the relationship between data subject and data holder, but it is also helping to construct a solid framework of understanding for the digital age, enabling the next wave of innovation to push ahead – and businesses to leverage the new data economy in safety.

Riding the next wave

With 5G networks rolling out across the world, the capacity of data transmission is mounting. This, says Dobson, is empowering all stakeholders and giving rise to new sources of data. In the future data economy, he suggests machine-to-machine communication could be amongst the most powerful.

"Whether it's for autonomous vehicles on the roads, automated medical procedures or a host of other possibilities, improvements in data transmission could open up industries where precision-machinery communicates in ways that, today, we can only dream of," says Mahoney.

The nature of machine-to-machine data transmission may have a huge impact on the nature of commercial models and economies in general. As cutting edge solutions become commonplace, it will impact core commercial activities such as payments and collections. With real-time data, the rise of fractional or micro-payments begins to emerge.

Treasury tends to think in terms of end-of-day batch payments. But where the transmission method increases in velocity, so too does the data flow. This, suggests Dobson, will lead to a "profound change to the way commercial entities operate".

Indeed, instant automated micro-payments could be made to suppliers based on devices sharing job completion data, potentially several times a day as a project progresses. With confirming transactions taking place at near-instantaneous speed, the velocity of commerce increases in parallel. Batch processing may be fine for now but the positive implications of real-time data exchanges for treasurers are significant in terms of liquidity and working capital management.

Getting ready

With the increasing speed of networks and data transmission, Mahoney believes that the power of data – and thus its value and price – becomes "inextricably linked to the solution providers capable of transforming data to solve real business challenges".

However, rather than acquiring data assets en masse, or implementing a broad-sweep approach to the new data economy, he advises corporates to adopt a focused 'use-case' approach. Building a use-case first requires data to be extracted from the right sources – potentially challenging in a legacy environment. The data haul must then be transformed into value-adding information; appropriate platforms and in-house skills must be available to achieve this. The final high-level consideration is data distribution. This means getting the insight to the right place, at the right time, in the right format and in a secure and governed way.

For use-cases to succeed, and for businesses to engage successfully with the new data economy, it becomes incumbent upon each function to identify and understand their particular challenges or goals before deciding on the scale of investment. At this point, it is advantageous to work closely with external partners, particularly relationship banks who can offer an appropriate wide-angled view of the business itself and the environment in which it operates.

As the data economy gathers momentum, competitive advantage will most likely be found by businesses capable of leveraging internal and external data. Indeed, when it comes to making effective strategic decisions, driving operational efficiencies, and ensuring sustainable growth and innovation, access to the new king would appear to be vital.

Nigel Dobson
Banking Services Lead
ANZ

Leigh Mahoney
Head of Wholesale Digital, Institutional
ANZ

From BRICs to TICKs

Catchy acronyms have long been used to indicate groupings of emerging markets. TICKs – incorporating Taiwan, India, China and South Korea – is one of the more recent. But what do the TICKs economies really have in common? And which other markets in the region may offer growth potential in the coming years?

The practice of using pithy acronyms to group together emerging economies with shared characteristics goes back many years. The term BRIC was coined in 2001 by Jim O'Neill, former Chief Economist of Goldman Sachs, and initially encompassed Brazil, Russia, India and China. While geographically and culturally disparate, the four countries included under the BRICs umbrella were deemed to have something important in common: their potential to grow rapidly and play an increasingly important role in the global economy in the coming years.

As well as indicating these nations' common ground from an economics point of view, the acronym was enthusiastically adopted by fund managers – and it also led to a political alignment, with the first formal BRICs summit held in June 2009. The following year, the grouping was expanded to include South Africa, thereby turning BRICs into BRICS, although O'Neill himself argued that South Africa's economy wasn't large enough to warrant the inclusion. Nevertheless, cooperation between the BRICS continued and in 2014, the five states created the New Development Bank (formerly the BRICS Development Bank).

In the meantime, numerous other acronyms have been coined to describe other groupings of emerging markets, including the CIVETs (Colombia, Indonesia, Vietnam, Egypt and Turkey), MIST (Mexico, Indonesia, South Korea and Turkey) and MINT (Mexico, Indonesia, Nigeria and Turkey).

The appetite for further groupings continues, and in January 2016 the Financial Times published an article announcing 'The Brics are dead. Long live the Ticks'. Incorporating Taiwan, India, China and South Africa, the TICKs grouping sets aside Brazil and Russia – both heavily reliant on commodity exports – in favour of technology-focused Taiwan and South Korea.

Capturing growth

While the acronym may not have captured the level of recognition achieved by BRICS, it nevertheless continues to fulfil a role in highlighting the relevant economies' potential.

"Over the past decade, the acronym BRICS has received a lot of attention with economies like Brazil, Russia, India, China and South Africa leading the growth in emerging markets," says Varoon Mandhana, Senior Advisor, APAC Solutions, Treasury Services, J.P. Morgan. "With plummeting commodity prices and a slowdown in Brazil and Russia, TICKs economies came to the focus of many to capture the growth of high tech, entrepreneurial industries in emerging markets."

Mandhana says that while BRICS and TICKs are just industry acronyms, "to some extent they capture business and investors' sentiment towards underlying economic growth outlook of these economies." He adds that in addition to Asia's giants – China and India – "we also see significant

Taiwan

Population
23,545,963 (July 2018 est.)

Languages
Mandarin Chinese (official), Taiwanese (Min Nan), Hakka dialects

41.3 YEARS
Median age

GDP
US$572.6bn (2017 est.)

GDP growth
2.9% (2017 est.)

Inflation
1.1% (2017 est.)

Exports
US$349.8bn (2017 est.)

Export partners
China, Hong Kong, United States, European Union

Imports
US$269bn (2017 est.)

Import partners
China, Japan, United States, South Korea (2017)

Source: CIA, Statista.com, Santander Trade Portal opportunities in PIMs (Philippines, Indonesia, Malaysia) where the demographics are getting better and potential growth is improving."

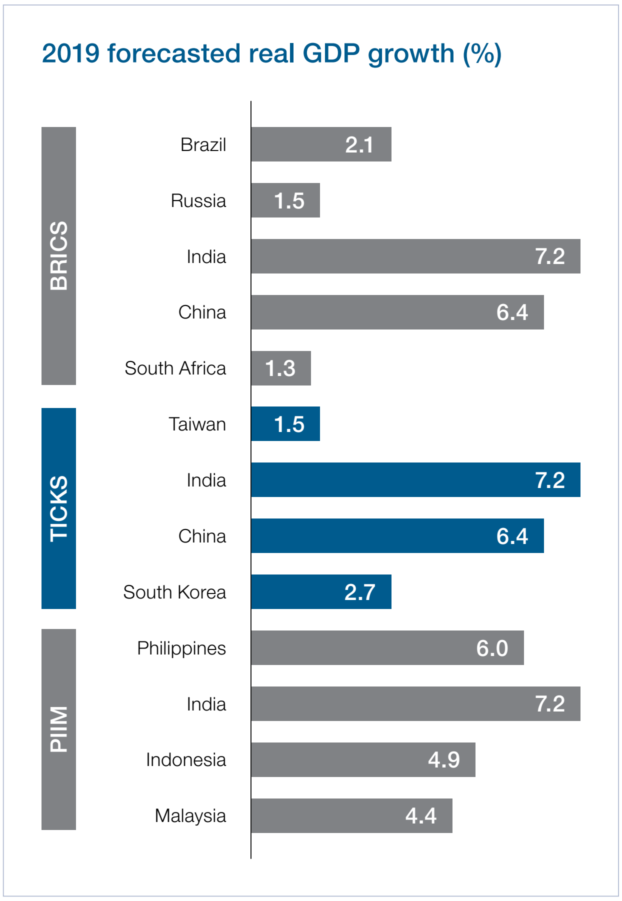
Aziz Parvez, head of Asia Pacific Corporate Sales, Global Transaction Services, Bank of America Merrill Lynch, explains that when the TICKs acronym was coined, the economies included "reflected the changes in global markets and in global demand shifting from trade in raw materials/ commodities and energies to services, especially high technology ones." He adds, "These changes are still relevant and we continue to see global investment channelling into high-tech industries and TICKs economies."

According to Parvez, other macro-economic indicators also point to the relevance of these markets. "With a young population increasingly participating in e-commerce and online shopping, these economies are well placed to cater to this category of consumers," he comments.

Comparing and contrasting the ticks

Some have complained that the groupings invented in recent years are little more than a sales gimmick, and that the countries brought together are often at significantly different stages of development. Indeed, despite enthusiasm for the various groupings, some of the resulting acronym-focused funds have had a limited shelf life: HSBC Global Asset Management closed its CIVETS fund in 2013, and Goldman closed its BRIC fund in 2015. So do the TICKs really have much in common with each other, beyond their inclusion in an appealing acronym?

On one level, the four economies are fairly diverse: the populations of China and India dwarf those of their smaller cousins, for example. But Frederic Neumann, Co-head of Asian Economics Research at HSBC, argues that Taiwan, India, China and South Korea "share as many features as divides them". For one thing, he points out that both Taiwan and Korea are highly export dependent, with electronics playing a particularly prominent role. "That means their economies are exposed to the vagaries of the global trade and tech cycles," he says.



Source: J.P. Morgan Global Data Watch

Technology

Where technology is concerned, Parvez explains that South Korea and Taiwan "have been significant players in the global hardware production space in the information technology (IT) industry." He notes that while South Korea specialises in handsets and liquid crystal display (LCD) panels, Taiwan specialises in notebook computers, motherboards, IC foundry and LCDs.

India

Population

1,296,834,042 (July 2018 est.)

Languages

Assamese, Bengali, Bodo, Dogri, Gujarati, Hindi, Kannada, Kashmiri, Konkani, Maithili, Malayalam, Manipuri, Nepali, Odia, Punjabi, Sanskrit, Santali, Sindhi, Tamil, Telugu, Urdu as well as English.

28.1 YEARS **Median age**

GDP

US$2.6trn (2017 est.)

GDP growth

6.7% (2017 est.)

Inflation

3.6% (2017 est.)

Exports

US$304.1bn (2017 est.)

Export partners

US 15.6%, UAE 10.2%, Hong Kong 4.9%, China 4.3% (2017)

Imports

US$452.2bn (2017 est.)

