September/October 2018

treasurytoday ASIA

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Renminbi: the next reserve currency?

Internationalisation of the renminbi directly challenges the supremacy of the US dollar as the world's reserve currency. How likely is it to become a reality and what do treasurers need to know about working with this currency?

The Corporate View

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AVP – Head of Treasury

Amway India

Women in Treasury

Yeng Butler

Senior Managing Director,
Global Head of Cash Business

State Street Global Advisors

Insight & Analysis
AI: threat or opportunity?

Banking
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Back to Basics
What a credit rating really means

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Is the crypto gold rush over?

The internet is slowly becoming a crypto-graveyard. This is after cryptocurrency after cryptocurrency, often created as part of an initial coin offering (ICO), lose their value, rendering them worthless. In fact, one website which tracks failing cryptocurrencies claims that there are over 800 cryptocurrencies that trade for less than a cent.

This raises serious questions about the legitimacy of the ICO market, which is largely unregulated. Yet despite this, money continues to pour into ICOs. Companies raised US$3.8bn via ICOs in 2017 and by July this year fundraising through ICOs had hit US$11.9bn.

The problem is that for every legitimate fund raising there are several ICOs that are scams or jokes. Some of these are obvious, such as BUTT-Coin and Koindashian. Others, however, seem legitimate. Take LoopX, for example, the coin was created as part of an ICO to raise money for what seemed like a promising lending platform. Then just after the ICO they took down the website, left Twitter and cleared off with the money. As a result of these scams, investors lost US$233m in 2017 – much more was lost due to the proceeds of ICOs being stolen by hackers as well.

The fact that ICOs have gone this way shouldn't be a surprise; ICOs are like the California Gold Rush or DotCom bubble in the sense that people think they can get rich quick and ignore the risks. It is a shame that ICOs are being tarnished though, because legitimate ICOs offer businesses an innovative way to raise funds quickly and without the costs associated with traditional forms of fundraising. ICOs also democratise finance, allowing retail investors to access a wider range of investment products.

It's not just the cryptocurrencies created through ICOs that are having a tough time. The grand-crypto-daddy itself, Bitcoin, is also struggling and has fallen around 70% since it reached its record-high of US$20,000 in 2017. Morgan Stanley states that Bitcoin's decline is happening 15 times faster than the bursting of the DotCom bubble.

What does this all mean? Is crypto-mania over? Has the cryptocurrency experiment been a failure? Probably not, the likelihood is that cryptocurrencies are here to stay in some shape or form. In fact, they will likely develop over time as technological advancements, enhanced security and greater regulation rebuild confidence and enhance the coins utility.

So, whilst cryptocurrencies shouldn't be the number one topic of discussion within the treasury department, it would be remiss to ignore them. If the last few years have proven anything, it is that technology trends evolve quickly and something can become widely used almost overnight. Treasurers, therefore, don't want to miss the opportunity to perhaps issue an ICO or receive payments using a cryptocurrency if that is what customers want. Ultimately, like with most things, treasurers must proactively monitor what is happening, ensuring the business is ready to act when the time comes.

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Joint Publisher & Head of Strategic Content
Sophie Jackson

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Editorial
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Sarah Arter

Circulation Assistant
Sophie Friend

Digital Content Manager
Joanna Smith-Burchnell

Creative Designer
Robert Murray

Founder & Director
Angela Berry

Chair
Richard Parkinson

Switchboard	+44 (0)13 0462 9000
Publishing	+44 (0)13 0462 9005
	+44 (0)79 4665 6656
Memberships	+44 (0)13 0462 9013
Advertising	+44 (0)13 0462 9018
Editorial	+44 (0)13 0462 9003
Production	+44 (0)13 0462 9019

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memberservices@treasurytoday.com

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AI will not take your job

Artificial intelligence is slowly moving into the mainstream. Should we start bowing to our new robot overlords now, or get ready for an era of far greater productivity and job satisfaction? We look at the strengths, weaknesses, threats and opportunities that treasurers can expect from this technology.

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Yeng Butler

Senior Managing Director, Global Head of Cash Business

Yeng Butler is Senior Managing Director, Global Head of Cash Business at State Street Global Advisors. Personal development has been a strong theme throughout her career. With a strong belief in the power of self-reflection, she uses an understanding of her own successes and failures to drive continuous self-development.

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SWIFT VERSUS RIPPLE:
A MARATHON BOUT

Is the fintech challenger's promotion of blockchain as the future of cross-border payments more convincing than the long-established SWIFT's payments initiative?

Will the future of cross-border payments be determined by SWIFT or Ripple? The latest enhancement to SWIFT's service was announced in August. It said that 22 participants – ten major multinational corporates and 12 major global banks – would begin piloting a new multi-bank standard to improve the cross-border payments service for multi-banked corporates.

According to the co-operative: "This enhanced standard… streamlines the process for corporate treasurers by allowing them to initiate and track gpi payments to and from multiple banks in a single format and integrate gpi flows in enterprise resource planning (ERP) and treasury management systems (TMS)."

The names signed up for the pilot make an impressive roll call, with Airbus, Microsoft, General Electric and Roche among the corporates and Bank of America Merrill Lynch, Citi, J.P. Morgan and Deutsche Bank as participant banks.

Microsoft's Group Treasury Manager, Lisa Wagner, commented: "The ability to access a greater level of payment information in a timely manner through SWIFT gpi will bring immediate benefits to our payments experience with greater transparency and responsiveness to our vendors. Providing multi-bank information all in one place and in the same format fits into our modern finance roadmap."

While the latest initiative sounds impressive, Ripple's response to new developments in the gpi service is usually that it can do the same, but better. Speaking at the Hong Kong event in late June, Ripple's director of joint venture partnership, Emi Yoshikawa, dismissed improvements to gpi as marginal because "SWIFT was built 40 or 50 years ago, before the internet was created. So their architecture is very old. They realise that this is a big problem and they consider us a big competitor".

A major differentiator between the two rivals is that SWIFT is lukewarm towards blockchain. Having trialled the technology last year it decided that while the results were encouraging, blockchain wasn't yet sufficiently developed for it to be deployed globally.

Wim Raymaekers, SWIFT's Global Head of Banking Market, recently confirmed: "We are still experimenting with blockchain, but as others have acknowledged, it isn't ready for wholesale payments, much less in the cross-border area. We will continue to look at and develop technologies that could help improve the cross-border payments experience even further – using application programming interfaces (APIs) for instance."

Yet Ripple has been able to attract more than 100 financial institutions to its enterprise blockchain network. In April this year, Banco Santander announced the launch of One Pay FX, the first blockchain-based international money transfer service using xCurrent, a technology based on Ripple's distributed ledgers. Initially offered to retail customers in four countries – Spain, the UK, Brazil and Poland – the service will be steadily rolled out to other countries.

"Blockchain technology offers tremendous opportunities to improve the services we offer our customers, and the launch of One Pay FX is the first of many potential applications," declared Santander's Executive Chairman, Ana Botín.

However, while many banks are ready to use Ripple's messaging services, they are markedly less keen on adopting its XRP cryptocurrency. On its website, in response to the FAQ 'How many financial institutions have adopted XRP?' Ripple answers:

"MoneyGram, MercuryFX, IDT, and Cuallix – four major payment providers – have publicly announced their pilot use of XRP in payment flows through (XRP-based) xRapid to provide liquidity solutions for their cross-border payments. Ripple also has a robust pipeline of financial institutions who plan to use XRP through xRapid in their payment flows in the near future."

Perhaps more detail on this 'robust pipeline' will emerge in late October, when the two contenders square up in Sydney at Sibos 2018 for the latest round of their tussle.

CRYPTOCURRENCIES:

ACCEPTANCE AND ACCEPTABILITY

Uncertainty and volatility have been characteristics of bitcoin and its offspring, making many financial professionals wary of cryptocurrencies. Is it time to rethink this attitude?

Will 2018 be the year that treasury departments start taking cryptocurrencies seriously? There are signs of interest now in the SEC ranks. Hester Peirce, who joined the regulator last January as a commissioner, has recently spoken of how “we’re not great with respect to innovation as an agency” and that the US risks falling “behind the curve” in not being more receptive to the cryptocurrency industry.

She has reason to be concerned. Cryptocurrencies are inextricably linked to blockchain technology, which even China is keen to encourage. A growing number of regulators around the world are deciding that standing in the way of cryptocurrency innovation is a Canute-like activity and devising basic guidelines instead will prove rather more productive.

China’s recent crackdown increasingly looks like a move to delay the inevitable as other Asia Pacific economies look to accommodate cryptocurrencies. Japan was the first country to accept bitcoin as legal tender back in April 2017 and has recognised more than a dozen companies as registered cryptocurrency exchange operators in the past year. Japanese banks are reported to be working on their own digital currency, the J-coin, to be launched in time for the 2020 Olympics and to wean consumers off cash.

Japan’s lead was quickly followed by Australia, where bitcoin has been officially accepted for just over a year and the Australian Securities and Investments Commission (ASIC) is proving proactive on issues such as the treatment of ICOs. Add to these pioneers other APAC locations, such as South Korea, which is fast becoming a major cryptocurrency hub that accounts for 14% of the bitcoin market and Thailand, which has just announced the launch of Project Inthanon, a proof of concept trial for developing a national cryptocurrency.

Asia Pacific might lead the pack, but other regions are closely following. The Jerusalem Post reported that Israel’s Finance Ministry and the Bank of Israel are reviewing the possibility of developing a state-backed cryptocurrency, the digital shekel, which would be employed in the government’s campaign against tax evasion.

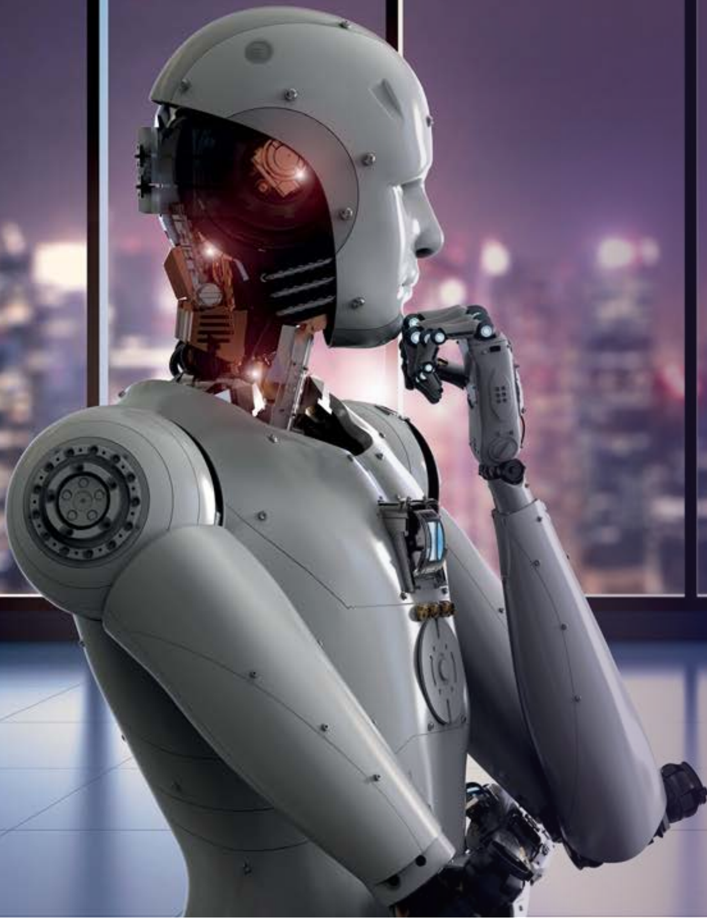
It’s clear that the momentum is building and the increasing automation of life over the next few years will pave the way for the greater acceptability of crypto – particularly as it affords consumers the opportunity to cut out the middleman when making payments.

For corporate treasury departments, cryptocurrencies have carried too many negative connotations, including price volatility and their use in activities such as scams and money laundering. However, just as the dotcom boom to bust of two decades ago saw survivors develop into today’s major tech names, the merits of cryptocurrencies may now come to the fore if they no longer offer a means to get rich quick.

The big question is whether they will steadily supplement – or even in time replace – fiat currencies? The progress that many countries are making towards a cashless society and the imminent disruption that automation will cause to everyday purchases and bill payments, suggest that crypto is here to stay.

If the resistance of bitcoin deniers such as China gradually melts away, a more unified regulatory approach could develop worldwide. This would open up possibilities such as using cryptocurrencies as an international payment method and avoiding FX, once they become commercially accepted.

A recent KPMG study concluded: “It is evident that a ‘serious crypto-community’ is taking shape whose ambition is to bring cryptocurrencies out of the shady, highly speculative niche they have occupied to date.” As this year’s conference season nears, it’s a prospect likely to be widely debated over the coming weeks.



AI will not take your job

Depending on what report you read, we are either all about to be usurped by robot overlords or enjoy far greater productivity and job satisfaction with technology's help. Although not yet mainstream in treasury or corporate banking, what should we make of the threat/opportunity that is artificial intelligence?

The truth about any situation when monumental change is predicted is often surrounded by equal parts hype and fear. The reality, usually, turns out to be somewhere in between. The use of artificial intelligence (AI) in business has risen up the agenda in recent times and is now a fixture with content providers in many sectors. But for those at the sharp end of treasury, is it a threat or an opportunity?