Import partners

China 16.3%, US 5.5%, UAE 5.2%, Saudi Arabia 4.8%, Switzerland 4.7% (2017)

Source: CIA

Parvez adds that China – thanks in part to Taiwanese investment – has surpassed Taiwan in hardware production to become the world's second-largest hardware exporter. He also points out that both China and India have substantial software sectors, with India controlling the largest share of offshore software production worldwide.

Demand

Neumann notes that India and China are both "continental-sized" economies, as well as being relatively closed. "Here, domestic demand, whether consumption or investment, is the primary growth driver," he says. "Both are also huge users of imported commodities, with their ups and downs having major consequences for global raw material prices. Taiwan and Korea are also highly exposed to swings in Chinese demand, with a large share of their exports heading to the Mainland." Meanwhile, he says that India is not very exposed to China's economy, "importing more from its large neighbour than exporting to it."

While currently at divergent stages, Neumann says all four economies are important in their own right, with unique development stories. "Korea and Taiwan are some of the most export dependent economies in the world, sharing this feature with places like Singapore, Hong Kong, Malaysia, Thailand, and Vietnam," he says. "India, Indonesia, and the Philippines, by contrast are currently more domestically driven."

Other markets to watch

Emerging market acronyms are something of a moving target – so while there may still be life in the idea of TICKs economies, it is also worth asking which other markets might be included in future groupings.

Bank of America Merrill Lynch's Parvez says that other economies that could belong in this category are Thailand and the Philippines. "Thailand is actively developing high-tech industries and the profile of Thailand economy meets the priorities of the modern global economy," he says. "While the Philippines is in early stages of its evolution, they have the advantage of human capital. This is also an economy that is tremendous potential for growth."

Meanwhile, Steven Beck, Head of Trade and Supply Chain Finance at Asian Development Bank (ADB), argues that Vietnam may deserve a place in the latest acronym. "Our trade finance business focuses on the more challenging markets where the private sector has most trouble operating," he comments. "Vietnam is one of our strongest markets, along with Pakistan, Bangladesh and Sri Lanka. But Vietnam is growing and reforming at such a pace that the private sector requires fewer of ADB's AAA-rated guarantees and funding to conduct business there."

Increasingly, Beck says, the private sector is comfortable establishing clean lines for Vietnam's country and counterparty risk, meaning that fewer guarantees are required from ADB as the country graduates. "This is a good thing," he comments. "We should sort out how to add 'V' into 'TICK', because 'V' could become the next 'K' within the next generation or two."

Opportunities in emerging markets

With TICKs economies continuing to drive the region's growth, Parvez says that a large number of global corporates are actively looking at entering these markets and setting up manufacturing units to cater to domestic demands and exports opportunities. "These countries have become key suppliers to the global market," he says. "They not only provide the intellect and relatively cheaper labour, but also a large consumer base for the end products."

With Asia being the fastest growing region in the world – and accounting for over 60% of global growth – it's no surprise that MNCs are investing in APAC emerging markets as a longer-term strategy, argues Mandhana. He highlights some of the opportunities that corporates are focusing on across the region:

- China and India continue to be the key markets in which MNCs are investing, where real GDP growth is forecasted to grow at 6.4% and 7.2% respectively in 2019, compared to developed markets at 1.7% (source: J.P. Morgan Global Data Watch, 5th April 2019).
- Malaysia and Vietnam are set to benefit from the US-China trade debate, particularly in low end manufacturing

China

Population

1,384,688,986 (July 2018 est.)

Languages

Standard Chinese or Mandarin, Yue (Cantonese), Wu (Shanghainese), Minbei (Fuzhou), Minnan (Hokkien-Taiwanese), Xiang, Gan, Hakka dialects, minority languages.

37.7 YEARS

Median age

GDP

US$12.01trn (2017 est.)

GDP growth

6.9% (2017 est.)

Inflation

1.6% (2017 est.)

Exports

US$2.216trn (2017 est.)

Export partners

US 19%, Hong Kong 12.4%, Japan 6%, South Korea 4.5% (2017)

Imports

US$1.74trn (2017 est.)

Import partners

South Korea 9.7%, Japan 9.1%, US 8.5%, Germany 5.3%, Australia 5.1% (2017)

Source: CIA

of ICT (information and communications technology) products, such as intermediate components and manufacturing of consumer goods like mobile phones and laptops (source: EIU). Malaysia and also the Philippines continue to be attractive locations for MNCs looking to set up shared services with increased investments going into both captives SSCs and BPOs (source: SSON).

- Indonesia, the largest economy in Southeast Asia, with a large and growing digital population, is providing fertile ground for e-commerce businesses growth.
- Indonesia's internet economy, the largest and fastest growing in the region, reached US$27bn in 2018 and is poised to grow by US$100bn by 2025 (source: Bloomberg)

Mandhana also notes that the evolution of payments infrastructure across emerging markets, and the rise of real-time payments, "will further help to increase B2C flows by improving the customer payment experience."

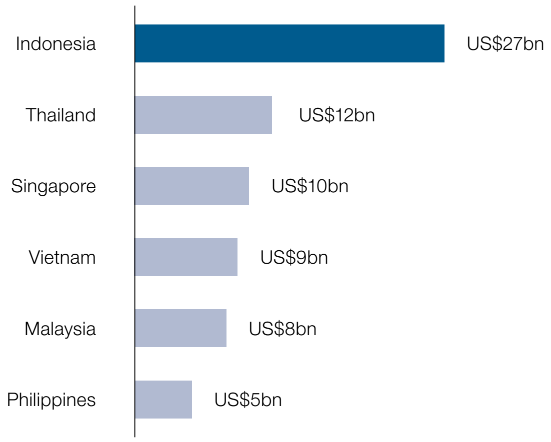
Overcoming challenges in emerging markets

While the opportunities may be considerable, Asia's emerging markets also present significant challenges from a treasury point of view. As Mandhana points out, these include the combination of multiple currencies, currency controls, complicated tax regimes and varied legal frameworks. "Another significant issue often faced by treasurers operating in APAC is how often regulatory changes can be introduced with little advance notice, or without any formal process for widespread notification," says Mandhana, citing the example of India's demonetisation, which "occurred overnight".

Parvez, likewise, emphasises the challenges presented by these economies' regulatory controls and currency restrictions, noting that corporates need to understand the relevant regulations and remain abreast with continuous changes. "They would also need to understand that the funds could get trapped and accordingly look at the right financing structure to support their offices in these markets," he says.

Southeast Asia's internet economy

Indonesia, the largest in the region, reached US$27bn in 2018



Source: Google, Temasek report

At the same time, Mandhana notes that the region's geopolitical landscape continues to evolve, with India, South Korea, Indonesia and Thailand all set to hold elections this year – and, of course, the ongoing trade disputes between the US and China.

In this dynamic and complex regulatory and political landscape, treasurers need to keep their processes agile in order to be able to adapt to changes at short notice. "Establishing a treasury centre, or having a person based in the region in charge of treasury and tax that understands local nuances – alongside good two-way communication with head office – makes the region's complexity more manageable," says Mandhana. "Maintaining close relationships with regulators and banking partners is also imperative in order to gain insights into new regulatory changes as soon as they happen and be able to seek clarification on how the regulation applies in practice."

South Korea

Population
51,418,097 (July 2018 est.)

Languages
Korean, English

42.3 YEARS
Median age

GDP
US$1.54trn (2017 est.)

GDP growth
3.1% (2017 est.)

Inflation
1.9% (2017 est.)

Exports
US$577.4bn (2017 est.)

Export partners
China 25.1%, US 12.2%, Vietnam 8.2%, Hong Kong 6.9%, Japan 4.7% (2017)

Imports
US$457.5bn (2017 est.)

Import partners
China 20.5%, Japan 11.5%, US 10.5%, Germany 4.2%, Saudi Arabia 4.1% (2017)

Source: CIA

Finding space to reflect and refresh

Jonas Falk
Managing Director

SKF

Jonas Falk, Managing Director at SKF Treasury Centre Asia & Pacific, looks back on an eventful career, considers the challenges and opportunities ahead for the treasury profession and explains why he believes it is so important to never allow one's innate curiosity to fade with time.

SKF is a leading global supplier of bearings, seals, mechatronics, lubrication systems, and services. It is represented in more than 130 countries and has around 17,000 distributor locations worldwide. Annual sales in 2018 were SEK 85,713m and it employs 44,400 globally.

As the genial, thoughtful managing director of SKF's APAC treasury in Singapore, Jonas Falk is evidently as passionate about his leisure interests as he is serious in helping to ensure the responsible and effective stewardship of the Swedish ball bearing manufacturing giant's finances.

In choosing to commit time in pursuing his interests, philosophy and photography in particular, Falk is adhering to advice he would readily offer to others, young and old:

"Always try to stay curious and learn new things outside your profession – it's one way of getting a perspective on things. It's so easy nowadays to do so as well, there are many wonderful things available online that can provide support for learning, and much of it is free."

On the philosophy front, he has been very taken by Justice, a free, online introductory course in moral and political philosophy offered by Harvard University. Recently he began exploring Philosophize This!, an entertaining podcast series focused on the works of the world's greatest philosophers and hosted by 28-year old Stephen West.

So what drew Falk to philosophy? "I am very much a beginner but it appeals because many of the skills and abilities you pick up are transferable to other areas. It touches on so many subjects and I think it makes me a better thinker. It uses logic and reason to analyse the ways in which we humans see the world. It is about critical thinking and logical analysis but also communication skills, critical reasoning skills, and problem-solving skills in general."

"Another value of learning philosophy is that it helps one frame hypotheses, do research, define problems. It helps you to develop the ability to be convincing, build and defend your own views, but it also asks you to understand other perspectives. These capacities are highly valuable to have in any walk of life, especially in your interaction with people of different political, ethnical and cultural backgrounds.

"René Descartes defined philosophy as 'the use of reason in understanding such things as the nature of the real world and existence, the use and limits of knowledge, and the principles of moral judgment'. I like that."

Falk is even more passionate about photography – he is an accomplished lens-eyed observer of animals such as deer, snakes and all types of winged creatures but his main interest is landscapes. "When I want to really relax, refresh my mind, I just go out to take pictures. It's my biggest hobby. Most people do something creative – painting, writing, singing, or just play golf or exercise. For me its photography, I find it totally absorbing."

Adding value

As head of SKF's treasury in Singapore, Falk's responsibilities cover the company's operations across APAC. His department's work compliments that of SKF's Europe and Americas focused treasury at group headquarters in Gothenburg. Key responsibilities for his team include funding, collection of surplus cash, FX management, hedging and making sure an effective cash management structure is in place.

The department is only four strong, which Falk says is the "bare minimum we can do with to keep things running". He adds: "We always look to take on challenges, question everything. We try to keep adding value for the group – that is very important. And that means staying sharp and aware of external events that can impact us and figuring out how we can handle them."

External factors that are constantly on his team's radar screen include macroeconomic developments, geopolitical issues; global financial factors, industry trends and regulation. "We need to be aware of everything that can potentially affect our cash flows. We are not future proof but we do try not to lock ourselves into a certain way of being or managing, and that helps us to be prepared for the uncertainties of tomorrow."

With treasury functions cutting through other parts of the SKF business, Falk says it is vital his department liaises effectively across the group. While it's not always the case other SKF departments will know exactly what they are looking when they turn to treasury for help, his team stands ready to provide ideas backed up by its access to an array of information including market intelligence, market outlook, detailed data on listed SKF suppliers and peers: "There is a lot we can leverage to help devise solutions."

Payments is one area Falk is especially keen to stay ahead of the curve: "In the future customers may come and say, for example, they want to pay using PayPal or crypto… we are not there yet but who knows? Payment rails wise, it's a very fast evolving environment, especially across Asia. There is a lot of virtual banking coming up as well so we have to be on our toes on that front too."

Buy and sell

An economics graduate of Gothenburg University, Falk joined SKF in 2000 and focused on risk control but from the outset his eye was on front office and FX trading. In 2003 the company offered him to trade for a couple months out of the Singapore office. A few months later he was offered relocation to Singapore for his first international assignment: "It was a very big thing for me back then. I moved there with my girlfriend, Jenny – we are now married – and stayed for two years. It was a very good experience, not just because of the work but because of the impact it had on me as an individual and a person. You learn a lot about yourself when you are posted overseas at an early age, especially about living and working in a different country with a different culture. You have to appreciate and respect cultural differences, which is very important in understanding how the world works."

The couple moved back to Sweden in 2006, a year after their first son, Jack, was born. Falk left SKF a little later that year and joined Ekman & Co AB, one of the world's oldest trading houses – it was founded in 1802 and, remarkably, is still in the hands of the Ekman family. The company today trades in pulp, paper, packaging, recovered materials and bioenergy and Falk's role when he joined the firm was to head up the derivatives unit that traded wood pulp with futures on NYBOT with physical delivery of the contract. "It was all pit traded for one hour a day. I sat in an office in Gothenburg and used a broker firm in New York, sent all my bids and offers on excel sheets and watched the trades via Reuters, calling New York to tweak my prices…it all seems so incredibly ancient now but it was really good fun, exciting."

By 2007 NYBOT delisted the contract with physical delivery of wood pulp. The CME group launched a cash-settled softwood pulp index futures contract in September 2007. "It was very enjoyable but then of course we had the financial crisis in 2008 and liquidity dried up completely. The market just collapsed. It was an extraordinary time and definitely the worst period of my life."

As luck would have it, in 2009, with the aftershock from the crisis still reverberating strongly globally, Falk was contacted by a bank he had been trading with, Nordea, which offered him a senior sales manager role in the markets division with a focus on FX. After six years at Nordea he was contacted by SKF, ten years after having left the company. "They had this idea of sending me to Singapore again and being responsible for the same department I worked for as a trader there ten years earlier. I was very interested in doing that because we felt after the previous two year posting we weren't really done with Singapore. I wasn't actively looking for opportunities to move back but when this offer came from SKF it was an easy decision to make."

Leveraging experience

Now, three and half years into his second sojourn in Singapore, Falk is very grateful for the experience gained and lessons learnt over the ten years away from SKF. "Most treasuries want to have people with banking experience but for me, when I joined SKF again, it was also about timeliness. Banking has changed very much during the last ten years so fresh, recent experience of banking helps a lot."

"I joined Nordea in 2009 and left in 2015 and over those years banking changed dramatically due to things like all the new regulation and the fact that many banks had to repair big holes in their balance sheets, forcing them to review business models and make changes. Coming directly from that environment was very helpful when I arrived back in Singapore, especially in dealing with the bankers here. I think they appreciated my experience as it meant they could be open with me, they knew that I knew how it now works for banks."

Gaining experience of both the buy and sell side over the ten years without SKF was another big positive: "I guess this goes for all professions but moving from one side to another side of any role can be very instructive and useful. I've been on the buy side, then sell side with a bank, and then changed company again and am on the buy side again. You learn so much from doing that. It helps to give you a much broader understanding of roles. That's especially important in a managing director role where you have to be more generalist. That is my experience at least."

In mulling the challenges ahead for his profession Falk is strongly of the view that treasurers should look to disrupt themselves before they have disruption foisted upon them: "We have to view technology as an opportunity not a threat. Some people worry that, for instance, robot technology will take all our jobs but for treasurers arguably it will mean doing less of the formulaic, routine and predictable and spending more time on strategic matters and analysis to be better prepared for the future."

Falk certainly sees treasurers increasingly having to learn new skills to help them fully exploit new technologies that are shaping the future of banking and treasury. As well as robotics, he has high hopes for AI, especially for data analysis and forecasting. Indeed, he is of the view that data gathering, sorting and analysis using new technologies will become a critical operation for treasuries of the future: "We don't have a global payments platform as yet but in the future that may be possible. That would create a lot of data so analysing it, exploiting it will be very important and beneficial not just for treasury but for the group as a whole."

He adds: "In many ways we are still having to deal with platforms, IT infrastructure that date back to the 70s. Over the next few years that is going to change. It has already started happening; we are seeing a lot of open source, open banking applications, APIs and customised peer-to-peer connectivity with boundless financial functionality such as funding, discounting, payments and settlements, and all of it integrated with existing processes. Banks are launching portals to attract communities; they are opening up now and delivering connectivity. It's a very exciting time as it seems we are taking some important steps that will inform the future of banking."

> "Always try to stay curious and learn new things outside your profession – it's one way of getting a perspective on things.

Falk says that in comparison to Europe and the Americas, Asia appears to be moving much faster in developing and adopting novel financial technology and solutions. Singapore is a case in point, with the central bank MAS working closely with other banks, fintechs and financial service players to create an environment that supports the emergence and development of new technologies. Going forwards, he believes one of the big challenges will be getting the regulatory frameworks in place for new technologies, a task that is "especially urgent" in the payments space as it is evolving so rapidly.

Indeed for Falk the pace of change in the payments space is so rapid he believes it is not unreasonable to hope that at some point in the future SKF might end up with just one bank account for functional currencies per country: "Today if you look at the payments landscape we have a lot of different types of payments – domestic, international, clearing, different types of cross border payments and so on. I hope payments in the future will be just like sending an SMS."

The bigger picture

More broadly, Falk has watched with growing dismay the US-China trade war, the US pull-out from the Trans-Pacific Partnership, tensions in Europe due to Brexit and general global drift away from multilateralism. "These things are never good for global trade or indeed for running of treasuries for cross border payments, collections, setting up loans and deposits. They generate new frictions. We have had decades of globalisation but there has been this shift to protectionism and I think it will get worse before it gets better. In the long run I am positive but right now I am a bit worried."

With challenges for treasuries multiplying and workloads getting heavier, young, inexperienced treasurers might feel especially under pressure to contribute much more, but Falk urges them not to lose sight of the bigger picture: "My advice to them, and young people in the very early stages of their career generally, is don't be in too much of a hurry. You don't have to worry that your colleagues will expect you to know everything about treasury during the first period of your career. Ask a lot of questions, show you are curious, willing to learn and understand how things work. I learnt a lot by asking questions when I was young, there is nothing wrong in doing so."

He also advises that they seek out a mentor: "Not all companies have a mentor programme but that shouldn't stop you – try not to have a mentor from your own unit. Rather it should be someone away from it, even from another company. And it doesn't have to be too formal, you can meet over lunch to discuss topics you have sent in advance. Good mentoring is not appreciated enough I think – it's very useful and in the future, it will become even more valued."

Revisit cash investment strategy as US monetary cycle matures

As we near the US Federal Reserve's terminal rate, treasurers should rethink their cash investment strategy.

Kyongsoo Noh, CFA
Portfolio Manager for Managed Reserves Portfolios, Global Liquidity
J.P. Morgan Asset Management

Even though the Federal Reserve (Fed) has indicated there will be no more tightening of policy for the foreseeable future, the effective fed funds rate, which targets the overnight level that banks charge each other for loans, has edged up to within just a few basis points of the top of the target range.

It's a state of affairs that for Kyongsoo Noh, Portfolio Manager for Managed Reserves Portfolios, Global Liquidity, J.P. Morgan Asset Management means we are near the Fed's terminal rate. And being so close to the end of the monetary tightening cycle requires investors to begin reorienting their investment strategy and consider adding duration.

Every economic cycle is different but there are a number of factors to consider for late cycle investment, the timing of the downturn being among them. Noh anticipates it could materialise in late 2020 or 2021 so investors still have some time to act. However, while they do not need to be at maximum duration today, Noh believes investors should have more duration in their portfolios now than they did last year when the Fed was raising interest rates more aggressively.

Explaining further why investors have some time to act on duration before the next downturn, Noh first points out that in 2018 US GDP growth was about 2.8%, well above US trend growth of 2%. This above trend growth was due to a sizeable fiscal stimulus package implemented last year: "The stimulus is still in effect this year and while its effects are unlikely to be as strong as last year, it still means growth will probably be slightly above trend, maybe 2.25%. As such, the economic expansion in the US should remain intact for this year."

Volatility is another issue to consider. After a turbulent 2018, volatility has eased considerably; with factors such as the Fed's dramatic turn from hawkish last December to dovish just a month later and progress on the US-China trade talks, as being responsible for the decrease in overall volatility. Volatility is likely to remain low in the near term, but Noh believes investors could see volatility pick up again towards the fourth quarter as year-end effects take hold.

One way to add some downside protection to portfolio returns during volatile periods is to buy more government bonds.