AI is sometimes seen as an all-knowing, all-conquering conscious mind; something to be feared. But worrying about AI taking over our lives is the equivalent of worrying about pollution and over-population on Mars, according to AI expert Andrew Ng, Chief Scientist at Chinese web search giant, Baidu, and an Associate Professor at Stanford University. We are, Ng writes, a very long way from facing up to the killer robots. Thoughts of this kind, he has concluded, are "an unnecessary distraction" to progress in this field of endeavour.

AI today

AI at the moment is not much more than a complex mathematical equation, says Matt Armstrong-Barnes, Chief Technologist, Hewlett Packard Enterprise. Asked if AI will change business processes, he responds with an emphatic 'no'. "AI today is a tool that ingests a lot of information and uses machine learning to provide a critical input for humans to make a decision." The emphasis here, he says, is on 'human' decision-making.

Of course, it can be hard to work out the reality of AI through all the noise. But whoever or whatever is taking the decisions, one thing is certain and that is "AI is revolutionising every industry and is transforming our lives", says Alex Housley Founder and CEO, Seldon, an open-source machine-learning framework vendor.

Housley concurs with Andrew Ng's belief that AI is "the new electricity". Indeed, he says, with the ready availability of some "fantastic tools", businesses should now be taking advantage of what AI can offer. But AI has been around since the 1950s (and arguably even before then), so why is it only now coming to prominence?

For Kristian Luoma, Head of financial services firm, OP Financial Group's OP Lab, the stars have now aligned. Key 'stars' include the availability now of so much more data, the pace of technological development at the heart of computing (particularly CPUs and GPUs), and consumer behaviour trending massively towards digital channels. The importance of the latter should not be underestimated.

Luoma agrees with Armstrong-Barnes that, for business, back office processes won't be subject to wholesale change. However, he does see an opportunity for certain processes or interfaces to be replaced by the introduction of what he calls "maths-based recommendations". Currently, this notion is serving to reduce the amount of time consumers must spend interacting with the services being created for them, increasing their satisfaction – and expectation – levels. As more is expected from the digital experience, it will play a significant driver for the uptake and eventual cross-over into business applications.

Indeed, for Husayn Kassai, CEO of identity verification software company, Onfido, the need for businesses to address customer satisfaction is one of the drivers for why AI is now coming to the fore. The capacity, for example, for banks to on-board customers quickly and cost effectively in an environment where fraud is such a huge regulatory issue, will increasingly rely on AI-based tools to keep them engaged, he believes.

Light and dark

Despite Ng's reassurances, with the acceleration in the past couple of years of 'deep' machine-learning capabilities, and the increasing pools of data from which AI can derive answers, people do worry about it. Less about evil super-intelligence perhaps but certainly about losing their jobs and their place in the labour market to machine-learning technology.

The increasing presence of AI as an agent of change has seen opinions polarise. PwC research has shown that AI is a commercial opportunity that could boost global economic output by 14%. This, it noted, equates to GDP gains of US$15.7trn, making it "the biggest commercial opportunity in today's fast changing economy". Furthermore, US-based not-for-profit think tank, the Institute for the Future, and its panel of 20 technology, business and academic experts from around the world, expectantly suggests that 85% of the jobs that will exist in 2030 haven't been invented yet, so there is much to look forward to.

But then McKinsey reported the darker side of AI. Using conclusions drawn from detailed analysis of 2,000-plus work activities for more than 800 occupations, it reports that about 30% of tasks in 60% of occupations could be automated using current technologies. "As automation advances in capability, jobs involving higher skills will probably be automated at increasingly high rates," it warned. Realisations of this nature have led to Bank of England Chief Economist, Andy Haldane, to claim that in the US and UK alone, about 80m and 15m jobs respectively could be taken over by robots.

Hope and fear, it seems, are pedalled freely. In the treasury space, because AI is yet to be adopted with any real vigour, the facts are few and far between. Here, readers of a certain age may be reminded of the battle between VHS and Betamax video formats; consumers and producers followed one or the other trend, initially the outcome being difficult to predict. Eventually VHS came out on top and was everywhere, at least until that too was superseded.

The point is that following the 'right' technology can be a gamble at the early stages – precisely where we are with AI in the context of treasury and corporate banking. The talk is loud but the action limited as the ideas and use cases jostle for position. Making a point of understanding the trends has great value because those heeding the advanced warnings will have a clear advantage over those who do not.

Consumer driver

Just as it has with the advance of mobile technology, the consumer space is likely to lead the march of AI into the realm of business adoption. The advent of High Performance Computing and massive leaps forward in GPU and CPU technology has enabled the vast data processing and presentational needs of AI to be met in non-specialised environments.

The consumer world now abounds, for example, with online chatbots using powerful and quick-learning AI technology to steer sales conversations to a positive conclusion. As Armstrong-Barnes points out, in the insurance sector, chatbots are more successful at selling than their human counterparts. With the so-called millennials more aligned with the culture of messaging than previous generations, he argues that this format will only grow in strength.

That's not to say the corporate space is not without its adventures in AI. Some banks are offering a practical nod to its adoption with applications handling banking back office operations, trading, risk management, fraud detection and KYC compliance. Others have deployed AI in the realm of customer services, having recognised the need to reduce the time customers spend interacting with online portals.

Bank of America Merrill Lynch and Wells Fargo, for example, are using 'virtual assistants' to help deliver a quicker and more relevant service to their retail customers, so how long will it be before the more complex needs of corporate clients are tackled in this way?

It is true that a treasurer presiding over multiple accounts, multiple locations and currencies, and even multiple access rights, is a much bigger challenge. But just as mobile has ridden high on a consumer wave that is now breaking over the commercial space, the use of AI tools in retail seems to be a warm up exercise for the committed bankers of corporates – and not just as a risk management tool.

J.P. Morgan is said to spend around 40% of its US$10.8bn annual technology budget on new technology including AI, RPA and blockchain. It has already rolled out mobile apps for its trading community, and now it is deploying Amazon's voice-activated assistant, Alexa, to give its investment banking clients an easier AI-driven way to use its research database.

The plan is eventually to enable AI to help its treasury clients navigate the bank's online portal and be able to ask an online assistant for balance information. By continuously learning from user questions and online behaviour, the so-far nameless system, which the bank reports as being in pilot mode, is expected one day to be able to offer clients alerts and actionable options based on predictions.

AI at the cusp

The stage AI is at now makes it a useful tool to manage vast quantities of data. It has the capacity to tackle highly complex business processes and to create new opportunities, offering the kind of rapid insight – including behavioural and pattern analysis – that otherwise would not be possible. This, says Housley, could be a vital boost for treasurers who lack immediate insight into how efficiently subsidiaries are using cash, for example, with this data subsequently fuelling improvements in their working capital, forecasting and funding models.

Through the identification of patterns and characteristics within increasingly vast data pools, AI can also begin to move beyond simple insights and start to assist the improvement of processes. For treasury, a prescriptive model is envisioned where the dynamic use of data – on cash flows, balances and so on – can be turned not just into warnings on limits but also suggestions to optimally route payments, for example.

Virtual assistants could even be used to provide help with supplier negotiations or make bespoke recommendations for certain FX exposures. The transaction banking community's oft-repeated claim that its advisory role is taking a bold step forward would certainly be supported by such tools.

A question of ethics

As with most forms of data use, AI is subject to ethical and social enquiry. For Housley, the need to maintain

> AI is a tool and it is one that needs to be used effectively; you need to choose and to plan how you use it and it needs to be part of a wider strategy.
>
> Matt Armstrong-Barnes, Chief Technologist, Hewlett Packard Enterprise

'explainability' of decisions is a vital consideration. As data users use AI to move away from hand-crafted rules-based processing, and simple ways of drawing conclusions, and start to hand over decisions to "highly complex and uninterpretable black boxes", he feels there is a risk of not being able to offer clear reasoning for the decisions being returned (why was this loan not granted?), a state that is not acceptable under GDPR, for example.

Armstrong-Barnes argues that the discipline of "algorithmic accountability", dissecting how an answer was arrived at, is something that must be fully developed as decisions become more reliant upon AI. This is essential to address any notion that business is entering a dark age where "the computer says no" and that's the end of it.

AI decisions can be based on extremely complex data manipulations and their formation, he notes, can become almost impenetrable for normal human intellect. "If we get to the point where we can't understand and explain the complexity of the machine-learning algorithms, we have to build something that will understand them."

Both Kassai and Housley raise the idea that bias exists in most data sets. Even if sensitive fields are removed, machine-learning algorithms can find patterns elsewhere in the data, or make assumptions based on insufficient data, inadvertently reintroducing those biases. Machine learning programmers need to be mindful of such cognitive bias, just as those interpreting output need to avoid applying their own partial readings, if the output is to be of any use.

As a mark of the seriousness with which this is taken, Microsoft has formed an academic team, FATE – Fairness, Accountability, Transparency and Ethics in AI – to try to tackle this issue. "As we move toward relying on intelligent agents in our everyday lives, how do we ensure that individuals and communities can trust these systems?", it asks.

For OP Financial Group's Luoma, the opportunity to derive more from data, whether that's using data in medical research to detect problems ahead of time or in banking to reduce fraud, the advantages to all stakeholders can be compelling. However, he says, even though protection regimes such as Europe's GDPR offer "sound principals on how privacy is taken care of", it will be quite a "balancing act" between function and fairness going forward.

Human after all

"AI needs a human being," states Armstrong-Barnes. As a defence against an unlawful decision, for example, "the computer told me to" is unlikely to be acceptable, he notes. "AI is a tool and it is one that needs to be used effectively; you need to choose and to plan how you use it and it needs to be part of a wider strategy."

As with any data source, whatever is put in, dictates what you will get out. As Armstrong-Barnes has said, AI is just a mathematical algorithm: "we need to make sure that humans beings are the decision-making entity".

For Kassai too, "the importance of human judgement should never be forgotten". As such, he believes that it must be possible for data-related issues to be dealt with as exceptions by small teams of highly skilled individuals, not large teams of unskilled personnel. The implication for professional treasurers is clear; expertise will always be required.

Job or not?

Ultimately, will AI lead to job losses? Most likely it will: "fewer resources with higher skills, but becoming a lot more effective", explains Luoma. With treasurers typically operating in lean teams and almost always charged with doing more with less, AI presents an opportunity to remove many or all mundane, repetitive tasks. This can enable treasurers to focus on adding value, tackling more complex and unexpected situations, where experience is essential. As McKinsey has said, "the majority of the benefits may come not from reducing labour costs but from raising productivity".

AI's raison d'être is, arguably, to learn and take over certain tasks from humans. For some professions the human touch remains essential to the task. Just as few today would be happy to know that the commercial plane they are travelling in at 38,000 ft has no pilot (the basic technology to fly planes without pilots already exists), so removing the human element when it comes to an organisation's financial existence would unsettle all but the most committed.

'Turn it off and turn it on again' is common but often-experienced reality when working with technology. This is a somewhat flippant argument perhaps, but the fact is, human intervention will always be necessary. Direct contact with the situation (an airline pilot correcting computer error, for example) is often required for successful decisions to be made.

This is perhaps why the concept of Expert Automation and Augmentation Software (EAAS) may offer the right balance that Luoma talks about. EAAS uses machine learning to seek out highly complex patterns in data and to automate tasks, leaving the human to step in where professional skills can be applied to context.

Whilst tomorrow's treasurer may have a whole new approach to that intervention, preparation for what is to come should start now. The future of the profession lies not in worrying about being replaced, but in accepting the challenge to keep up to date with the skills, knowledge and the technologies that are on the horizon today. The rules of progress then are simple: first start, then keep moving, but make sure skilled humans keep a watching brief.

The winner takes it all? Not quite in the battle of fintechs vs banks

The notion that corporates may one day do all their banking with tech groups seems entirely possible. It's forcing an urgent revaluation between banks and their corporate clients of where the true value in their relationship rests. From the outside, corporate banking looks as vulnerable of falling victim to the internet as its retail cousin; look a bit closer and banks still have important advantages.

Two years ago Omnicom Group, the global marketing and communications company, introduced a centralised payments function within its US and European treasury divisions. It swapped a laborious, decentralised system involving processing payments through 500 separate accounts in the two regions, for non-bank technology from fintech company Pelican.

The new system gathers daily payment data from every Omnicom entity and aggregates those payments into a single file that is then processed through one bank account. "Banks are trying to do something similar but they're not quite there yet," says Maeve Robinson, Assistant Treasurer at Omnicom who spoke to multiple software providers before choosing Pelican. "The centralised disbursement system is more efficient and allows us to focus on strategic activities like cash flow forecasting, managing our debt and investment maturities, interest rate risk management, and ultimately promote shareholder value."

Banks have been losing sections of their business to tech companies for a while, as sophisticated treasury teams switch to new software to improve their cost base and efficiencies. But the trend of fintechs picking off key parts of banks' value chain to offer specific services is gathering apace. The churn of new applications and software means the outsourcing or unbundling of treasury services to fintech groups is constantly encroaching on banks' traditional and profitable corporate offering, spanning everything from payments to foreign exchange and small company lending.