As part of their late cycle investment strategy, ultra-short investors in USD portfolios should, over time, consider gaining more exposure to US treasuries: "They serve to lengthen duration of portfolios, are always liquid, and are important diversifiers against credit holdings."

In the past when the Fed was raising rates more swiftly, Noh was focused on buying one-year treasuries but with the Fed near the terminal rate, he is looking to buy, going forwards, longer maturities, even out to two to three years.

With respect to credit risk, Noh favours financial corporate bonds, and particularly bank paper: "As a direct result of the financial crisis, regulatory pressure has encouraged banks to deleverage their balance sheets and reduce risk taking. The upshot today is a much stronger global banking system than before the crisis.

"On the other hand, in the years that followed the financial crisis, we have seen US industrials take advantage of near zero interest rates and increase their leverage. That does not mean we should avoid US industrial corporates altogether, but it does mean that the sector warrants some caution."

Put cash in its place

In considering the broad framework for late cycle portfolios and adding duration, cash segmentation is key. The idea here is that investors can deploy risk into their portfolios more efficiently if they segment cash by the need to call on it. So, there will be cash treasurers need on a daily basis (operating cash); cash that might be called on once or twice a year (reserve cash); and cash required only once every one to two years (strategic cash).

Noh explains that by segmenting cash into these various "buckets", increased duration risk can be taken with the longer-term cash. "One of the things we've seen our clients do is that with operational cash, they'll often go for deposits and/or money market funds. With the once or twice a year cash they can implement ultra-short fixed income strategy. And for longer-term cash, we see some corporate treasurers investing into a short duration strategy."

A wide range of investment vehicles can be leveraged for cash segmentation, ranging from money market funds to bond funds and, in some cases, exchange-traded funds. While investors may view allocation differently depending on their appetite for risk, Noh says the most important thing for treasurers in implementing cash segmentation "is to ensure they have a robust investment policy that allows for different investment types and different vehicles".

It is the business of the future to be dangerous

How, in an age when new technologies are offered with unprecedented frequency, can treasurers benefit from progress whilst avoiding failures? A treasurer, a vendor and a banker offer tips on future-proofing.

The treasurer's view

The idea of future-proofing for Royston Da Costa, Assistant Group Treasurer, Ferguson Group means "having the ability to grow with a solution for the foreseeable future". Although at some stage it is inevitable that existing systems will have to change, when that time comes – and it may be driven by commercial or regulatory pressure, or simple obsolescence – he maintains that treasurers today have, as never before, the chance to experiment with new solutions where, if something doesn't work out, "it doesn't have to be a disaster".

Certainly, with the rise of the fintechs and their disruptive offerings, there have been some interesting partnerships formed with banks where the 'sandbox' approach to development has enabled safe and lower-cost exploration, in some cases with regulatory blessing to use real-world data (such as the FCA's regulatory sandbox). But what is on the menu?

Rich pickings

It will have quickly become apparent to most treasurers attending conferences these days that the main technology discussion points are APIs, AI, blockchain and cloud-based solutions. Perhaps the main enabler of progress here is a cloud-based environment. Indeed, Da Costa feels Ferguson's roster of 14 such solutions is helping to future-proof the group's treasury, simply because whenever a new cloud solution is considered, its compatibility across the board is assured.

However, the approach Da Costa takes with any of these technologies is one of pragmatism. "I'm always on the lookout for any new tools that would add value to our business but I'm not going to lose sleep over whether we adopt them or not," he states. "Technology is not my core responsibility; it is the responsibility of the suppliers that are looking to develop these solutions, to come up with viable proposals."

He attends to the market closely, playing an active development role with some vendors and banks. "Developing the right solutions demands that they know their clients' pain points and goals," he explains. Although this inevitably leads to conversations about 'exciting' new technologies, he remains rational, adding that "a solution could be based on blockchain, or some other technology; to me, ultimately, it's about solving the problem, not using a specific technology".

When seeking a solution, in every case, Da Costa says treasury must first identify and understand what it is trying to achieve. From a business-case perspective he advocates considering all options. "Sometimes it may well be a case of 'if it ain't broke, don't fix it'." That said, whilst there may be little advantage in implementing technology for the sake of it, he believes that "having a system is usually better than not having one".

Engine of growth

In explanation, he says a business needs to be efficient and agile to grow. Its processes must therefore be underpinned by systems capable of facilitating and keeping up with that growth. New technologies such as AI and blockchain may well be subject to much hype, but the hype, he feels, often has some basis in truth.

For Da Costa then, the treasury issue around future-proofing should not necessarily be about judging the right time to jump or whether to jump at all. Instead he argues that as long as common sense, due diligence, and appropriate checks and balances prevail, it is more a question of whether treasury "can afford not to take that leap".

Ferguson's first ever move into the cloud in 2015 was accompanied by some understandable hesitancy. As such, it went through a lengthy internal process of ensuring that all the right boxes were ticked for engaging with the provider, to the point where it looked at the company's financials and even arranged for penetration testing of the system, to see how resilient it was to cyber-attack.

Rapport

Although happy to embrace the technology revolution, Da Costa knows that, in his position, he cannot move without first ensuring he has all the facts. He has access to a helpful IT department but where this resource is not available, he suggests either appointing an external consultant, or simply talking to the banks for whom "it is in their interest" to ensure their clients are using secure technology.

Of course, not every new solution has the wow factor. In keeping clients up to speed, whilst banks tend to be "more proactive", Da Costa feels it will be a vendor's business model that dictates its willingness to help customers with specific requirements. Many will look at the nature of the issue and how many customers it affects (and which particular customers) before deciding the commercial viability of investment.

Sometimes, a change is required by all, especially where regulation is the catalyst. In such a case, treasurers may feel that vendors should be taking the initiative. However, Da Costa recalls how the sparsity of ready-solutions following the introduction of EMIR reporting on derivative contracts in 2013 caught some treasurers by surprise.

In both cases, keeping the channels open and bringing up pertinent issues at monthly meetings, ensures there can be no doubt as to what is expected some way into the future. "If you really want to keep up with or ahead of your competition, then it's incumbent upon you to build a truly dynamic relationship with your vendors and banks; and it has to be two-way."

The vendor's view

Future-proofing is not a matter of being technologically advanced, but one of being able to flexibly use technology in order to meet the future needs of treasury and the business, says Bob Stark, VP Strategy at Kyriba. As long as treasury fully understands what it needs, and will need, "it is in a position to find the right technology to be future-proofed".

The need for understanding amplifies the importance of treasury opening up the discussion to other parts of the business. Historically, treasury has made technology decisions independently, notes Stark. When treasury makes its own decisions, its focus will naturally be on meeting its own functional requirements.

Whether treasury needs to talk to further flung functions – such as procurement or sales – before undertaking a technology upgrade depends on the business and how treasury relates to those other functions. But, says Stark, it is worth considering that for a core treasury responsibility such as building a cash forecast, execution in isolation may not give treasury the perspective that relates, for example, to how sales team expenses play out in the field, or what new markets are being prospected.

Indeed, he argues, lack of visibility over such aspects makes it harder for treasurers to gain an accurate assessment of their own cash and liquidity expectations, with all the negative consequences this has for working capital management. As such, he urges treasurers to maintain "openness to collaboration" to ensure the "smoothest possible flow of information across the business".

At some point, new or updated technology will be necessary. In terms of 'future-proofing' that technology, one pitfall to avoid is the solution that has a "shelf-life", warns Stark. If treasury's technology is built only to meet today's requirements, its obsolescence is a problem-in-waiting.

Currently, the cloud delivery model appears to be the model most capable of offering resilience to obsolescence, simply because product development and integrability is the business, and indeed lifeblood of the technology provider; its own survival is, after all, contingent upon continued delivery of appropriate technologies.

Red flag

Avoiding the pitfall requires treasurers to probe the details, says Stark. How is the system future-proofed? What is the vendor's vision for incorporating AI or blockchain into the platform? Can it point to hard use-cases for these new technologies? Is it innovating in-house or using third-parties?

By exploring the innovative capacity of the vendor, it will become apparent if it has any appetite to pursue advanced technologies or if it is merely watching and waiting or, worse, ignoring them. Any indication of vendor-unpreparedness in respect of how it intends to tackle the future needs of its clients should be a "red flag", he warns.

Joint decisions

Treasurers should task themselves with keeping up to speed with technology developments, suggests Stark. Expertise is not necessary but a deeper curiosity will allow the treasurer to start asking the right questions, steering them towards an understanding of how AI, robotics, blockchain and any other advancement might be useful in their own function.

"It's about being curious enough to find out what those technologies might mean for treasury," he comments. "The treasurer's responsibility is to understand what their requirements are today – and what their value and impact are – so they can prioritise needs as far forwards as they can sensibly predict."

If treasury's collaboration with the business proves useful during the technology discovery and mapping phase, then it will surely benefit to take the same approach within the organisation during system selection and deployment, says Stark.

Treasurers who are in touch with the market will know what products answer their own technical needs, but in-house experts drawn from other disciplines can help guide the process towards solutions that meet the needs of the whole business. What's more, that deeper pool of expertise can better explore and define future-proofing by revealing how the organisation's own clients, suppliers and other partners are engaging with technology.

Time to jump

Of course, no one wants to be burdened with obsolete or incompatible technology. However, says Stark, the rapidly evolving nature of the industry means there are many opportunities to improve treasury technology incrementally, rather than wholesale. It is still necessary to know the value of switching technologies, he states. "Every function can point to needs that are not being met, but when asking 'when is the right time to jump', the correct response is 'when treasury can identity value that can be derived from deploying new technology'."

If, for example, there is quantifiable value in being able to produce more reliable long-term cash forecasts but technology is required to do so, a business case for new technology can be made. The strength of this case increases in proportion to the ROI, especially if that technology delivers more ROI than competing business cases (and typically there will be many).

Treasury may make a quantifiable case for the technology it needs to do the 'day job'. But if it works collaboratively on building out a future-proofed technology landscape, it should also be able to quantify the value it brings to the rest of the

> I'm always on the lookout for any new tools that would add value to our business but I'm not going to lose sleep over whether we adopt them or not. Technology is not my core responsibility; it is the responsibility of the suppliers that are looking to develop these solutions, to come up with viable proposals.
>
> Royston Da Costa, Assistant Group Treasurer, Ferguson Group

business. Indeed, as Stark notes, "the more value you can prove, the more you can future-proof yourself".

The bank's view

"We are witnessing the most radical change treasury has seen," notes Rajesh Mehta, Head of Trade and Treasury Solutions, Asia Pacific, Citi. "The industry is rapidly moving towards real-time transactions, emerging technologies including AI and ML for forecasting, blockchain for information security and storage and the integration of platforms into banking services. While it is difficult to generalise how ready a treasury function is, generally speaking, a function that is more efficiently organised and already leveraging technology for transformation will be better prepared for the future."

It is, he notes, also important to recognise that as the industry is changing, so is the role of the treasury function. "With the capabilities technology offers, treasury is evolving from being primarily efficiency-focused to being more business-focused."

Indeed, organisations are increasingly transforming their business models to be consumer-facing as they seek to capture growth. The rise of e-Commerce, especially in Asia, continues to be powered by technology, high smartphone-penetration and the prominence of digital ecosystems, as well as the development of instantaneous payment infrastructure across various markets. This development has also turned its attention on supply chain convergence and how technology can be used to create a supply chain model that better corresponds to changing business models, says Mehta.

With a direct view of these shifts and resulting flows, the role of the treasurer is increasingly much more of a "business enabler". The ability to evolve with appropriate talent also factors into how future-ready a treasurer or treasury function is.

Evolving treasury

For Mehta, future-proofing "is about taking actions, step by step, to bring different elements together to build a treasury that is fit for purpose for the future shape of the business it serves".

This, he explains, involves having an investment plan that reflects the organisation's strategy and priorities, being attuned to evolving treasury best practices and related governance, policies and technology given that they are the foundation of treasury. "It also means evolving treasury alongside key banking partners and having senior management recognise the changing and critical role of treasury."

It is possible to plan ahead today, suggests Mehta. "At Citi, we have a Treasury Advisory Team that advises clients on how treasury is evolving for the future. The team counsels clients who are on their own transformation journeys, giving them a deeper understanding of relevant developments and helping them embrace the ongoing tech revolution."

The plan, as Citi advises clients, needs to incorporate:

- Putting in place an organisation digital strategy.
- Having a digital strategy for treasury that aligns to the corporate digital strategy.
- Upgrading and managing the evolution of skillsets for treasury employees.
- Engaging key banking partners to stay up-to-date and align.

Timing

"There is a fine line between being an early adopter and a beta-user/tester and sometimes the latter can have its advantages," says Mehta. Being future-ready does not necessarily mean always being an early adopter. Whether or not to jump in with new technologies should depend on how relevant the expected benefits will be to the treasury function.

Those technologies that can produce a considerable competitive advantage and address various points of friction should be pursued, he says. There are specific technologies, like blockchain for example, that would completely change the ecosystem should adoption become widespread.

"While investments into these types of technologies sooner rather than later would make sense, it is important to again ascertain relevance and define use cases for initial use and implementation, possibly through learning focused pilots."

But is there a way that treasury can make better judgements on what technologies are being offered or promised? For Mehta, there is no "instant recipe". Better judgments can be made with comprehensive knowledge of the technologies being considered and thorough assessments on potential use cases and benefits, he advises.

However, there are a few factors to keep in mind. These, notes Mehta, would include understanding the fundamentals behind various technologies and assessing which would be most beneficial for the actual treasury set up. He continues: "Evaluate potential costs against expected benefits – taking a step back to re-examine the treasury set-up and evaluating whether it can be further optimised before making additional investments, and talking to banking providers to benchmark treasury technology to that of best-in-class peers."

FINANCIALS BANKING ON BIG DATA TO MAKE MONEY

Big data and analytics have become hot topics in boardrooms over the last few years and are destined to become increasingly vital weapons for financials and corporates generally.

The explosive global growth in the use of the internet and proliferation of connected devices in recent years has been accompanied by equally explosive growth in the volume of data being generated. Finding ways to exploit such “big data” has been a challenge for organisations but all the signs are that they are now starting to get to grips with how to extract value from it.

There is plenty of evidence indicating the strong commercial potential of big data. US B2B research firm MarketsandMarkets predicts that the global big data and data engineering services market size will grow from US$34.5bn in 2018 to US$77.4bn by 2023, at a CAGR of 17.6% during the forecast period. It says North America was home to the largest big data and data engineering services market in 2018, due to the technological advancements and their early adoption in the region. However, the market size in APAC is expected to grow at the highest CAGR from 2018 to 2023. Major growth drivers for the APAC market are the increasing adoption of big data and significant opportunities in major countries such as India, China and Japan.

Big data and corporates

For Marieke Saeij, Chief Technology Officer at order to cash specialist Onguard, it is clear that big data holds considerable potential for organisations in a number of areas. She points to an EY survey finding that 35% of respondents recognise the financial value of big data, citing “to monetise existing data” as a key driver. She points to Onguard’s own fintech Barometer, a regular survey of 1,000 finance professionals, showing that data plays a role in 80% of businesses, while 24% of organisations say their “business is data”.

The importance of big data to businesses is unsurprising given its potential to provide insights into processes and information flows, as well as its ability to be used in assessing financial risk, increasing returns and scoping out new potential. So, what role will big data play within the financial sector and what benefits can financial firms expect to see?

Predictive value

Saeij says that within the financial sector, past figures have long been used to generate management information based on previous results. However, by including big data, which encompasses data from customers and the market, alongside past data from within the organisation, finance professionals are able to gain a better view of the future: “The predictive value this provides means financial departments can be proactive and plan for the future, rather than be reactive.”

Within an insurance company setting, for example, if a controller sees that the number of claims over the previous winter increased enormously, they will likely be interested to understand why this might have been and if it was just a one-off occurrence. However, from existing data, they will only be able to see the number of claims, rather than the reasons for the claims. “By adding big data to their existing data, they will be able to make a correlation between the season and the level of claims. Any findings that aren’t tied to bad weather, for example, can then be used to provide predictions for the future,” says Saeij.

As well as the predictive value of big data, it also has the potential to provide insights across a number of processes and information flows within the financial sector. Through the use of big data, finance departments are better able to assess risks to the organisation. Saeij says it is possible, for example, to gain a better picture of how the organisation’s finances stand at an earlier stage.

Pooling: thriving and here to stay

Cash pooling is an established optimisation tool for multinationals looking to effectively manage liquidity, streamline bank account structures and lower bank transaction and, despite periodic bouts of concerns about its relevance, its future remains bright.

Regulatory change and the rise of new technology have led to question marks over cash pooling in recent years yet it remains an effective, valuable strategy for companies aiming to maximise the availability of internal sources of capital, especially when it is executed on a global scale.

There are two main types of pooling: physical cash pooling – also referred to as sweeping or zero balancing – and notional pooling. Cash pooling brings together a number of individual bank accounts to pool balances, optimise interest and improve an organisation's liquidity management. And it can be executed across multiple jurisdictions, currencies and entities, depending on the type of cash pool in place.

Galia Elizondo, Global Product Manager, Cash Management at Finastra says companies looking to execute either physical or notional pooling first need to understand the types of liquidity management techniques available as well as the tax, regulatory and commercial issues that may come into play during pooling operations in different countries.

She explains physical cash pooling can be achieved on both a single-country and cross-border basis, using one bank or multibank, with the most common method for sweeping being where balances are physically moved in one currency at a time. In practice each company division or subsidiary maintains its own bank accounts – effectively sub-accounts of the header account. Assuming there is no regulatory restriction, these accounts can be held in location. At the close of each business day, all the balances from the accounts held in the subsidiary accounts are swept to the header account and this header account (which may or may not have an agreed overdraft for the use of the group of accounts) will send over the deficit balances.

Usually the main account is maintained in the name of another legal entity, such as the parent, a regional subsidiary, or a finance company – whatever best suits from both a practical and tax perspective.

Elizondo says: "The first thing to note about cash pooling is that nothing has really changed with the practice over the years. It remains what it always was, a way for companies to physically concentrate balances on a number of accounts into a single header account, in order to optimise interest and also invest the surplus concentrated in this header account."

The other main type of pooling is notional pooling. This is primarily a tool for interest enhancement. Notional pooling structures are typically overlay structures. Debit and credit balances on a series of accounts owned by the same or different entities and domiciled in the same country are notionally netted for interest calculation purposes, without a physical movement of cash. Multicurrency notional pooling offers the ability to achieve a net notional position in a single currency without the need to perform traditional FX or swaps, and extends the benefit of further interest savings as a result of compensating balances in different currencies.

In addition to the two main types, hybrid solutions which combine notional and physical pooling are available for optimising liquidity. Elizondo says in her experience with multinationals, most first physically sweep balances from local accounts into a local master account (an account per currency). After centralising individual countries, the accounts are then centralised to a global structure and balances then notionally pooled, with cross-currency notional pooling a typical solution here.

In recent years there has been speculation over the relevance of notional pooling due to regulatory changes, for instance Basel III, making corporates perhaps unsure whether it will be useful to them in the future. But Elizondo assures that "notional pooling is very much alive and will continue to be on the agenda in the future for corporates wanting to optimise cash management". "In fact, I think notional pooling will actually be more popular going forwards. It's actually gaining in popularity now for cross-currency notional pooling in one country. That is particularly true here in the UK where we have so many currencies flowing through and, as a result, we see a lot of corporates want a multicurrency notional pooling scheme," says Elizondo.

Let's get physical

So, what are the pros and cons of physical cash and notional pooling? The concentration of all of a company's surplus cash into one account, generally managed by the group treasury, will certainly help improve its control over cash. If the net balance of the cash pool is positive, this aggregated balance can be used to invest in overnight or short-term deposits, such as money funds and other short-term products. Companies with large treasuries often have dedicated staff managing these investments, with treasury accounts also likely to get better interest rates.

The establishment of a physical cash pool enables treasuries to exercise greater control over cash flows. Ideally all subsidiaries should participate in the cash pool, as this provides the centre with more information about the daily cash flows that exist throughout the company. Establishing a physical cash pool also means that the treasurer need only negotiate one credit limit for the entire group, thus avoiding the need for separate credit arrangements to be set up for each subsidiary participating in the cash pool.