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>
> Maeve Robinson, Assistant Treasurer, Omnicom

It is also happening much faster than banks, saddled with legacy technology and struggling to change the pipes while the water is still running, can adapt or compete. The notion that corporates may one day do all their banking with tech groups, particularly the big ones like Google or Amazon, seems entirely possible. It's forcing an urgent revaluation between banks and their corporate clients of where the true value in their relationship rests. From the outside, corporate banking looks as vulnerable to falling victim to the internet as its retail cousin; look a bit closer and banks still have important advantages.

Unbundling rolls on

The unbundling trend is everywhere. SWIFT's payment system offering corporates direct access to its platform to avoid transacting through multiple banks is the most obvious example. "We've just started using SWIFT because we needed technology that was independent from banks to meet our growing number of transactions and desire for independence," says Tim de Knegt, Manager, Strategic Finance and Treasury at the Port of Rotterdam in the Netherlands. The raft of new know your customer (KYC) service providers which have sprung up offering the Holy Grail of standardised, automated KYC in contrast to onboarding with individual banks is another.

In one trend, tech companies are now introducing multi-bank portals for a much broader range of organisations, changing the way they can interact with banks as big corporate treasury already has. Non-banks like Kyriba and Finestra are introducing software that offers multi-bank portal interfaces directly, allowing more companies to carry out transfers, access information, compare prices and execute trades through their platform across multiple banks. "It's an important trend that is making it much more transparent for the treasuer," says Thomas Olsen, a partner in Bain & Company's Singapore office.

Bank of Amazon

Technology companies are also bypassing banks to interact directly with corporates to cause disintermediation. This is most notable around supply chain finance and working capital solutions offered by cloud-based specialists like PrimeRevenue or Tradeshift. Similarly, Amazon and Alibaba now offer supply chain finance to the vast ecosystem of merchants selling through their sites. "This is the kind of financing down the supply chain that banks would have done in the past," says Olsen.

Tech giants' access to buyers and sellers' data fuels their ability to offer working capital solutions. Amazon's data gathering on the retail and consumer goods companies using its site spans things like information on their suppliers to how frequently they sell to large corporations; trade flows and details of destination and origination markets. Admittedly, it's only one area of data and doesn't reveal a holistic picture of a companies' treasury policies around issues like foreign exchange hedging or overall cashflows, but it is more than enough to build new products and solutions around.

Indeed, it's not just corporates outsourcing to tech companies. Banks themselves are throwing in the towel and outsourcing to fintechs, particularly around payment processes. Witness Commerzbank recently outsourcing all of its payments processing in the single euro payments area (SEPA) to French tech group equensWorldline. The ten-year contract will see equensWorldline take over all SEPA instant, multi-currency, and domestic payments – equating to 4bn transactions per year – on behalf of the bank, migrating legacy inhouse architecture to the equensWordline platform.

The loss of profitable services means less fees for banks and could result in banks charging more for large financings. An ongoing transaction banking and working capital relationship allows banks to build a credit profile when it comes to raising debt for new services and solutions. If companies only come to banks for bigger financing solutions, it will cost more.

Client is king

But tech companies' encroachment on banks' corporate business offering doesn't extend into one important area – yet: the valuable relationship banks have with their corporate clients. Whether treasury divisions are investing in their own software solutions, outsourcing to third parties or using a third-party service through their bank, banks are still banking their clients. "Technology companies are playing a role in the corporate banking value chain, but corporates are unlikely to switch their core relationship to tech companies," says Olsen.

One reason is because fintechs are not actually trying to compete with banks on everything because much of what banks do isn't their area of expertise. This could involve providing a large credit facility, require a banking licence, or the ability to implement transactions in a regulatory environment. Platforms will face increasing regulation the more they venture into banks territory and although fintechs are cash rich, it remains to be seen whether they have the appetite to take on the costs associated with compliance. "A large corporate bank does many things, much of which a technology company wouldn't want to do," says Olsen.

Data danger

And corporate treasury is similarly reticent to embrace tech firms as their new bankers. It all comes down to trust. Companies are wary of how tech companies are already storing and using their data, nor do they trust them to manage

their deposits or keep their assets safe. "I wouldn't give a tech company a penny of our deposits because I don't want to do anything that would put our assets at risk," says Omnicom's Robinson. "The Federal Reserve sits behind US banks; tech companies don't have that because they are not banks." She adds that choosing a third-party provider to implement the company's new centralised disbursement technology involved a leap of faith. Two years on, and she would still rather the technology sat behind her banks' firewall. "I would be more comfortable with banks' level of security, systems and data centres, but they can't do it right now," she says. It's a mistrust evident in her insistence that the daily payment data comes back in-house, enabling a "last look" before treasury sends it to the bank for processing – rather than Pelican mail the file direct, host to host.

Nor do treasurers like the thought of being sold services off the back of data gathered by tech companies. "I know that a bank will not use my data to predict what type of services they can sell to me," says de Knegt, who explains that his concern that tech companies might use the Port's data in this way is already manifesting in treasury strategy. "We are considering to what extent we should use technology in our financial processes from tech firms because the information we give them is much more valuable than the service their technology performs for us."

Advisory wins

Indeed, he wants his banks to do much more to leverage the information they hold and their sector expertise, to offer more, higher value services. Alerts to risk in the Port's complex supply chain that stretches to over 20,000 companies, is a key area in which he'd like some help. "We will invest more than €2bn in the port area over the next five years and if a small customer or supplier is in financial trouble it could mean the difference between a finished project, or a delay of several years." He welcomes signs that some of his relationship banks are beginning to adapt and offer client analysis, like ING's data company Suburbia.

The call on banks to make more of their corporate relationships, and translate their customer knowledge into new services, opportunities and profit, is coming loudest from within the banking community, especially while fintech still lacks the institutional history and access to flows needed to inform the advisory expertise that corporates say they value most. "The relationship is wasted unless banks leverage their knowledge of the client and turn it into a value proposition," says Citi's EMEA Treasury Solutions Head, Ebru Pakcan. It's a process that should see banks get their hands dirty with new technologies, experimenting with clients around AI and data science, and worrying less about the immediate application of technologies. "Banks need to be able to pick up a piece of technology and understand how it works and what it does," she says.

She draws on Citi's adoption of blockchain, where the hype often overshadows the realistic application, as an example of the approach in action. Rather than exploring ways to make payments on blockchain itself, Citi is looking at how its clients which are adopting blockchain can connect to traditional payments and financial services within the bank. "We have concentrated on how the bank can connect to the blockchain ledger of a corporate client and receive instructions and send information. We currently have one live client and are talking to others. It comes down to asking what problem are we trying to solve for our clients and what new services are needed?"

> Technology companies are playing a role in the corporate banking value chain, but corporates are unlikely to switch their core relationship to tech companies.
>
> Thomas Olsen, Partner,
> Bain & Company

It also requires looking at what a business will look like in five years' time, she says. Banks need to examine how companies' changing business models will require different technology. For example, application programme interfaces (APIs) may not make much sense for a traditional treasury, but if a business switches from a distribution model to selling direct to consumers and selling more on-line, the real time benefit of API connectivity comes into play.

In another development that could work in banks' favour, some fintech's are struggling to sell their services direct to corporates, especially those plying data information technology to improve cash optimisation. It means these firms are increasingly coming to banks to help them break into corporate treasury. Citi's recent collaboration with US-based fintech HighRadius illustrates the point, says Pakcan. "Many of these tech companies don't require banking partners and they could go direct to the corporate. However, they need that introduction and access to the flows, and partnering with us makes integration smoother for the corporate," she says. Viewed through this lens, the new financial services landscape shifts from competition to cooperation in a win-win for tech companies, banks and corporate treasury.

Unbundling may also slow down. Of course, technology erodes many inefficiencies, but the more third parties a corporate works with, the more unwieldly and potentially costly the proposition; unbundling also breaks with the two-decade trend in rationalising corporate treasury and one-stop shopping with large banks. "There is a fine balance in terms of how many third parties you want to partner with, ensuring that the benefits of these relationships don't suddenly become costly and inefficient," argues Pakcan who notes that companies expanding into emerging markets particularly benefit from a comprehensive single solution because working with individual providers is difficult.

Treasury is using technology to access banks' services more efficiently, and new software is allowing corporates to change the way they interact with their banks. Yet ask most companies if they'll start banking with a fintech and the answer is no: they depend on banks to keep their money safe in different pockets of the world and depend on technology providers for the software and applications they provide. "The difference between banks and IT companies is black and white," concludes Robinson.

This much I know

Yeng Butler

Senior Managing Director, Global Head of Cash Business

STATE STREET GLOBAL ADVISORS

What is the best piece of advice that you have been given in your career so far?

To make sure that you proactively manage your career. This means mapping your goals – not necessarily for the course of your entire career, but over a few years – and taking proactive steps to meet them. The goals you set don't always have to be based around changing your role or the company you work for; they can be about learning a new skill or gaining knowledge about a different industry. The key is to make sure you are always moving forward in a methodical and purposeful way.

How much opportunity is there for career progression in the financial industry?

There are many opportunities. However, they don't always come to you directly; you must be open to identifying opportunities in the least likely places. This may sometimes mean taking a lateral step. It is important for women to understand that a career is a journey and not necessarily an upward trajectory all the time.

What has helped me is taking the time to sit down and map out my skills to see where they are applicable. This task also helps you understand your weaknesses and what you must do to get that promotion. You must be courageous in your decisions and willing to take a risk every now and again.

It is also crucial to find advocates throughout your career. I have been fortunate to have strong managers who have mentored me and sponsored my path towards running a team of my own. These people can help your career progress that much smoother. My advice to anyone with managers that aren't championing your career progression is to look for other ways to gain new skills or exposure to other teams and consider using mentorship programmes.

What is the most important lesson you've learned in your career to date?

To act with humility. In a professional context, this includes being open to learning from other people's points of view that differ from your own. Everyone has different experiences, understanding these allow us to arrive at the best solution. It also means admitting when you are wrong and coming up with a plan to fix it.

I believe in this so much; humility is a crucial attribute I look for when I am hiring for my team. I ask candidates what their biggest mistake or biggest challenge has been. It is a big red flag if they cannot provide an honest answer. It's important for me to see that they can self-reflect as that attribute allows the broader team to perform at its best.

I must stress that being humble doesn't mean not advocating for yourself. It means showing that you are human and able to self-reflect.

What advice would you give to women in finance in terms of establishing and developing a career?

Women tend to be held to a higher standard in industries where we are outnumbered by men. Because of this it is crucial for women to clearly articulate their ideas. My advice, therefore, is to take a public speaking course as this will help you clearly and coherently express the good ideas that you have. People often think that impressive public speakers have an innate gift. They don't. It takes practice and is a skill that must be nurtured.

"Being humble doesn't mean not advocating for yourself. It means showing that you are human and able to self-reflect."

ONLINE

To read all the interviews in this series go to treasurytoday.com/women-in-treasury

Yeng Butler, Senior Managing Director, Global Head of Cash Business at State Street Global Advisors, believes in the power of self-reflection. She spends time considering not just her successes, but also her failures. The objective of this is to drive continuous self-development to ensure she can meet her next career aim. Yeng summarises this with a simple, yet powerful motto: "Pause, reflect and onwards and upwards."

Personal development has been a strong theme throughout Yeng's career, which began at Merrill Lynch. Yeng confesses that as a political science graduate she knew little about the industry at the time and joined the bank's professional development programme to "learn something new". It turned out to be a good choice, as Yeng has become a successful leader in her industry.

After spending two years rotating through the bank, Yeng settled in the institutional asset management business, focusing on short-term fixed income. Her career took an interesting detour when she decided to move to work in micro-finance in Western Samoa, providing small loans to women to help them start their own businesses. Reflecting upon this decision, Yeng notes that she felt, and still feels, passionately about women being given a chance to succeed. "My mother was an entrepreneur and it is a tough business," she says. "I took this role to act on that passion and help give these fantastic women a chance to flourish."

Today, Yeng leads State Street Global Advisors' cash business, after spending the last eight years leading its strategic expansion. She explains that the past eight years have been immensely satisfying on many fronts, but what stands out is the team that she has built and the way in which it works together. "To see the team working to their full potential and utilising the skills they have is very gratifying," she says. "I believe this is one of the main reasons that last year we were one of a few top institutional cash managers to gain market share, something I am very proud of."

Setting an example

As a highly respected female leader in finance, Yeng believes that she has a responsibility to help shape a better workplace. Most importantly, she wants to create a frictionless pathway for women to meet their career ambitions.

Yeng believes there's already been progress in this regard. "I remember early in my career when a female colleague received a promotion and a gentleman next to me quipped that she only received the promotion because she was a woman," says Yeng. "Comments like these were commonplace back then. Today, this doesn't happen as much, if at all, and there are plenty of strong female leaders blazing a trail, which is a sign of how far we have come."

That being said, some legacy issues remain. For example, Yeng says that women sometimes find it difficult to strike the optimal work-life balance. This is something Yeng admits falling foul of once or twice in her career. "I remember when I was on maternity leave and decided that I would check in with work for a few hours every week," she says. "I didn't need to do this; I had a newborn to focus on and it was very hard to zoom in and out of work at the same time. It was unfair on my child and on me."

Most importantly, Yeng felt like this didn't set a good example for other women in her team, something she is keen to do. "I remember feeling uneasy about it at the time because I didn't want to be perceived as a 'supermum' that could do everything at once because that is unrealistic," she says. "I was just trying to keep in touch with what was happening in the office."

Indeed, setting an example and elevating the level of conversation around diversity in the workplace is a major objective for Yeng in the years ahead. "Through our work internally at State Street Global Advisors, and with Treasury Today's Women in Treasury initiative, we are trying to do something impactful and play our part in creating a better world," she concludes. "I am deeply passionate about this, and determined to make a difference."

Yeng Butler is a Senior Managing Director, Global Head of Cash Business at State Street Global Advisors, and a member of the Senior Leadership Team. Joining the firm in 2010 as Head of US Cash, Yeng shaped the vision for the business and delivered expanded market share, despite the challenging market environment. She built a global sales team, ensuring a seamless and highly differentiated client experience to State Street Global Advisors' institutional and multinational corporate cash clients. Her career started at Merrill Lynch, joining State Street from State Farm Insurance. Yeng earned her BA from Dartmouth College and an MA in Public Administration from Harvard University. She is a member of the Investment Company Institute's Money Market Funds Advisory Committee. She serves on the Board of Trustees of Esperanza Academy in Lawrence, MA, a tuition-free independent middle school where girls of modest means are welcomed into an empowering learning community. Yeng also holds FINRA Series 6, 7 and 63 licenses.

STATE STREET GLOBAL ADVISORS

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Despite evidence linking gender diversity to long-term value, women are still dramatically under-represented in corporate leadership.[1]

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1 MCSI study, 2015; Study shows companies with strong female leadership generated a return on equity of 10.1 percent per year versus 7.4 percent for those without a critical mass of women at the top. McKinsey Global Institute
2 As of June 30, 2018
3 State Street Global Advisors Asset Stewardship Team

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Photo credit: Federica Valabrega. Sculpture by Kristen Visbal

The innovation game

Bikash Mukherjee
AVP – Head of Treasury

Bikash Mukherjee, AVP – Head of Treasury at Amway India, strives to be ahead of the game and his storied career is punctuated with innovation after innovation. Here he reveals the secret of his success and what is next on the agenda.

Amway India is a wholly owned subsidiary of Amway with headquarters located in Michigan in the US. Amway is one of the largest direct selling companies in the world, with a presence in over 100 countries and territories.

It is impossible to be at status-quo when working in a dynamic company like Amway India. Innovation necessarily flows through the company, which was created to give Indian entrepreneurs the chance to own and operate their own business. It is this continual need to innovate and reach Amway India's family of distributors that inspires Bikash Mukherjee, AVP – Head of Treasury, Amway India to keep raising the bar of treasury excellence.

Since its formation in 1995, Amway India has gone from strength to strength. It is now India's largest Direct Selling FMCG Company, with a nationwide presence, thanks to the millions of distributors who sell its nutrition, beauty and household products to over 8,900 postal regions.

Corporate treasury has played a crucial role in facilitating this growth. Most notably, it ensures that Amway India gives wide options of payment to its distributors to buy it's products. Mukherjee explains that this is very vital in a country like India which is geographically and socially so diverse. "In Urban areas our distributors are comfortable using digital forms of payment," he says. "In many rural areas, however, cash is the only option. And Treasury ensures Amway India can cater to all."

By catering to all and innovating to provide Amway India with the tools to move forward, Mukherjee's treasury team has proven the value it adds time and time again. It has also blazed a trail for other treasury departments in India.

Accidental treasurer

This is no mean feat for an individual who initially harboured no intention of becoming a treasurer. After graduating from university, Mukherjee joined an auditing firm in New Delhi, working as an accountant for some years. He then moved to the corporate world, joining Gillette in a generic finance role. "This was an exciting opportunity," he recalls. "Gillette is a huge brand in India with a wide presence. It was a great place to gain exposure to different areas of business."

With corporate treasury not yet on his radar, Mukherjee joined Amway India in 2001 to lead the company's reconciliation team. This move was "transformational" for Mukherjee. Not only did it set him on his path to become a world-class treasurer, but it also showed him the power of innovation, with Amway being fully open to resourcing his new ideas.

Upon joining Amway India, Mukherjee immediately set about improving its reconciliation processes. In a short space of time, he transformed what was a manual procedure into an automated process. With Amway India's reconciliation teams beating its KPIs, management added corporate payments to the Mukherjee portfolio. Again, he highlighted the problems that existed and went out into the market to see what tools he could use to solve them. "I set up host-to-host payments with our key relationship bank to overcome this challenge," he says. "This was very innovative at the time and we were one of the first companies in India to adopt this."

The rest of Mukherjee's career at Amway follows a similar narrative. Management repeatedly gave him challenges to solve, which he did, often exceeding expectations. This earned him many accolades, which included 'employee of the year' award. As an achiever, his portfolio grew, and management rewarded his success by giving him the position of AVP – Head of Treasury.

> Our business is so dynamic and competition is so fierce that if you stop moving, you will be left behind.

Today, Mukherjee handles Amway India's core treasury operations. He also manages its insurance portfolio, sales accounting and audit. Supporting him are 16 full-time treasury professionals. Two sit alongside him in the head office conducting what he calls "strategic treasury". The rest work in offices around the country, supporting the business with day-to-day treasury support, such as reconciliation, collections management and distributor payments.

Delivering customer experience

Despite achieving so much, Mukherjee has no plans to stop innovating. "I couldn't even if I wanted to," he says. "Our business is so dynamic and competition is so fierce that if you stop moving, you will be left behind."

Mukherjee offers an example of a recent project that exemplifies this approach. He explains that over recent years Amway India has been onboarding roughly 50,000 distributors each month. The issue, however, is that many of these distributors live in rural parts of the country and are unbanked. As a result, they place orders over the phone and have to travel a significant distance to collect and pay for their goods at one of the firm's 136 offices around the country.

"This isn't a great experience for our distributors and they will stop working with us if we don't solve this issue for them," says Mukherjee. "I sat down with my team to brainstorm ideas for how we could fix it. We soon realised that there is one place close to all these distributors, no matter how rural: a state-run bank."

Mukherjee reached out to a handful of the state-run banks – many of whom operate over 15,000 branches across the country – to see if a partnership deal could be struck. "We worked together to build a solution that turns these branches into our collection agents," explains Mukherjee.

"When our distributor places an order, they receive a text message containing a reference number which they can take to their local bank branch. The cashier puts this number into the bank system which links to our system to instruct them how much cash to collect. The distributor can then give the money owed to the cashier who deposits it in our account. The ERP then generates an invoice, allowing our warehouse staff to distribute the items. It is seamless."

Not only does this solution provide Amway India's distributors with an improved customer service, ensuring they continue doing business with them, it also solves other issues. "Because of this solution we have reduced footfall in our offices, allowing us to use our staff for more strategic work,"

he says. "We have also mitigated much of the risk and cost of handling cash, as distributors now deposit payments straight into the bank rather than leaving them with our staff."

Problem solving

Mukherjee's work in solving business problems has transformed the status of the treasury within the organisation. He explains that across India, corporate treasury is commonly considered a back office function. At Amway it is very much part of the forefront of the business. As a result, it is common for other departments in the business to reach out to treasury to help them with issues they are having. "This is quite unique, even by international standards," he says. "Typically, it is treasury that has to reach out and make its case, not the other way around."

This recently came to the fore when the Amway India sales team contacted Mukherjee with an issue: a new line of premium products Amway India had launched was not selling as well as expected. "This isn't a typical treasury issue," says Mukherjee. "But sales knew there was possibly a financial reason it was struggling to shift the product."

In his typical diligent fashion, Mukherjee spoke to a handful of Amway India's distributors to understand their issues. "All said the same thing: they didn't have the cash to pay for the goods up front," he says. "Also, the banks were unwilling to lend them money."

With knowledge and understanding of the problem, Mukherjee worked with his core banking partners to come up with a solution. This led to treasury developing a financing solution that Amway India's distributors now use to purchase premium products. "This is yet another example of how a corporate treasury-led solution is enabling the business to flourish."

Banking on support

Mukherjee is keen to note he wouldn't be able to achieve what he has done without support. He pays tribute to the culture and leadership at Amway India, which provides a platform for innovators to thrive and is always open to exploring good ideas. He also pays homage to his team. "To be successful, you must surround yourself with the best people," he says. "I have done this here and I am proud to be leading such a talented team."

Enthusiastic external partners, such as banks, are also important. Indeed, for Mukherjee, they are vital allies. "I have made it my business to build a good network with the banks in India," he says. "By doing so, I receive a first-rate customer service with all those with whom I work. This puts Amway India in a privileged position in so far as these banks will work hard to customise solutions for us. We are also often first in line to take advantage of any new solutions they develop. This ensures Amway India remains a market leader."

Mukherjee also acknowledges the recent work of the Indian administration. "The government is focused on digitising the financial services industry in India," he says. "We are supportive of this and have already taken advantage of many opportunities this has created. For example, we have implemented a paperless import remittances solution facilitated by the government. We also leverage UPI (Unified Payments Interface, an instant real-time payment system developed by National Payments Corporation of India)."

Doing what it takes

Whilst Mukherjee spends most of his time focusing on what is happening within India, he must also monitor what Amway is doing globally. He therefore holds regular calls with the head office treasury team in the United States to ensure he is up to speed on any major projects.

The relationship he has formed with the head office has paid dividends multiple times. For instance, he was recently appointed to lead the rollout of a new ERP system across India. Also, when Amway India built a new manufacturing plant it did so without borrowing. "To do this, we had to pause our royalty and dividend payments to the head office," he says. "I was tasked with taking them through how this would work and ensuring that all the paperwork was in order."

Of course, time zones are an issue for any treasurer sitting in India and dealing with the US; Mukherjee is no exception. He says he often has to make lots of calls through the night to ensure that these projects run smoothly. "I am not a morning person and prefer working at night so this is not a problem for me," he jokes.

Despite not being a morning person, Mukherjee says he is on call 24/7. "I have positioned treasury as a strategic business partner. To fulfil that role we must ensure that we solve problems as soon as possible. We are therefore ready to respond to any issues, no matter what time of the day."

Building an ecosystem

Having created a modern and value-adding treasury, Mukherjee is now keen to help other treasury departments in India reach a similar level. He is not alone in this endeavour and highlights how there are now daily workshops and talks held by the banks and other third parties around the country.

These are not only helping to build the standard of knowledge amongst treasurers in India; they are also helping to create a solid treasury ecosystem in the country. "This is something that hasn't existed before," he says. "It is exciting to see the treasury environment in India becoming so dynamic and energetic."

Gaining exposure and building a network is something that Mukherjee believes is crucial for any aspiring treasury professional and he encourages his team to attend relevant events. This is also why he is so proud of his treasury's five Adam Smith Awards Asia wins. "These have helped build my exposure across the region and helped me build lots of new relationships I can use to ensure we continue to follow best practice," he says.

Pursuit of excellence

So what is next for a treasurer that has already achieved so much? Well, more innovation. "Amway India is a dynamic company that is growing rapidly," says Mukherjee. "We aim to have US$1bn' worth of sales by 2025; it will be my treasury's responsibility to facilitate this. As a result, the challenges will keep coming and treasury will continue to be innovative to overcome these as quickly and effectively as possible."

Longer-term, Mukherjee has the ultimate aim of becoming a CFO. And whilst this can be a daunting move for any treasury professional, Mukherjee has already shown that he has the skill set and confidence to make it with ease.

Bank of America Merrill Lynch

The Executive Series

Drawing upon its position as a leading global bank, Bank of America Merrill Lynch (BofAML) has a comprehensive and global view of the issues affecting today's treasurers. In the first part of Treasury Today and Bank of America Merrill Lynch's Executive Series experts from the bank joined a roundtable discussion hosted by Treasury Today Chair, Richard Parkinson, to provide their insights into a diverse range of topics, from the rise of artificial intelligence (AI) in treasury management systems to the importance of measuring environmental, social and governance (ESG) factors for companies.

Participants

Matthew Davies
Head of Global Transaction Services EMEA
Bank of America Merrill Lynch

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

Hubert J.P. Jolly
Global Head of Financing and Channels, Global Transaction Services
Bank of America Merrill Lynch

Moderator

Richard Parkinson
Chair
Treasury Today Group

treasurytoday group
research | insight | analysis

I am very much of the view that transaction banking is going to change more in the next five years than it has in the last 35 years.

Matthew Davies, Head of Global Transaction Services EMEA: Matthew heads up the global transaction services business for BofAML for Europe, Middle East and Africa. We spend a huge amount of time with our US client base, but we also have significant international relationships with our European, Asian and Latin American headquartered clients. Some of those perspectives differ, so I want to try and share some of those today.

Stephanie Wolf, Global Head of Financial Institutions & Public Sector Banking for Global Transaction Services: I run our global financial services franchise from a client-coverage perspective. That includes traditional financial institutions, our correspondent bank clients and non-bank financial institutions, as well as global government entities, around the world.

Hubert J.P. Jolly, Global Head of Financing and Channels, Global Transaction Services: J.P. has responsibility for financing and channels, which includes BofAML's trade and supply chain business, cards and payables. This is a comprehensive solution set, so pre-paid and commercial cards, digital channels, online mobile direct connectivity and innovation all fall within my domain.