In this type of arrangement, the treasury has a high level of visibility over the balances of subsidiaries' accounts and, as a result, can control the distribution of cash. A subsidiary experiencing cash shortfalls can be funded from the master account at a cheaper rate than could be arranged locally. The treasury should be able to reduce borrowing costs significantly by using balance aggregation to arrange inter-company funding.

Disadvantages associated with the physical movement of cash between accounts include the creation of a series of inter-company loans between the master and participant accounts. This can have complex implications, particularly with regard to, for instance, withholding tax and, in some countries, 'thin capitalisation' rules which restrict the level of financing a subsidiary can receive from its parent or major shareholder.

The transfer of funds between a company's subsidiaries can also create legal issues due to the co-mingling of funds, while the physical transfer of cash between accounts will incur high banking costs, particularly if a large number of movements takes place and/or cross-border transfers are involved.

Also, most cash pooling arrangements require that all participant accounts are held with the same bank. This may cause problems for companies with operations in many countries – a bank which is strong in one country may offer a more limited service, or indeed no service, in another.

Variations on vanilla physical cash pooling include target balancing whereby cash sweeps are arranged so that accounts in the pool are left with a pre-determined target balance after the sweep. Different target balances can be set for the constituent accounts in the pool. It is even possible for the treasurer to set negative target balances – an overdraft facility – on some of the participant accounts.

Let's get notional

With notional pooling the main benefits include subsidiaries maintaining their autonomy over their bank accounts and retaining their cash balances as no physical concentration of cash occurs. The group however achieves similar economic benefits as it would with a physical cash pool.

Notional pooling also means less administration as balances remain with each legal entity and no inter-company loans are created – notional pooling requires far less administration than physical pooling. Notional pooling incurs lower fees than physical pooling as the bank operating the pool is not required to transfer cash between accounts.

The drawback with notional pooling is that the balance sheet of both the bank and the company involved in a notional pool can become unnecessarily large. This is because there are no physical cash transfers occurring between the various accounts in the cash pool. Specifically, a bank offering notional pooling services may find that it is unable to offset fully the debit and credit balances appearing on its balance sheet. This will affect the way in which the bank allocates capital, which will in turn affect the interest compensation paid to the pool.

Also, in some countries notional pooling is prohibited and the way in which net interest is calculated can vary from country to country. Furthermore, separate overdraft facilities and credit agreements will need to be negotiated for each account participating in the cash pool. This can make managing liquidity across a company more complex.

Variations of notional pooling include interest optimisation, a limited form of notional pooling whereby a bank offers a company preferential credit and debit rates – that is, it returns to the company some of the 'turn' it would normally benefit from. This service is usually offered in jurisdictions where full notional pooling is not permitted.

More broadly, there is the overlay cash pool, which isn't necessarily distinct from notional, conventional target or zero balancing but can contain components of all three. It is a cash management service that facilitates the aggregation of liquidity from a series of multiple underlying banks or accounts into a single bank or banking structure. This could be within a single bank, but typically an overlay structure refers to a multi-bank structure.

Where balances are held at two different banks, the cash has to physically move from the local bank to the overlay bank. This can be done by the corporate instructing its local bank to push the funds to the overlay bank – where every day at a particular time the bank pushes excess cash into the overlay bank account structure. The alternative is for the overlay bank to pull the cash from the local bank at a predefined time and within certain parameters.

Horses for courses

The key difference between the two main types of pooling is that notional is favoured by companies that want their subsidiaries to maintain their autonomy, while physical pooling enables budgetary assistance to be actioned across subsidiaries with surpluses being invested in a money market fund or a short-term financial product – the transfer of funds results in a transparent or clean pooling structure.

Elizondo says that one thing notional pooling allows that is very advantageous is that no intercompany loans are generated and cross border transfers are not necessary. However, one major disadvantage of notional pooling schemes is that they generate the need for cross guarantees, cross indemnity agreements or pledge guarantees. This is because the bank requires each participant to indemnify the bank, or provide a guarantee to like effect, against any other participant's default. That means there is much more documentation generated and it needs experts to basically read all the documentation and small print that banks will give to the corporates.

She adds: "Any legal entity that wants to participate in a notional pool must give the bank the right to offset the pooled debit and credit balances and record the net position only on its balance sheet. Usually the participating subsidiaries sign a cross guarantee agreement. This cross-guarantee agreement implies that in case of default, the risk should be borne by the credit account balance legal entities of the notional pooling account structure, and it will be equivalent to the sum of debit account balances in the structure."

Based on her many years of experience in pooling – she spent several years at Banco Santander as a global liquidity manager with a focus on sweeping and pooling before joining Finastra – Elizondo reckons around 75% of corporations favour physical pooling. Of the rest around 15% implement notional pooling and 10% will plump for a hybrid solution.

It is vital companies consider country specific regulations when considering notional and physical pooling. In general, notional pooling tends to be implemented more in Asia and in Europe, which is also the most mature region globally for hybrid solutions. Physical pooling tends to find favour in Latin America and the US. She cautions that in some countries, like China and India, which do not allow unrestricted cross border movement of funds, pooling solutions are very difficult to implement, with the cost of doing so likely to outweigh the benefits.

Optional routes

Jelle Goossens, Head of Group Treasury at Barry Callebaut Group, Singapore, says that aside from pooling structures involving third-party (usually banking) partners, corporates can also look to in-source these activities by deploying an inhouse bank ledger-based solution. "Inter-company flows related to commercial, lending, and hedging activities can be settled completely virtually in a transparent and cost-effective manner. Moreover, if executed within the same ERP platform, this will help to create efficiencies by avoiding inter-company reconciliation differences; a job which can become quite cumbersome in companies that have a global footprint and global supply chain, resulting in a matrix of possibilities of inter-company relationships," he says.

Furthermore, Goossens says, in a more advanced set-up, one could implement daily inter-company swaps of cash/debt positions in currencies different from the home currency of the operational entity. The FX swaps serve to align the mismatch between the cash flows – for example the underlying commercial risk as hedged item versus the hedging instrument which, when best-practice, is also an inter-company hedge traded with the inhouse bank – mitigating the risk of changing interest rate differentials. As a result, the operational entity shows a clean net cash or debt position at the end of the day, resulting in a clear-cut financial expense or income.

"Ultimately, all of these virtual flows and associated financial risks are centralised, create transparency and hence allow risk management within a single financial vehicle. Granted, as with external pooling structures, such virtualisation also faces challenges including regulatory, compliance and fiscal and across emerging Asia they are especially pronounced. However, the efficiency gains should not be underestimated."

Goossens says such integration within a group-wide ERP system can be a key enabler when it comes down to forecasting cash flows, which in turn drives more efficient and effective liquidity management. "In the third-party bank linked solutions, forecasting is done based on what could be labelled as first-order derivative pieces of historical information, such as cash collections and payments, which are extrapolated to forecast the future.

"However, especially for corporates in the B2B-space, access to the underlying sources of the cash flows – commercial contracts, purchase orders, sales orders and ultimately invoices – provides insight in what to expect well in advance – before the bank statement indicates what cash flow took place."

Ping An – the adoption of emerging technologies to drive greater operational and financial efficiency

We are now in a world where the only constant is change. The treasury landscape is shifting as emerging technologies embracing intelligent automation, application programme interfaces, distributed ledger technology, cloud and big data provide a real opportunity to reimagine the treasury function. The time is right to take the first step in establishing a strategic foundation that delivers a new enterprise-wide digital experience. In this first article in the Citi Treasury Dialogues series, we discuss with Michael Fei from Ping An Group the firm's experiences in leveraging API technology.

Michael Fei
Board Secretary & Chief Strategy Officer
Ping An OneConnect Smart Technology Co., Ltd.

Mark Sutton
Director
Treasury Advisory Group – Asia Pacific
Treasury & Trade Solutions

Application programming interfaces (API) have been around since the 1960s. If they aren't a new concept, why have they become such a hot topic lately? Without APIs, the digital experiences that we expect every day as consumers (eg Google maps) simply would not be possible. APIs have evolved from the very early days, but it was the birth of web APIs in 2000 that really highlighted the potential opportunities.

In November 2000, eBay launched its API along with a developers' programme. Adoption by Apple, Facebook, Amazon and Twitter increased the level of interest in API technology. In June 2009, Apple launched the iPhone 3G and its App Store began allowing iPod Touch and iPhone owners to download applications through the iTunes desktop software or the App Store on their iPhones. This opened up an entirely new world of mobile applications, all underpinned by API technology.

How does this relate to the world of banking? The drive for digitisation of banking services continues to gain momentum and APIs provide a clear opportunity for real-time services to enhance the overall customer experience, accelerating existing slower and typically manual processes.

Whilst Ping An Group has been using API technology for around six years, the adoption within its Treasury and Finance function is a more recent development. Ping An Group is one of the early adopters of financial API technology within the Asia region, having gone live with it in mid-2018. It initially focused on automated retrieval of real-time balance information. The group is now also using real-time API messaging to enable a fully automated and real-time account statement retrieval process.

Until Q12018, Ping An Group's OneConnect Open Platform had developed several hundred interfaces; more than half of them were applicable. In 2018, its OneConnect AI Research Institute opened more than 20 core technology APIs, exporting AI capabilities to other companies.

With so many emerging technologies now available, albeit at different levels of maturity, resilience and scalability, Ping An Group's strategy is to take a more layered approach to help move initiatives forward in a more timely manner. For group-wide problems, a broader analysis is undertaken, with decisions made at a management level. This ensures there is a clear understanding of commercial relevance at an individual business level. It also provides the top-down direction and support needed to help drive a smoother overall implementation on time and in line with quality and cost requirements. However, additional agility is provided by allowing enhanced flexibility at a subsidiary or business unit level where smaller scale initiatives would be more suitable, an example being the use of OCR technology to scan expense sheets.

With any digital transformation project, one of the key issues is around talent. The focus is on people who can understand the business models and challenges as well as the underlying technology. Having people with the skills to understand both aspects ensures the technology remains relevant to the business, and the resulting implementations deliver the required efficiency gains.

The digital transformation journey continues within Ping An Group with a focus on how to extend the use of API technology to solve real business issues. It's about taking an enterprise level view through two different lenses. The first looks at today, while the second has a more strategic aim and looks to forecast the future. Within Ping An, the executive group views the initial adoption of financial APIs as having been a success. There are always lessons to be learnt from the development and execution process, but it is important to be bold and think big about what can be achieved, with clear focus, commitment and partnership.

Citi sees further opportunities to embed financial APIs to accelerate processes and drive greater operational and financial efficiencies. From a treasury perspective, more accurate liquidity positions could be ascertained to drive optimum hedging and funding decisions through fully automated real-time balance enquiries. At a shared service centre level, accelerating cash application through automated real-time credit notifications could help support the rise in real-time payments systems around the world.

Financial APIs are just one of the emerging technologies that will help treasury deliver on a digital transformation journey. The Ping An Group's journey will continue as it explores other emerging technologies that will create more impact, help solve business issues and drive enterprise-wide value.

The entrepreneurial treasurer

> *In these volatile uncertain times, how can treasurers become more entrepreneurial and help firms explore and capture new growth and investment opportunities?*

Mr Joseph Lee

Director of Global Treasury Advisory Services, Southeast Asia

Deloitte

The bread and butter issues, and the outcomes (for example improving business cash flow, capital effectiveness and efficiency, and margins) differentiating good from poor business operations have not shifted.

The shift is in the speed and magnitude of change in the different enablers that support effective business operations, and these factors have made staying afloat dicier.

Changes in the geo-political, business and regulatory environments, exacerbated by the rapid and frequent disruptions in technological advancements, have increased the urgency for business operations to act. It has become crucial for companies to have a strategic roadmap of how they would invest and deploy appropriate technology to make sense of the business environment, identify opportunities and manage results.

It seems like only yesterday that many companies shunned being the first adopters of technology for reasons such as fear of change, and fear of failure. Back then, the punitive costs of being an early adopter (be it financial or non-financial) were also prohibitive in many cases.

Today, technology options and delivery platform choices are aplenty, and they cater to different budgets, scale of operations and complexity. New systems, artificial intelligence (AI) and automated processes can increase the processing and analytical bandwidth of corporations and provide platforms for sizing up opportunities in the marketplace.

For the treasurer, the entrepreneurial push towards successful adoption of the right technology could free up valuable manpower that can then be deployed to identify new areas of market growth for the company, and to develop strategic/tactical plans to manage treasury risks. Treasurers can consider actioning a number of initiatives to help identify and manage growth and investing opportunities. They include treasury management systems to provide the organisation with visibility and transparency over its financial resources and commitments and risks associated with them that will need managing. Electronic dealing, confirmation and settlement is a value enhancing add-on that provides the straight-through process for funding and risk management operations while standardising trading operations. Adoption of BOTs and robotic processing applications (RPAs), meanwhile, can help increase efficiency in data gathering, reporting and analytics.

Firms can also look to leverage the scale and reach of core banking relationships to enhance support for existing business operations while providing outreach to new business areas in different geographies.

As with all investments in an organisation, it is imperative for the treasurer to build a credible and achievable business plan. A plan that has clear objectives, timelines, return on investment and payback period will improve the odds for management and business buy-in, and provide the financial and non-financial resources for the work ahead.

The journey of a thousand miles begins with a single step. The treasurer's first step would be to take stock of where the organisation is and where it could be. The next steps following the assessment is where the treasurer's business entrepreneurship comes in.

Anton Abraham

Head of International Advisory, Global Transaction Services

Bank of America Merrill Lynch

In order to help their organisations navigate today's challenging macro conditions and shifting treasury landscape, treasurers need to be prepared to be more entrepreneurial. A key part of that is to leverage people, innovation and best of breed technology to find an incremental edge.

Technology in particular has moved from being an enabler to being a driver of change and, as the global marketplace changes, business models and operations need to adapt to remain competitive. This is especially true in Asia where the different markets, languages and regulations create a unique set of challenges.

We see three major areas that will impact a treasurer's ability to be more entrepreneurial and help firms explore and capture new opportunities. On the technology front, building a coherent and optimised technology strategy is key but takes planning and foresight, a keen understanding of current technologies, and, more importantly, anticipating how technologies may evolve. Indeed "TreasuryTech" is now developing so quickly that not adopting new technology will negatively impact treasurers' ability to manage risk, and capture opportunities. The real risk comes from not taking action in areas such as cloud for treasury applications, integration of multiple applications, management of master reference data and dashboard reporting applications.

Another big challenge for treasurers is leveraging data to identify emerging trends across global treasury operations, moving from reactive treasury management towards pro-active management across liquidity, financial risk management, investments, funding and working capital. Information harnessed from data provides treasurers with useful insights and enables them to optimise flows and capture new opportunities. Typically, we see treasurers focusing on data solutions related to cash flow forecasting, cash pooling, consolidated reporting, dashboards and real-time reporting. Even something as simple as automating the receipt of electronic bank statements can improve a treasurer's visibility over their cash position and enhance efficiency.

More broadly, there is the need to embrace disruption: stand out treasuries seek to drive a revolutionary spirit within their own teams, encourage team members to challenge processes and ways of doing business with a focus on collaboration across the organisation. In order to disrupt and innovate in a rapid test-and-learn fashion, organisations should seek to partner with banks and other advisors to develop digital solutions that are globally consistent and locally relevant.

In addition to the above, treasurers also need to stay informed on a number of emerging technology areas even if their commercial applications are still evolving. These include distributed ledger technologies (blockchain, tokenisation) across areas such as payments, trade finance and working capital management; and AI going beyond robotic process automation into cognitive intelligence.

Underpinning all of this is of course one of the most important assets a treasury has – its people. People will be critical in driving change and partnering with the business to formulate a corporate wide approach to explore and capture new growth and investment opportunities.

Prem K Thakur

General Manager – Finance/Treasury

Sopra Steria

VUCA, short for volatility, uncertainty, complexity and ambiguity, is becoming a trendy managerial acronym and while it may be trying a little too hard to become just that, it does have the merit of pithily summing up the key challenges confronting treasurers.

In this VUCA world challenges and surprises for treasurers have become the norm and with an entrepreneurial mindset I believe we can also leverage them to yield opportunities and add value for our firms. In the VUCA world treasurers who are agile and smart enough to keep pace with the change can really help their organisations grab opportunities.

Treasury functions are often global and handle a substantial portion of a group's worldwide balance sheet. One wrong decision or failure to act in a decisive and timely fashion can destroy a group's profitability and undermine its status in the eye of investors.

As custodians of their company's fund and shareholders' interest, treasuries now, perhaps more than ever, need to act as an entrepreneur force within the organisation. As such the treasury teams can support the wider business by identifying opportunities for novel investments, acquisitions, and leveraging offshoring models more effectively.

The development of the VUCA world we now have to contend with can be traced back to the 2008 financial crisis, the subsequent Eurozone debt crisis and through to more recent economic events. All have contributed to challenges confronting treasurers today. Coupled with the rising cost of capital, governance and risk profiling treasurers' responsibilities and strategic roles have been transformed significantly. Their unprecedented access to boardrooms nowadays is an indication of the scale of the transformation in their role.

In the VUCA world treasurers needs to move on from just dealing with numbers, finances and compliance to actively collaborating with the wider business to add value. As entrepreneurial treasurers, their remit is broader, more demanding and will almost certainly require the learning of new skills.

In adding value for the wider business, the entrepreneurial treasurer has to "enable, enhance and engender". Ensuring visibility and control of cash positions; eliminating unproductive working capital; negotiating global funding lines with relationship banks/financial institutions; counterparty risk management; managing sovereign difficulties and associated regulatory uncertainty; and revising and applying improved corporate governance and policy control are among the key responsibilities.

Perhaps the biggest challenge though will be changing mindset with regards to technology. That means justifying to the wider group the need for investment in automation. It will also require keeping an eye on developments with AI and blockchain and upgrading technological skill set and know-how.

There is however no one way for developing treasury as an entrepreneurial force within an organisation. It can be accomplished in a variety of ways and to a variety of degrees, depending on how a corporate wishes to target its business segments.

Next question:

"Constantly changing regulations across the larger Asian markets present a big challenge for APAC treasurers. How do you manage to keep up to date with them consistently?"

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

Holistic STP

STP in treasury is often looked at in an atomistic way, for instance, avoiding rekeying payments into e-banking systems and rekeying foreign exchange deals into treasury management systems. To get maximum efficiency, STP has to be viewed in a holistic way.

With the digital era over half a century old it is surprising how many treasuries still interface with operating companies and even banks with email and Excel spreadsheets. But the fact that email and Excel enable enterprise-wide data to be collected and processed ipso facto proves that all the needed data is available in some system or other.

The real problem is normally that the data is in disparate systems. Some may be too old to have modern APIs yet they are capable of outputting something that ends up in Excel. And whatever Excel can read (or have pasted into it), other systems can read.

The key point is that the data is out there, and normally in some kind of structure that makes it machine readable. Machine readable data is better handled by data processing, ie software, than by humans. This is especially true of finance data that treasury normally consumes.

ERP

In the dreams of ERP vendors, all this should be moot. After all, ERP means enterprise resource planning, and the idea is that everything is integrated in the ERP. Also, the 'planning' part of ERP implies business plans, including financial plans – meaning treasury can simply read the cash flow forecast from the ERP.

That's the theory. In practice many enterprises use their ERP as a glorified general ledger. So before diving into APIs and robotic process automation (RPA) and other work arounds, it makes sense to investigate why ERP is not being used in an integrated manner. Often it is because implementing basic accounting functionality was such a costly nightmare that no one wants to try other functionality. Or else IT is overwhelmed with the two-yearly version upgrade cycle – anyone for SaaS?

Treasury will probably not drive full implementation of ERP across the enterprise but it may be worth it investigating whether the ERP might provide a decent solution for cash flow forecasting.

Connecting systems

When, for whatever reasons, there is not one integrated ERP covering treasury's information needs, some way of connecting systems is required. The bad old way of connecting systems is to manually rekey data from one system into the other.

Arguably more dangerous is to copy-paste from the source system into Excel, mess up the data in Excel with formula errors and more copy-pasting, and then copy-paste the resulting stew into the target system. Compared to the bad old way described previously, this simply allows humans to mess things up at scale.

File transfer is much more reliable and still a very valid way to connect systems. Typically, the source system exports a file to a directory, which the target system is checking regularly, and when the target system detects the file it imports it. This has been used for decades and is reliable and convenient.