What is going on in corporate treasury today? Are the fundamentals changing and what are the key trends you are seeing?

Matthew Davies: There has been quite a shift since the global financial crisis. Up until that point, the focus was very much on traditional areas of treasury. That focus continues today but what has changed is that the role of the treasurer has become so much broader. Treasurers have had to develop new skillsets to spread the reach of treasury much further across the company.

J.P. Jolly: Corporates are also looking to drive operating efficiency from technology, which includes digitising the treasury function. Digitisation is driving treasurers to review their supply chains, and how they can help their partners in procurement and manufacturing be more efficient. This includes how they should pay their suppliers and how they can get capital to suppliers who may require it. Last but not least, they are exploring how they can help their companies collect payments more efficiently.

Resources in corporate treasury are always limited. So how do you see corporates coping with the need to digitise?

Matthew Davies: Introducing automation through the use of robotics can enable treasury to become much more

efficient. This offers a great opportunity for corporate treasuries to gain that efficiency so they can use the resources that they have much more effectively on strategic initiatives.

J.P. Jolly: I think there is an opportunity to free up working capital, particularly given rising interest rates in the US and other markets. We are seeing some corporates deploying supply chain finance when they haven't done so before.

We are also combining supply chain finance with virtual purchasing cards in order to provide clients with a seamless solution. For example, by leveraging the data that we have, we may be able to determine that a company's smaller suppliers could benefit from a virtual P-Card.

Meanwhile, treasurers are focusing on extending days payables outstanding (DPO) in order to free up working capital for their corporations, drive benefits and, in turn, get more investments into the treasury.

Stephanie Wolf: We have a whole generation of treasurers and treasury departments who have not lived through a rising interest rate environment. So we spend a lot of time with our clients talking about how that environment impacts the deposit rates, the borrowing rates and the working capital cycle as a whole.

J.P. Jolly: I think treasurers also need to look at their inflows and ask how they can leverage technology to reduce outstanding receipts and collect cash faster. So it's all about maximising your inflows, collecting faster, leveraging bank tools to pay your suppliers later, extending your cash flow and improving your working capital.

Stephanie Wolf: On the inflow side, we have used AI to help when receivables come in. We have a global product used by many of our clients where, as the receipt is confirmed, we use artificial intelligence to determine where those receivables should be applied.

Matthew Davies: We have some clients that previously had automated match rates of 30-35% for their incoming receivables. By deploying this type of technology, they have been able to increase the match rate to 75-80%. That is a major efficiency gain which can free up a significant amount of resources.

Which trends should corporates be watching right now?

Matthew Davies: Corporate treasurers should be focused on the automation opportunities that we are talking about. Beyond that, it is really about how fintechs can help drive change in the broader market place.

Top five priorities for corporates over the next 12-18 months

Extract from the findings of Treasury Today's Voice of Corporate Treasury Study 2017

One thing that is constant is change. Treasurers have to be willing to look at the landscape, take all the information they can and apply to their specific circumstances.

Stephanie just gave the example around intelligent receivables, where we partnered with a fintech – I think it is interesting to watch how banks are partnering with fintechs and what that is enabling them to bring to market. We are seeing much more collaboration in the bank/fintech space.

J.P. Jolly: Treasurers are looking to their banking partners to innovate to help them work smarter and more efficiently. This could mean propriety bank products or partnering with fintechs.

Staying on top of market trends and priorities is so important to innovation. Last year, we worked with Treasury Today on the Voice of the Corporate Treasury Global Study. The study provided insight on corporate treasurer's priorities over the next 12-18 months. Truly understanding trends and our clients' needs is key to delivering the right solutions.

Stephanie Wolf: Of course, cybersecurity is applicable to every single one of our clients and it is applicable to all of us personally. So, we at BofAML have taken a global position that we are here to share information on how we think about cybersecurity – and, where we can, offer advice.

Matthew Davies: You can imagine that as a large global bank, we have to spend a huge amount of time, money and resources protecting the bank every minute of every day. We try to leverage that expertise to give advice to our clients on how we protect ourselves, because it is equally applicable to them.

Stephanie Wolf: And technology helps the 'knowing your client' relationship work much better. We have used technology to build databases that give us information on what a particular client or industry of clients or region of clients are doing. What type of receipts are we seeing? What type of payments? What is the gap between a receipt and a payment? What means of executing a payment is being used? We meet with our clients regularly and then we bring that knowledge to achieve more efficient execution.

Almost an element of benchmarking there?

Stephanie Wolf: It is very interesting when you try to find a comparison. Not every company is comparable to the company you might think they would be compared to. I'll give you an example. One company might simply be a manufacturer of a product. Another might be a global manufacturer of that same product as well as six others. They are very different companies. So we try to look at their

When assessing bank relationships, corporates rate the following factors as the highest priorities

Extract from the findings of Treasury Today's Voice of Corporate Treasury Study 2017

behaviour, rather than just the industry sector. That is where you start to find commonality.

Let's turn to regulation. Obviously, there are enormous regulatory pressures on your industry and, in turn, on your clients.

Stephanie Wolf: I look at regulation as an opportunity for us to evolve. When I think about PSD2, the second payment services directive out of the EU – what did we do when faced with that regulation? We created an entirely new way to connect with our clients via API connectivity.

Matthew Davies: Regulation is both a challenge and an opportunity. It is a challenge for all banks to be able to fund growth whilst staying compliant. But the opportunity is significant and we have seen many examples of regulation driving positive change.

Faster payments came to the UK and it was driving a better consumer experience. We have now seen this transition towards real-time payments on a global basis. If you have full open banking and you have full real-time payments, you will probably think very differently about which banks you pick to work with in a number of different jurisdictions.

J.P. Jolly: Speaking of real-time payments and APIs, this really is an opportunity for corporates on the collections and receivables end. This enables them to take a real-time approach when it comes to collecting money. They may also be able to leverage APIs to connect to whichever system their clients are using and source the information they need to reconcile invoices.

Matthew Davies: That is a great point. We spend a lot of time talking about the speed of the payment. Actually, one of the biggest benefits from real-time payments is the increased level of information that can be passed alongside the transaction.

Is there an impact on cash flow forecasting here as well?

Stephanie Wolf: Most definitely. Certainty is of great value to corporate treasurers around the world and as J.P. was saying, we are spending our technology dollars on ways to

Hubert J.P. Jolly

Now this is early stages, but it is very interesting to see what you can now do with the cloud-based artificial intelligence solutions that are on the market.

On a different note, another business trend is the measurement of ESG factors. How important is this and what should corporate treasury be doing in this space?

Matthew Davies: You can look at this a couple of ways. I think we see it as important because for us it is very much linked with responsible growth. This means making sure we are the best employer for our employees, and using the significant resources that we have around the world to do the right thing for our clients and the communities that we operate in.

Recently we have started to look at our customers and try to build an ESG scorecard. Interestingly, when you look at it, around 50% of corporate treasurers are involved with and engaged in ESG programmes within their organisations. The other 50% really don't know anything about it. And I really do think for corporate treasurers, it will be increasingly important to focus on this area – firstly because it is the right thing to do, but also because investors are focused on this topic too.

> Digitisation helps us improve the client experience that we provide to our clients.

offer our clients better cash flow forecasting tools. Indeed, respondents to the Treasury Today Voice of Corporate Treasury Global Study said that the most valued service their financial services partners provide is greater transparency in the cash flow forecasting process.

Matthew Davies: A number of corporate clients are thinking very differently about how they can use technology for cash flow forecasting. For example, one company has taken its bank statements and open item files from SAP, and all its history from its ERP systems, and loaded them into Watson, the cloud service from IBM. Then Watson uses AI and machine learning to deliver cash flow forecasting for the company.

What do you see as some of the winning factors for modern corporate treasury?

Stephanie Wolf: The key is to stay nimble, look at how your group is organised, review the technology you use and get your processes to change as your systems change – then you will be far more successful.

And a second aspect that I see in the clients who are most successful, is the ability to take in information across the landscape and to have designated experts, both externally and internally.

Matthew Davies: Yes, you need good advisors around you and to make sure you have got the right relationships with the right banks that give you the right level of advice and

service. I also think the modern treasurer needs to be both proactive and intellectually curious.

J.P. Jolly: People are very focused on running a proposal process and maybe on selecting the best price – but that is not always the best indicator in terms of how easy it is going to be do business with a particular provider.

What else should corporates be watching?

Stephanie Wolf: Technology is a must in this day and age. If you are a treasury group that is not technologically proficient, you will fail.

Another important industry trend is open banking, which is leading to more cross-border low-value payments. Beyond technology, the biggest change for my clients over the next five or six years is going to be low-value, cross-border, cross-currency payments becoming cost effective and, therefore, more prevalent.

So corporate treasury has to be curious, nimble, but also proactive. How do you help your clients do that?

J.P. Jolly: Well, I think some of our most successful clients in terms of freeing up working capital are the ones who partner with procurement in a collaborative way. Traditional banks look at these three products – supply chain, payments and cards – as three separate silos. We don't. We take an integrated approach to include all of a company's suppliers in a single implementation.

Stephanie Wolf: The first time we implemented our Digital Disbursements solution, it came out of a whiteboard session where we spent an entire afternoon sitting with an insurance company's department head, thinking about the future of paying insurance claims. And that led to the execution of a particular solution – which, in turn, led to a rather dramatic change in the industry as to how claims are paid as well as unearned premiums.

Matthew Davies: In another case, really understanding some of the challenges of the sales organisation was key. The company's sales organisation had a number of clients that wanted to buy a lot more products – but the sales organisation was unable to sell more products to them because of customer limits which were included in the internal credit policy.

Of course, if you can identify the cash and apply it quicker, you can free up that credit limit quicker and therefore sell more product. But it's also important to consider what you know about your customers and whether you have the right view and the right limits in place.

By looking at how the company's clients paid, the company was able to adjust its credit limits and sell more,

Top five areas in need of improvement in terms of the use of existing technology

Extract from the findings of Treasury Today's Voice of Corporate Treasury Study 2017

Technology is a must in this day and age. If you are a treasury group that is not technologically proficient, you will fail.

Stephanie Wolf, Global Head of Financial Institutions for Global Transaction Services, Bank of America Merrill Lynch

while still maintaining the same risk profile that it had previously. This is a great example of a treasurer taking a commercial view and helping the organisation be more successful in selling to its clients.

I would like you to summarise. What are the key takeaways that you would like to leave with the reader?

Matthew Davies: I am very much of the view that transaction banking is going to change more in the next five years than it has in the last 35 years.

There will be significant opportunity for efficiency gains, cost reductions, greater transparency and better advice driven by data. We'll continue to do our part in providing advice on a consistent basis across all of these areas, but I think there has got to be that intellectual curiosity there.

Stephanie Wolf: One thing that is constant is change. Treasurers have to be willing to look at the landscape, take all the information they can and apply it to their specific circumstances.

J.P. Jolly: The right approach is to look at how digitisation helps us improve the client experience that we provide to our clients.

Whenever I meet with my colleagues in operations, service, fulfilments or implementation, they measure themselves based on client delight. So, one major trend that treasurers should look at is what are my banks doing to make it easier for me to do business with them?

This discussion highlights that while customer needs and the client experience remain paramount, recent developments and the evolving landscape are continuing to change the needs and challenges faced by treasurers. It's clear that corporate treasurers are operating in interesting, not just difficult, times and that the coming years will see the arrival of many more examples of innovation and collaborative solutions.

Treasury Today's Voice of Corporate Treasury Study 2017 was conducted from February to April and attracted over 600 responses from a broad universe in terms of company size, industry sector and geography.

Will the 'People's Currency' become the world's currency?

China is determined to internationalise the renminbi – a course of action which could challenge the US dollar's long-held dominance as the world's reserve currency. What progress has China made? Will it achieve its ambitions? And what do treasurers need to know about using the currency? Treasury Today Asia investigates.

The geopolitical landscape is changing. China, the once reluctant global superpower, is awakening. The country's leader, Xi Jinping, has said that China is ready to "take centre stage in the world" – and driving this transformation is China's economic power. Indeed, Xi asserted in a speech late last year that it was time for China to promote its economic model, defined as socialism with Chinese characteristics, around the world.

China's emergence as a leader on the international stage comes at a time when the world is looking for leadership as the United States looks inwards and Europe deals with its own turmoil. And as the epitome of the potential of the developing world, China is well placed to establish a new world order. Xi has expressed this, saying that China can provide a "new choice" for the developing world.

By promoting its economic model to the world, China is also promoting its currency. And from a symbolic point of view, displacing the US dollar as the world's most dominant reserve currency will be a strong indication that China has taken centre stage.

Long-term project

The desire to push China outward and internationalise the renminbi is not new. In fact, Chinese leadership has been taking steps to achieve this for just under a decade, as the country's economy expanded and became more integrated with the rest of the world.

Many date this project back to 2009 when the HKMA and PBOC struck an agreement to settle trade in renminbi between Hong Kong and five cities in the mainland. In 2010, this agreement evolved and cross-border settlement extended to cover 20 provinces and cities. That year also saw the first renminbi-denominated corporate bond issued in Hong Kong by Hopewell Highway Infrastructure.

Since then, China has taken many other steps to internationalise the currency. These include:

- Letting foreign companies use currency to settle foreign direct investments (FDI) in China.
- Directly trading the currency with other countries.
- Creating offshore RMB hubs in cities around the world.
- Allowing freer convertibility of the currency in several Free Trade Zones.
- Launching the China International Payment System (CIPS).
- Permitting certain foreign banks to trade in the mainland bond market.

These actions have proved successful in promoting the use of the currency around the world. SWIFT data showed the renminbi became the world's fifth global payment currency in 2015. China's efforts also saw the IMF include the renminbi in the basket of currencies that make up the Special Drawing Right (SDR) in 2016. This was the first time a currency had been added to the basket for a decade and marked a significant step for the internationalisation of the renminbi, making it a reserve currency alongside the US dollar, euro, yen and British pound.

Commenting on the decision, Christine Lagarde, Managing Director of the IMF, said: "The Executive Board's decision to include the RMB in the SDR basket is an important milestone in the integration of the Chinese economy into the global financial system. It is also a recognition of the progress that the Chinese authorities have made in the past years in reforming China's monetary and financial systems. The continuation and deepening of these efforts will bring about a more robust international monetary and financial system, which in turn will support the growth and stability of China and the global economy."

Symbolic gesture

Despite the excitement around the inclusion of renminbi in the SDR, it was arguably a symbolic development. Professor Kathy Walsh, an expert in renminbi internationalisation from the University of Technology Sydney says: "SDR inclusion for China was about status. Many central banks already held the currency in reserve. Australia, for example, had 5% of its reserves in renminbi. So, from a practical perspective, the inclusion made little difference."

In fact, Walsh believes that status and prestige are key drivers behind China's desire to internationalise its currency and eventually challenge the US dollar's dominance. "Being a leading reserve currency provides certain benefits," says Walsh. "Most notably the concept of 'exorbitant privilege'. In times of financial turmoil, there is always a flight back to the

> Being a leading reserve currency provides certain benefits. Most notably the concept of 'exorbitant privilege'.
>
> Kathy Walsh, expert in renminbi internationalisation, University of Technology Sydney

US dollar, even when the US caused the turmoil. China believes that it should have a similar status as the world's largest trading nation – and soon to be its biggest economy."

Currency impasse

Talk of renminbi internationalisation suddenly subsided not long after SDR inclusion. Walsh says multiple factors led to this but highlights the competing economic and political objectives of Chinese policymakers as being the key reason. "I talked to several people at the time and not everyone agreed that internationalising the currency should be a priority," she says. "Some feared China was at risk of losing control of its economy and the stock market crash and economic headwinds it faced emphasised this fear."

With the Chinese regulators unsure whether to internationalise the currency further, some corporations lost interest in adopting it. "Our research at the time found that many international companies were open to using the currency," says Walsh. "This was because the cost of hedging renminbi offshore was less than the cost of hedging USD onshore. But there needed to be more incentive than this, and it didn't come. Because of this, the US dollar continues to dominate."

Difficult times

Had China missed its moment to internationalise its currency? It seemed that way in 2017 when the project was dealt a further blow after China reintroduced controls over its financial system, including regulatory measures to stem the money moving overseas. These moves had a negative impact on global renminbi usage. SWIFT data from December 2017 showed the currency only accounted for a 1.61% share of global cross-border and domestic payment activity that year. This is down from the 2.31% share the currency accounted for in 2015.

The controls mentioned above also knocked the confidence of the corporate community, which began to doubt whether China was serious about internationalising its economy and currency. They also required corporates to undo lots of hard work, as the treasury team at Solvay explained to Treasury Today Asia earlier this year. The treasury had been taking advantage of regulatory relaxation and the promotion of the currency, putting in place cross-border cash pools and conducting cross-border settlement in renminbi for some years. Then, almost overnight, the company had to readjust its processes and revert to using US dollar, as China introduced stringent capital controls. This showed that renminbi internationalisation isn't a one-way street.

Turning the page

After a tumultuous few years, there are signs that the project to internationalise the currency is back on track. SWIFT data from May 2018 shows the renminbi has regained its position as the fifth most active currency for global payments with a share of 1.88%. Meanwhile, data from the Chinese Securities Regulatory Commission indicates that the renminbi is currently the third most used currency for trade finance.

Corporate interest in using the currency is also increasing. Both Citi and Standard Chartered say they are speaking more to clients about renminbi strategies. "Conditions in recent years haven't been conducive to renminbi internationalisation," says Sandip Patil, Managing Director and Region Head, Global Liquidity and Investments, Asia Pacific, Treasury & Trade Solutions at Citi. "However, the environment has changed since the turn of the year and there is much more interest from corporates around the currency and how it might suit their treasury operations."

There are multiple forces driving this in Patil's opinion, including developments around CIPS, the opening of the capital markets and the continued progress of the Belt and Road Initiative (BRI) – all of which show that China is serious about internationalising. But the most important driver is the shifting geopolitical landscape. "There is clear tension between the US and China, which is creating instability in the markets," says Patil. "Corporates are exploring how to navigate through this instability, and many, especially those with a material interest in China, are looking to diversify and use the renminbi for some trade transactions with China."

Frankie Au, Head of RMB Products, Transaction Banking at Standard Chartered, supports this view. He says the headwinds preventing corporates from adopting the renminbi have disappeared, especially regarding the two-way flow of the currency. "China has also relaxed hedging rules, allowing corporates to hedge renminbi exposures offshore, which provides much more flexibility for corporates operating a renminbi portfolio," he adds.

Because of these measures, Au says that there is growing curiosity from corporates about how to use the currency and what benefits it can offer. "Some companies are being forced to consider the currency because they are receiving requests from their counterparties to be paid in renminbi," he comments. "However, many more are thinking strategically and looking at how the currency can enable them to achieve better pricing, win more business and reduce the cost of doing business with Chinese counterparties."

Citi's Patil agrees, noting that interest in the currency is especially high amongst Asian companies. "Flows between China and the rest of Asia are largely denominated in US dollar," he says. "But as the renminbi has internationalised, more Asian companies are adopting it for their dealings with China. By doing so they are achieving greater efficiency and pricing advantages over using the US dollar. As a result, I expect to see a lot more intra-Asia trade settled in renminbi over the coming years."

Strategic adoption

For all the pricing and efficiency benefits companies can achieve using renminbi for trade with China, Patil warns that adoption cannot happen overnight. Both Au and Patil

recommend that corporations carefully consider their renminbi strategy to ensure it is executed effectively.

Indeed, there are multiple commercial and operational factors to consider. For instance, on a commercial level, it is likely companies will need to adjust their organisational and procurement policies to accommodate the new currency. Corporates should also renegotiate payment terms with suppliers to reflect the change.

From a treasury perspective, Citi's Patil explains that treasurers must ensure the company has settlement accounts and intercompany agreements in place to support the currency. He adds that treasury teams will also need to investigate their cash management infrastructures. Doing so will ensure they optimise how they use the currency.

Treasury must also play a key role in working through and solving the unique issues encountered when using the renminbi, as highlighted by HSBC's 2017 Renminbi Internationalisation Survey. Corporates noted a number of issues that can arise when using renminbi for cross-border business, including a lack of solutions for surplus cash onshore, unclear and shifting regulations and onerous documentary requirements.

To work through these considerations and challenges, many corporates are focusing on small-scale experiments with the currency. Citi's Patil says most of the bank's clients are adopting renminbi in a handful of legal entities. "This sandbox-style approach gives the business the opportunity to work through all the nuances associated with using the currency without the risk of full-scale adoption," he explains. "Most importantly, it gets people comfortable with the currency, which is crucial for long-term usage to occur."

Renminbi's Belt and Road boost

A crucial driver for greater renminbi internationalisation will be China's ambitious BRI. The project, which will boost the flows of trade, capital and services between China and the rest of the world, will not only increase trade with Belt and Road countries but also promote the use of renminbi as a trade currency.

"Promoting the international use of the Chinese currency is one of the stated objectives of Belt and Road," says Vina Cheung, Global Head of RMB Internationalisation at HSBC. "Because of this, we expect the currency to be used increasingly for trade and investment flows along the Belt and Road. We also expect to see a sizeable renminbi offshore-debt market emerge to fund the infrastructure development."

Standard Chartered's Au adds that it makes sense for the renminbi to be used for subsequent transactions if these infrastructure projects are funded in the currency. "This will avoid a currency mismatch, removing the currency risk and reducing the cost of the project overall," he says.

The corporate world agrees. HSBC's renminbi survey shows over 70% believe that BRI will have either a significantly positive or a positive impact on renminbi usage in the future. In another survey conducted by China Construction Bank, 72% of all respondents said the Belt and Road initiative is having the biggest impact on RMB internationalisation.

To support this, the Chinese government is determined to improve the currency's infrastructure, as Yin Yong, Deputy Governor at the People's Bank of China (PBOC), explained in a speech last year: "The PBOC will continue to improve the renminbi cross-border payment framework and make the renminbi play an important role in pricing, settlement, investment, financing and trade. The currency's internationalisation will be a medium- to long-term process backed by China's strong economy."

> Flows between China and the rest of Asia are largely denominated in US dollar. But as the renminbi has internationalised, more Asian companies are adopting it for their dealings with China.
>
> Sandip Patil, Managing Director and Region Head, Global Liquidity and Investments, Asia Pacific, Treasury & Trade Solutions, Citi

For more on China's BRI and what it means for your business, read our deep dive into the topic in the July/August edition of Treasury Today Asia.

Will China become the world's leading currency?

Overall, the signs for the renminbi are positive. HSBC's 2017 Renminbi Internationalisation Survey shows that more businesses not currently using renminbi for cross-border transactions are planning to do so in the future. This then begs the question: will China achieve its ambitions and become a truly international currency? And will this be at the expense of the US dollar?

"The renminbi will become a global currency," predicts Walsh. "It won't displace the dollar, however. In fact, I believe there is room for two strong reserve currencies. The big question is how long this will take. I used to think it will happen in ten years but now I think it will be closer to 20."

Standard Chartered's Au shares a similar view. "The renminbi is on the rise," he says. "It will take time for it to reach its potential but it is heading in the right direction and I believe will sit alongside the US dollar as one of the world's major reserve currencies."

Citi's Patil expects that geopolitics will play a big role in the renminbi's future. "China will become an increasingly dominant player on the global stage, especially as the US takes a more protectionist stance and the renminbi will follow," he says. Patil does, however, note that this will depend on continuing deregulation and increasing liquidity in the offshore renminbi market.

HSBC's Cheung believes renminbi internationalisation is inevitable. "Renminbi usage shall reach the stage of balancing China's influence as a leading trading nation and the growth engine for the world," she says.

It may be easy to dismiss the renminbi's potential to challenge and displace the dollar. But it has only been 100 years since the US dollar displaced the British pound – so who's to say another change isn't on the horizon?

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Are you future ready?

With digitisation and ecommerce having a major impact on companies' supply chains and relationships – especially in Asia Pacific – businesses are increasingly stepping out of their comfort zones and embracing new business models. Which challenges lie ahead, and what should treasurers be doing to build a roadmap through this changing landscape?

Ernesto Pittaluga
Asia Pacific Sales Head,
Treasury and Trade Solutions
Citi

Digitisation and ecommerce are having a far-reaching impact on companies' sales models, supply chains and customer relationships around the world. This is particularly the case in Asia Pacific, which accounts for around half of the total estimated ecommerce value globally. According to the Ecommerce Foundation's Global Ecommerce Report 2017, China has the world's largest B2C ecommerce market with over US$681bn in turnover, compared to US$438bn in the US.

Ernesto Pittaluga, Asia Pacific Sales Head, Treasury and Trade Solutions, Citi, notes that Asia is home to some of the world's most important disruptors, such as Alibaba and Tencent. "The proliferation of mobile and social media in the region are also key drivers," he says. "In China, we now refer to mcommerce more often than ecommerce, because of the significant preponderance of online purchases made using mobile devices. And mcommerce is poised to burst into the mainstream, thanks to a host of technological advances that are making it easier for people to shop on their phones." At the same time, consumers are increasingly interacting with sellers using a variety of online and offline channels.

Many different factors are contributing to the growth of ecommerce and digitisation within the region. For one thing, the development of new payment infrastructures and the rise of faster payments is key to the appeal of ecommerce. "The emergence of digital wallets which are tied to credit cards in China for example, or the developing QR code solutions in India, will be supporting increasingly frictionless interactions between Buyers and Sellers, in a real-time settlement fashion," says Pittaluga. "These are major breakthroughs – and we are expecting every market in Asia to be in a similar kind of operational environment by 2020."

Regulation is another notable catalyst, and many recent developments resonate with high-level regulatory objectives in the region. With some countries having increased numbers of unbanked individuals, and levels of credit card penetration being generally low, the emergence of technology such as digital wallets can play an important role in enabling people to access (and transact in) online channels, thus providing for financial inclusion. Indeed, the move towards a cashless society is a critical regulatory objective, because physical cash creates friction, cost and inefficiencies. In several markets in Asia, for example, consumers already are, or soon will be, able to live much of their lives without the need for physical cash in their wallets – and regulators are actively encouraging this.

Evolving business models

Companies across many different industries can expect to face disruption in the coming years. And with growing competitive pressure from innovative new entrants, it is important for more traditional businesses to be able to adapt and prosper in this environment.