A lot of corporate to bank communication is done in this way using SWIFT standards. The bottom line is if the data can be put into Excel (other than by rekeying) then it can be transferred to the target system – thus avoiding all the risks involved in manual handling, not to mention all the brain atrophy that involves.

File transfer typically handles bulk transactions. It is possible to export an individual transaction but most file transfers comprise many transactions. Status messaging and error handling in the file transfer space is typically by return file. In other words, the source system exports transactions, the target system imports transactions and exports the status of import in another file which is in turn read by the source system. Although this may sound a bit lugubrious, in practice it normally happens within seconds.

API

APIs are designed for atomic transactions – an API sends and reports status on each individual transaction. This is conducive to near real-time processing between systems.

Although APIs are much in the news following PSD2 and other API and open banking initiatives, they are as old as computers. For example, "apps" use API calls for operating system services such as reading the keyboard and saving files. The browser is using API calls to display this text on the screen now.

APIs are used within ERPs to enable different modules to communicate. And they are extensively used on the web, for instance in 'mash-ups'.

Using APIs between different systems requires that both source and target systems use compatible APIs. To a limited extent, middleware can translate between different API standards. Older systems that do not support APIs cannot easily be connected via API.

To illustrate, consider SWIFT. FileAct is a file transfer method of corporate to bank communication. FIN is an API method of corporate to bank communication – individual MT101 messages are checked and acknowledged by the SWIFT network before being sent on to banks.

APIs – where available – are generally the best way to connect systems, and are likely to be the most future proof.

RPA

RPA is an important evolving technology for those situations where APIs and file transfers are not feasible – typically because of old systems and/or lack of budget.

RPA is at its core a way to automate manual operations on computer systems, based on screen scraping. An RPA can broadly repeat any sequence that a human would do. For example, click the "Add" button, key in transaction data, then click the "Save" button.

Anyone who has faced inscrutable error messages and other computer glitches will guess that the above quickly gets more complicated in the real world. So, RPA vendors build in various degrees of flexibility and even intelligence to keep the robots running smoothly.

Advanced RPAs can be programmed to make simple decisions that humans would otherwise make, and are being rolled out for insurance and mortgage application processing, for example.

In the context of connecting systems, a typical use case for RPA would be to scrape transaction data from the screen(s) of source system and key that data into the target system. In practice, commercial RPA software can also process the data that it handles, for instance to validate or translate data.

Example use case

Foreign exchange (FX) hedging is a process which is often not handled in a holistic manner. A typical legacy process might run over a dozen steps beginning with the subsidiary manually collecting data from sales and procurement systems, building an Excel of expected FX cash flows for their entity and emailing that to treasury, which then has to progress it further through many more steps like copy-pasting to consolidated Excel; manually entering new net forwards to be executed into eFX platform; checking confirmation emails and approving payments before finally being able to manually reconcile bank accounts.

This is all fraught with risk of errors and probably requires multiple reconciliations and manual checks to ensure reasonable accuracy. It can be much improved from operational risk and cost perspectives.

The reformed process begins with sales and procurement data being exported to the TMS directly and synchronised with forecasts therein. The TMS uploads new net forwards to the eFX platform; treasury manually prices new net forwards to be executed on the eFX platform; the eFX platform uploads executed forwards to TMS; confirmations are handled by either with only exceptions needing human intervention; TMS exports required payments to banks and auto-reconciles bank accounts, again with only unreconciled items needing human intervention.

This is much safer and cheaper, and also frees employees for more value-added activity. It can be implemented even in the most heterogenous system environments, even sclerotic legacy systems.

Conclusion

Current technologies enable treasurers to stitch together disparate systems to build effective processes that reduce risk and save time and money while making employees happier. It is no longer necessary to wait for new silver bullet solutions – alloys are more durable.

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.

Clients located all over the world rely on the advice and expertise of Acarate to help improve corporate treasury performance. Acarate offers consultancy on all aspects of treasury from policy and practice to cash, risk and liquidity, and technology management. The company also provides leadership and team coaching as well as treasury training to make your organisation stronger and better performance oriented.

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ERP-DRIVEN SUPPLY CHAIN FINANCE:

A TREASURY GAME-CHANGER?

ERP systems have been a boon for companies looking to optimise performance and now they are promising to even leverage blockchain-driven solutions for supply chain finance.

Enterprise Resource Planning (ERP) systems on premise or in the cloud are commonly used by companies of any size in any industry to support their internal business processes and overall business performance. They can, for instance, help reduce labour costs, IT expenses and improve interactions between staff and companies.

Rather less appreciated is the critical role ERP applications play in global supply chains, according to Oliver Belin, Chief Marketing Officer at TradeIX, a company that provides working capital and trade finance solutions leveraging blockchain. He points out that in a manufacturing environment, for example, ERP systems ensure that all required materials to produce a final product are available in the right place at the right time. ERP systems also deliver real value when linked to the sales forecasting system. When sales are booked for a product, the corresponding raw materials can be automatically ordered without the need for any human intervention. On the procurement side, suppliers, payables information and the invoice approval processes are also all managed with the ERP system.

"ERP systems store company-wide and trade-related data, critical for the ongoing operation of any business. As such, data captured and stored in the ERP system can be considered as the source of truth," says Belin, who has previously held supply chain finance positions at PrimeRevenue, GSCF and Sumitomo Mitsui Banking Corp.

In recent years, ERP solutions have migrated to the cloud as this offers firms lower operational costs and the potential for leveraging other cloud-based enterprise solutions, such as seamless electronic invoicing, within an ERP environment. Belin, however, says that supply chain data transfer and exchange processes are still costly, lengthy and not scalable. But with digital transformation gathering pace, Belin believes there is "a fantastic opportunity for companies and institutions to leverage emerging technologies to revolutionise trade finance, making it smarter, more transparent and better connected".

Simplify your processes

One promising, emerging solution is the Marco Polo ERP App, an application that can be fully embedded into a company's ERP system such as Oracle NetSuite and is focused on trade and working capital finance. The solution is delivered by the Marco Polo Network, a fast-growing trade and working capital finance network that leverages the Corda blockchain technology. The consortium comprises technology firms such as TradeIX and R3, as well as over a dozen banks including ING, Commerzbank, BNP Paribas, LBBW, NatWest, Natixis and SMBC.

Belin says that with the Marco Polo ERP App, accessing liquidity and improving working capital is simplified by a factor of one hundred with an unparalleled user experience: "With a simple invitation from a corporate, a trading partner can start the registration process and join the trade finance programme. The whole registration process is performed automatically and is integrated within the ERP system. The trading partner no longer needs to perform any system integration or lengthy onboarding processes. The ERP-embedded App also increases security as KYC information only needs to be submitted once and can be shared securely with other permissioned parties for future requirements."

Other blockchain-driven initiatives in trade that have been developed include the Maersk global cross border supply chain solution; the Yijian Blockchain Technology Application System in collaboration with IBM; Chained Finance launched by China-based electronic firm Dianrong and online marketplace lender FnConn (a Foxconn subsidiary); and the Mahindra common platform with IBM.

INSIGHT & ANALYSIS

Faster payment rails

Dealing with cash is a slow and costly process so the global rise in digital payments – forecast to hit over US$2trn by 2020 – is no surprise, with Asia developing faster payment rails rapidly and moving ever closer to real-time reconciliation and settlement. Benefits for consumers and firms promise to be great, but the developments will also present treasurers with new challenges.

TREASURY PRACTICE

Treasury role in growth

With the global economic outlook uncertain and volatility expected to increase again, treasurers are set to play an important role in helping their firms not only navigate difficult times over the near term but also identify and capture new growth and investment opportunities. In doing so they will look to technology to automate processes as well as new offerings such as AI and robotics.

BACK TO BASICS

Power of KPIs

Performance metrics that are communicated to the wider business provide treasurers with an important means of measuring how effectively objectives are being met. Indeed, an effective KPI strategy is essential for treasurers looking to develop a more strategic role as it can help demonstrate clearly to management their support for the organisation.

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

Jonas Falk, Managing Director, SKF Treasury Centre Asia & Pacific; David Blair, Managing Director, Acarate; Steven Beck, Head of Trade and Supply Chain Finance, Asian Development Bank; Ajay Sharma, Regional Head of Global Trade and Receivables Finance, Asia Pacific, HSBC; Agatha Lee, Head of Global Trade and Loan Products, Asia Pacific, J.P. Morgan; Peter Jameson, Head of Asia Pacific Trade and Supply Chain Finance, Global Transaction Services, Bank of America Merrill Lynch; Venkat ES, Head of Asia Treasury Product, Global Transaction Services, Bank of America Merrill Lynch; Aidan Shevlin, Head of Asia Pacific Liquidity Fund Management, J.P. Morgan Asset Management; Anton Abraham, Head of International Advisory, Global Transaction Services, Bank of America Merrill Lynch; Adhitya Wisesa, Director, Head of Institutional Liquidity Management, APAC Global Coverage Group, DWS; Varoon Mandhana, Senior Advisor, APAC Solutions, Treasury Services, J.P. Morgan; Aziz Parvez, head of Asia Pacific Corporate Sales, Global Transaction Services, Bank of America Merrill Lynch; Frederic Neumann, Co-head of Asian Economics Research, HSBC; Nigel Dobson, Banking Services Lead, ANZ; Leigh Mahoney, Head of Wholesale Digital, Institutional, ANZ; Royston Da Costa, Assistant Group Treasurer, Ferguson Group; Bob Stark, VP Strategy, Kyriba; Rajesh Mehta, Head of Trade and Treasury Solutions, Asia Pacific, Citi; Marieke Saeij, Chief Technology Officer, Onguard; Galia Elizondo, Global Product Manager, Cash Management, Finastra; Jelle Goossens, Head of Group Treasury, Barry Callebaut Group, Singapore; Michael Fei, Board Secretary & Chief Strategy Officer, Ping An OneConnect Smart Technology Co., Ltd; Mark Sutton, Director, Treasury Advisory Group – Asia Pacific, Treasury & Trade Solutions, Citi; Joseph Lee, Director of Global Treasury Advisory Services, Southeast Asia, Deloitte; Anton Abraham, Head of International Advisory, Global Transaction Services, Bank of America Merrill Lynch; Prem K Thakur, General Manager – Finance/Treasury, Sopra Steria; Oliver Belin, Chief Marketing, Officer, TradeIX.


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