Often that will mean stepping outside of established legacy business practices. "Five years ago, a leading European retailer was adamant that they would not pursue online sales as their business was built around a brick-and-mortar retail model," recalls Pittaluga. "Today, that retailer has completely transformed its business and is now using a variety of online channels in China and other countries in the region."

Likewise, Pittaluga cites the example of a large and successful processed food company which had previously decided against pursuing ecommerce channels, preferring to rely on its tried and tested relationships with distributors and wholesalers. Today, this business is taking part in an ecommerce payment channels aggregation pilot in China – and remarkably, this change in strategy has come about in the space of only a few months. "A number of our clients which have a traditional business will gradually experience a migration of sales that were traditionally B2B to B2C," comments Pittaluga. "This is increasingly evident in the branded consumer sector, and others will follow."

He adds, "What is also interesting is that many of these changes are consumer-driven. It is not a supply-side phenomenon, but rather a journey that to a large extent is being pushed by consumers looking for a frictionless experience – so it's essential for businesses to understand how their customers are changing and adapt accordingly, as it may not be a question of choice."

Digital on the inside

While the customer-facing digital experience is a major part of this evolution – a trend that Pittaluga refers to as being "digital on the outside" – it is far from the only challenge that companies face. While every company will have its own operational and technical infrastructure, Pittaluga says that one common issue is the question of how companies manage becoming digital on the outside versus being digital on the inside. In other words, it's one thing to provide online sales for customers via a digital front end – but in order to make the most of technological developments and become future ready, companies also need to pay the same attention to the systems that they use to process and authorise payment instructions, and the extent to which these systems are integrated.

In practice, this may not be straightforward. Very large multinationals that have grown both organically and by acquisition often have many different IT systems that may not be interconnected. When it comes to being future ready and taking advantage of new developments in technology, it is therefore important to integrate the different systems in place to facilitate interconnectedness to the outside. Indeed, IT systems integration is one of the key challenges cited by global treasurers

when seeking to capitalise on the potential benefits that emerging technologies could bring to treasury management.

Embracing the opportunities

In the world of treasury, the rise of faster payments is enabling a move from a batch operational environment to a real-time environment. Rather than making payments in batches, companies can make numerous low value payments individually in real-time, in a trend sometimes referred to as the 'miniaturisation' of payments. Likewise, treasurers can benefit from having access to fully up-to-date information on a 24/7 real-time basis. While this brings opportunities for companies to speed up the way in which they can collect cash, reconcile payments and sell to clients, it also creates the need for enhanced automation and standardisation of data to support the processing of large volumes of smaller incoming payments.

Alongside these developments, technologies including artificial intelligence (AI), machine learning (ML) and APIs can enable treasurers to operate more efficiently in the changing landscape. Pittaluga observes that a "very important technology shift" is taking place. "For example, In July 2018, Citi Treasury and Trade Solutions announced a strategic fintech partnership to launch Citi® Smart Match, which leverages AI and ML technology, together with the bank's proprietary assets, to increase the efficiency and automation of the cash application process of matching open invoices to payments received by corporate clients," he says. "We are also leveraging machine learning to build technology that monitors payments and lets clients know if any payments fall outside their historical norms – and that improves over time as our clients' businesses evolve."

What are treasurers doing?

In order to succeed in this environment, a proactive approach is needed. Understanding all the nuances of the changing landscape and formulating a digital roadmap can be daunting, but this is an area banks may be able to help with.

"We like to be very structured in supporting clients through this process," says Pittaluga. "We're having co-creation sessions with our clients to explore how they can give their customers a better buying experience. Faster payments, a digital front end and less friction in the payments process are all tangible benefits that improve customer experience."

When it comes to building a structured digital roadmap, the following six building blocks can be used as a starting point:

- **Policy and governance.** Developments like faster payments and the miniaturisation of payments call for different/additional controls, both for banks and for corporates. Creating a digital scorecard, ensuring policies include emerging technologies provisions, setting clear guidelines around third party vendors and working on a Cybersecurity Playbook could also be key elements of this pillar.
- **Liquidity and working capital management.** This area is being bolstered by data and game-changing technology such as AI. Using data analytics in forecasting – and investing in AI and APIs for automatic investment decisions and to enable business growth initiatives – are also areas to explore and include in the digital roadmap.
- **Accounts receivable and accounts payable.** Likewise, treasurers can benefit from new technology in this area, including faster payments as well as the use of data analytics/AI to enhance receivables reconciliation procedures and explore automation opportunities, among other opportunities.
- **Risk management, accounting and reporting.** The use of predictive analytics for FX and other risk factors analysis, as well as to better project how the business will evolve, could present considerable opportunities in the future. Companies should also look at leveraging existing technological developments to prevent/minimise fraud.
- **Systems, technology and information services.** Companies should aim to evaluate new connectivity options, understand the impact of a real-time operational environment, and embrace the opportunities that distributed ledger technology could bring for supply chains, among other things.
- **Culture.** Building a culture which values innovation is also important when it comes to embracing new developments and technologies.

Recruitment and skills

As topics like data analytics, blockchain and AI become increasingly mainstream, it's essential for companies to have employees who possess the relevant skillsets. Likewise, when recruiting, it is important to be aware of how expectations are evolving. "One client told us that they have realised that younger generations that have grown up in the digital space are themselves already digital on the inside," says Pittaluga. "So hiring young talent nowadays to support very basic administrative functions may prove to be an increasing challenge."

Looking forward

The pace of change is showing no signs of slowing – so which developments should treasurers be monitoring? For one thing, there is a growing emphasis on the concept of ecosystems, which is defining corporate strategy for many of the most important emerging players in ecommerce, technology and other industries. "The ecosystem concept is going to be very relevant in this area, with more players, greater specialisation and a lot of technology-driven changes," says Pittaluga. "We also expect that some of the more important disruptors will get a larger share of the economic value in the future."

Where Citi is concerned, Pittaluga says the bank will continue to focus on helping clients navigate these challenges and capitalise on the associated opportunities. "In summary, what we expect to see in the next two years is significant technology-driven progress towards automation, greater efficiency and better client experience," he concludes. "Enablers to this growth will include technologies such as robotics, AI and machine learning – but they will also include continuing evolution in the region's payment infrastructure and the rise of real-time settlement. This is a unique and interesting business environment, with significant changes that offer great opportunities."

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Bringing cash home

US tax reform has prompted many companies to review their cash repatriation policies. But how and why does cash become 'trapped' in overseas markets, what are the benefits of bringing cash home – and when is it preferable to leave cash where it is?

Companies around the world are continuing to hold high levels of cash. Mark Smith, head of Global Liquidity for Global Transaction Services at Bank of America Merrill Lynch, comments that since the financial crisis, corporates have increasingly aimed to carry more cash on their balance sheets in order to build a more significant buffer against unforeseen circumstances. At the same time, low interest rates have prompted some companies to issue debt for large acquisitions, rather than make use of that cash. "In other words, there has been a build-up of cash from a defensive standpoint, and there hasn't been any need to deploy that cash urgently because debt has been so cheap," he says.

But while a cash buffer can provide a sense of security, in practice not all of the cash held by a multinational company may be readily accessible. From stringent foreign exchange controls to tax considerations, there are many factors which can make it difficult for treasurers to bring cash home from overseas offices.

For corporate treasurers, one perennial goal is to overcome these obstacles and reduce the amount of cash trapped in other markets. This is certainly the case for George Dessing, Senior Vice President, Treasury & Risk at global information, software, and services company Wolters Kluwer. "We want to provide value for stakeholders, which means that we want to limit the amount of trapped cash, or restricted cash as we refer to it, and therefore maximise the cash which is repatriated to the central parent level in the Netherlands," he explains.

At the end of 2017, the company's restricted cash amounted to around €17m, down from €29m in 2016. As Dessing comments, "Most of the restrictions we face are due to local exchange control regulation on exporting cash and capital out

> In this way, factors that should not normally lead to a trapped cash problem can contribute to the outcome.
>
> Yera Hagopian, Head of Liquidity Services, Barclays Corporate Banking

of the country – and we even mention that explicitly in the notes to our annual report, so it's definitely a topic receiving a certain amount of attention in our financials."

Challenging markets

Where Wolters Kluwer is concerned, Dessing says that restrictions can be found in a number of markets, including countries where exchange controls are prevalent – such as China, India and Brazil – as well as other emerging markets and some Eastern European countries.

"China has always been a challenge in this landscape although the authorities have over recent years made a number of attempts to allow more movement, albeit sometimes for certain periods before reimposing restrictions," comments Yera Hagopian, Head of Liquidity Services, Barclays Corporate Banking. "Certain Latin American countries such as Brazil, Argentina and Venezuela also present challenges alongside other Asian countries like India, Thailand, and South Korea." She adds that Russia and Turkey "are still in the more challenging space when it comes to free movement of cash".

But tax and regulatory factors are not the only reasons why companies may have issues around trapped cash. "Poor visibility or inaccurate data can impede efficient cash management," says Hagopian. "Zero balancing may need to be watered down to target balancing, with substantial local buffers if there is the risk of overdrawing the local account and incurring a hefty local overdraft charge. Similarly, organisational factors may have some bearing on how cash is managed."

Hagopian points out that in organisations where payments are decentralised across different markets, local operations will require a degree of control over their cash flows, as well as the certainty that their payments have adequate access to funding on an intraday basis. "In this way, factors that should not normally lead to a trapped cash problem can contribute to the outcome."

Weighing the risks

As Hagopian explains, there is a dilemma in that the markets which present the most challenging environments for cash repatriation "often present the greatest concern regarding country risk". As such, she says that these considerations are best contemplated at the outset when investment in a particular market is being reviewed.

"The decision to invest may still be upheld, but the capital and funding structure of the local operation may be different as a result of a holistic review, given the reliance on dividends and royalties as the primary mechanism for repatriating cash. In addition, the attraction of a taxation rate for profits has to be weighed against the restrictions upon repatriation."

Naturally, there's no one size fits all when it comes to managing cash effectively. Where Wolters Kluwer is concerned, Dessing says that the group faces a variety of financial risks, including liquidity risk, market risk and credit risk, all of which are managed via a strict financial framework, policies and procedures. Against this backdrop, the company's total debt is around €2bn – "and therefore you want to reduce that by having access to all available cash on a global basis."

Dessing says that Wolters Kluwer tackles this task via a three-pronged approach. "First of all, we are using global cash pooling structures to gain access to cash, even in countries which have certain limitations," he says. "Secondly, our intra-group financing includes certain netting and settlement structures that we use internally. And finally, we reduce the restricted cash via our internal dividend policy."

Impact of the US tax reform

While the issue of trapped cash has long been a concern for treasurers, conditions in specific markets can and do change over time. One notable development in recent months has been the US tax reform: as well as cutting corporation tax from 35% to 21%, the reform set out to encourage US corporations to repatriate foreign earnings, offering a reduced one-off repatriation tax rate on profits brought back to the US.

The consequences of this development could be significant. "The United States Worldwide system meant around US$2.5trn of cash was parked abroad by some estimates, discouraging onshore investing, debt restructuring and dividend payments," says Hagopian. "At 35%, the rate of US Federal Income Tax was considerably higher than the average across the OECD, resulting in a deemed lack of competitiveness for attracting and retaining business in the US."

Consequently, Hagopian says that the reduced transition tax, reduction in income tax rate and the ruling that foreign subsidiary earnings and dividends from foreign subsidiaries will not be subject to US tax in future, "has led many US multinationals to reconsider their repatriation policies".

Some companies have been quick to take advantage of the opportunity. Apple, for example, announced in January that it anticipated repatriation tax payments of approximately US$38bn – implying that the company planned to repatriate around US$245bn.

But there are other factors to consider. Hagopian notes that there is a new minimum tax on 'global intangible low-taxed income' (GILTI), while CFC rules still apply to certain 'passive' income, making it subject to full US tax rate. "Of course,

In some cases, tax considerations outweigh the benefit of transferring cash in the long run. We sometimes leave the cash in-country, but mostly we try to get it to a central level.

George Dessing, Senior Vice President, Treasury & Risk, Wolters Kluwer

foreign capital gains remain subject to US taxation and local withholding or dividend taxes may still apply in local markets," she adds.

To repatriate or not to repatriate?

When it comes to taking advantage of the changes, not all companies are alike. Bank of America Merrill Lynch's Smith points out that large companies in sectors such as pharmaceuticals and technology may have built up large cash balances which they may have placed in short-term investments – "and they were waiting for repatriation to happen so that they could bring that cash onshore."

For other companies, however, the situation may be somewhat different. "A lot of overseas cash is actually needed to run the overseas operation, so not all cash is eligible for repatriation," says Smith. "Another factor is that companies have put together structures for their overseas cash that are sometimes complex, but ultimately efficient – and that efficiency may still hold post-tax reform. In any case, these structures can be quite time consuming and sometimes costly to unwind."

Consequently, Smith says that the bank has not seen a significant volume of flows as a result of the US tax reform. While some larger companies have taken advantage of the opportunity, many others are taking time to weigh up their operating cash needs versus their excess cash. Another consideration is that in some cases, there may be attractive investment opportunities overseas, which may mean companies can earn more overseas than they can by repatriating that cash.

Of course, taking the decision to repatriate cash is not the end of the story. "Even once they have reached their conclusions and found that they have cash that is eligible and desirable to repatriate, they still have to go through a process to actually repatriate it," says Smith. He notes that undertaking a capital distribution from a subsidiary to a parent can take time: "Cash could be buried several layers below that parent and you are going to need to do financial statements, have those audited and get tax advice. So there are practical reasons why it can take time to gather cash efficiently into the place where it is needed, and then execute the repatriation."

Weighing the options

These considerations are not limited to the developments in the US. While there are many good reasons for repatriating cash, from reducing reliance on external funding to taking advantage of opportunities for higher yield, there may also be situations when companies choose to leave cash where it is.

"Apart from the non-discretionary reasons relating to local regulations, punitive tax consequences are a primary reason for leaving cash in local operations, even if it is not needed for operational purposes," says Hagopian. She points out that withholding taxes generally apply to cross-border payments of interest, dividends and royalties. Likewise, transfer pricing considerations can apply to inter-company loans and deposits that require interest arrangements to be conducted at arm's length to prevent potential tax avoidance.

"In some cases, tax considerations outweigh the benefit of transferring cash in the long run," comments Dessing. "We sometimes leave the cash in-country, but mostly we try to get it to a central level."

Another consideration is the need for treasurers to provide their relationship banks with revenue opportunities. "If deposit rates are attractive and risk is acceptable, a local deposit or investment product may be a good way of rewarding a relationship bank, especially if the cash cannot be put to better use elsewhere," Hagopian explains. "Manufacturing and production sites can often be set up in challenging countries, and sometimes the best way to use cash is to invest further in that country to then generate more finished goods for sale. These goods can be destined for the home market, leading to bigger dividend repatriation if that is possible, or made available for export."

The currency in which cash is denominated will also need to be taken into account. Hagopian notes that consolidation of minor currencies may not always make sense, "especially where there are no corresponding funding requirements and currency markets are not deep enough to be certain of a beneficial exchange rate for swaps, whether real or virtual by way of a multi-currency pool". Likewise, in some Asian markets, it is possible to repatriate foreign currency but not local currency.

Keeping up to date

It's clear that there are many factors to consider when it comes to a company's cash repatriation policy – and given that market conditions and local regulations are not set in stone, treasurers need to be fully apprised of any developments which may affect their chosen approach.

Dessing explains that the company's treasury stays on top of these questions by leveraging local knowledge not only from the tax department, but also from local units that can advise about in-country changes. "We also speak to certain trusted advisory firms, our global banking partners and local and international treasury peer groups," he adds.

In conclusion, there is much to be gained by bringing cash home wherever this will benefit the company. But before this can happen, it is essential to have a full understanding of current market conditions, the mechanics of the repatriation process – and any factors which could mean cash could be put to better use in local markets.

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Instituting a cash investment policy statement

A cash investment policy statement, or cash IPS, is an important tool when it comes to articulating the company's investment goals, optimising cash and promoting accountability. But an IPS is not set in stone – and in current market conditions it's particularly critical to make sure the statement is fully up-to-date, whether that means reviewing the existing IPS or building an IPS for the first time.

In today's evolving regulatory and interest rate environment, it is essential that organisations' investment policies continue to meet the needs of current market conditions – and this means having the right tools in place. A cash investment policy statement is an important part of the equation when it comes to supporting sound cash investment decisions.

What is a cash IPS?

Organisations can use a cash IPS to set out their short-term investment goals and the strategies they will use to achieve them, as well as documenting the segmentation of cash into different categories based on the company's liquidity needs. Typically the cash IPS will define the organisation's parameters in terms of liquidity, quality and return, as well as specifying its return requirements, risk tolerance and permissible investments. The cash IPS should also document any investment constraints, such as tax considerations; environmental, social and governance guidelines.

There are many good reasons for adopting a cash IPS. As well as providing more clarity for everyone from the investment team to the board of directors, a cash IPS can help organisations optimise cash, while promoting accountability by building in governance. The statement can also be used to help navigate regulatory change and adapt to changing interest rates.

In with the new

While organisations may already have a cash IPS in place, current market conditions are prompting many investors to adopt a new cash IPS, or to update the existing statement. Regulatory developments such as Basel III or money market fund reform in the US and Europe may lead companies to adjust their cash IPS. Likewise, the evolving interest rate environment is making it more important for investors to be flexible in the face of market changes. As well as, evolution in products such as ultra-short exchanged-traded funds (ETFs) and liquidity private placement funds.

In any case, a cash IPS is not set in stone: treasury teams often update their cash IPS frequently so that they can take advantage of new investment opportunities and cash management products.

Of course, all of this takes time – so it is important to get the ball rolling at the earliest opportunity.

How to build a cash IPS

When it comes to creating a new cash IPS – or reviewing the existing IPS – companies will need to set out their cash investment objectives, draw up a cash forecast and, where applicable, segment cash into different categories based on considerations such as liquidity and purpose.

1. **Set objectives**

First and foremost, the cash IPS should detail the organisation's goals for its short-term investment strategy, as well as specifying how the organisation will meet those goals. The objectives section of the cash IPS may include the following:

- **Capital preservation.** Protecting the principal will likely be a primary goal.
- **Liquidity.** The cash IPS should stipulate the level of liquidity needed in order to mitigate avoidable risks.
- **Yield.** The organisation may include yield among its goals, although the cash IPS will need to weigh this against the likely increase in volatility of principal.
- **Tax-advantaged returns.** In some cases, organisations may be seeking tax-conscious liquidity management, for example by using tax-free short-term funds.
- **Above-benchmark returns.** Objectives may also include exceeding a benchmark that mirrors the portfolio's underlying investments.

2. **Produce a cash forecast**

The treasury team should then inventory the company's expenditures in order to produce a detailed cash forecast. This can be used to identify what portion of a portfolio needs to be readily accessible, and which portion can be treated as surplus cash.

3. **Segment cash**

Drawing upon this information, the cash IPS may then detail how cash should be segmented into different categories based on different objectives and liquidity requirements. Typically these categories will include key 'buckets' such as operating cash, reserve cash and strategic cash. Operating cash is used to fund the company's operating needs and therefore requires same-day or short-term liquidity. Reserve cash – which may be earmarked for purposes such as acquisitions, research and development, or stock repurchase

– may have an investment horizon of six to 12 months, while strategic cash may be invested for one year or more.

Key components of a cash IPS

Once the objectives of the cash IPS have been defined, and the cash segmentation strategy clarified, the next step is to provide greater detail about the level of risk which can be tolerated within each segment. In some cases, organisations will adopt a higher-risk strategic cash allocation – but the impact of the decision will need to be understood and documented within the IPS.

For each segment, companies should therefore consider a number of different risk factors, including their tolerance for liquidity constraints, the portfolio's sensitivity to interest rate volatility and the possibility of liquidity fees being imposed in times of market stress. Companies should also assess their tolerance for short-term negative returns and the acceptable range of realised gains/losses over a given period.

When considering risk tolerance, the following types of risk should be taken into account:

- **Interest rate risk.** A change in interest rates can affect the value of a security – so for each segment, the cash IPS should stipulate the organisation's interest rate risk tolerance. Typically the operating cash will have the lowest interest rate risk tolerance, while the strategic segment will have the highest tolerance.
- **Liquidity risk.** The cash IPS should define the level of liquidity needed so that companies can meet their obligations without needing to sell longer-dated securities.
- **Credit risk.** The value of a security can change as a result of a rating downgrade or a credit risk default. The IPS should define the minimum credit quality required for individual securities. It is also advisable to specify an average credit quality limit on the portfolio as a whole in order to ensure credit quality diversification.
- **Loss of principal risk.** In certain circumstances, a major downturn could result in the loss of principal for longer-duration cash products. The cash IPS should define whether the organisation can accept a level of short-term volatility, as well as its requirements in terms of steady dividend income and diversification.

Other considerations

As well as looking at the risk factors detailed above, companies should also consider a number of other elements when creating the cash IPS. For one thing, it's important to state the types of securities permitted by the cash IPS, including any parameters relating to credit quality maturity and diversification. The IPS should also detail what the company should do if a security or issuer is downgraded, or if ratings differ between rating agencies.

When it comes to tracking performance, the IPS should specify portfolio benchmarks in line with the company's investment strategy, as well as spelling out any tolerance for portfolio gains or losses. Likewise, the IPS should set out duration strategies for each cash segment, specifying in each case whether the strategy is a target duration or a buy-and-hold strategy.

In addition, the cash IPS should identify any sustainability or environmental, social and governance (ESG) parameters which may be applied.

Roles and responsibilities

Another requirement of the cash IPS is to provide clarity over the roles and responsibilities of those involved in approving, implementing and modifying the statement. Adopting an IPS is not a one-off exercise, so provision should be made for how the cash IPS will be evaluated on a regular basis, and how compliance will be enforced.

It is important to bear in mind that circumstances can change: regulatory developments may affect the company's cash management strategy, while risk tolerance can change over time. Actions such as acquisitions and share buybacks may reduce available cash, while a divestiture or bond issue could generate a significant inflow.

The IPS should therefore define who is responsible for reviewing the IPS and who can recommend modifications. Typically this will include the CFO, treasurer, assistant treasurer and other members of the treasury group. Likewise, the IPS should specify who has authority for final sign-off: this will usually be the CEO, CFO and/or board of directors. Procedures should also be put in place for any exceptions to the investment policy which may arise, and how these should be approved.

Seeking an external asset manager

Finally, companies will need to consider how to go about implementing the cash IPS. Some will have the resources needed to manage short-term investments in-house, such as portfolio management systems and risk control expertise. Companies managing their investments in-house will also need to have a credit team and a procedure for providing the necessary compliance monitoring reporting.

In other cases, it will be appropriate to seek assistance from an external asset manager which may be better suited to provide the relevant knowledge, resources, time and infrastructure. When choosing an external manager, it is essential to ask some rigorous questions about the capabilities of any managers under consideration. For one thing, companies should assess the asset manager's tenure in the short-term fixed income business and its track record in credit and risk management. Likewise, organisations should consider the size of the firm's dedicated credit team, the background of team members and to what extent credit teams are separated from the portfolio manager.

Other criteria should include the asset manager's geographical scale and business model, as well as the diversity of its client base. Last but not least, companies should pay attention to the firm's total AUM in short-term fixed income, its share in the money market business and how this has changed over time.

In conclusion, it is essential that companies continue to evaluate their investment strategies in line with changing market conditions – and the cash IPS is an important tool in defining and enforcing an organisation's investment goals. Whether companies are creating an IPS for the first time, or reviewing an existing statement, they will need to approach the process rigorously in order to create a robust IPS with the flexibility to meet their evolving needs.

Time to get rated?

A credit rating can offer treasurers a means of accessing diversified sources of funding. Given the economic and geopolitical uncertainty that prevails in many parts of the world, perhaps it is time to consider the value of an independent assessment of your organisation's creditworthiness. Treasury Today takes a back to basics look at what a credit rating really means.

There are many reasons why a credit rating may be desirable in the corporate sector. Every company needs to be prepared for future financial events, this being a key role for the treasurer. With a notable trend in the UK over the last few years, following the US example, for diversifying away from bank borrowing and instead heading towards capital market and private placement funding, a credit rating can become an integral part of an organisation's future growth plans.

What is a credit rating?

A credit rating is a considered, forward-looking opinion offered by a professional independent credit rating agency (CRA) concerning the relative ability of the rated entity (such as a corporate or a bank) to meet its financial commitments.

The main distinction within the scope of a rating is between the public, the private and the confidential. A public rating is a highly visible means of articulating the entity's credit story to a broad sweep of stakeholders, including investors and analysts, helping them to form more accurate assessments of any investment or lending decisions concerning that entity.

Ratings that are offered privately may be used to support an entity's private funding exercise, in which it may be seeking to better articulate its own credit story to, for example, the private placement or direct investment market. A private rating story may also be told to select business counterparts, perhaps prior to a corporate establishing a significant new trading relationship or in the negotiation of new commercial terms.

The advantage of a private rating is that it enables the company to understand the way in which external parties view its credit status, how the agency rates it relative to its peers, and also to understand the key ratings drivers in terms of its ongoing ratings performance. It will then be the decision of the company – not the CRA – to choose when (and if) it wishes to make its rating public, sharing with a broad set of market counterparts.

It may be that a company wishes only to dip a tentative toe in the credit rating pool, in which case it may opt for a confidential rating, giving it time to internally digest the information. Confidential ratings may be used as part of an internal benchmarking exercise, where an entity requires a comparison with its publicly-rated competitors. This understanding can help it to develop its own business and commercial strategies.

The process of investigation to reach a rating decision is the same in all cases. The rated business can terminate its relationship with the CRA at any time.

Rating purpose

The main aim of a credit rating is to offer a transparent, consistent and independent assessment of an entity's creditworthiness. This helps the accurate pricing of credit risk for that business.

An entity may call upon the opinions of more than one CRA, this decision largely depending upon factors such as purpose or geography.

Achieving a rating means the entity will have undergone a high level of disclosure and evaluation. For investors, ratings are commonly seen as a trusted benchmark when making investment decisions.

The principal benefit of a rating is therefore to give increased comfort to stakeholders that the holder, having undergone independent analysis, has been independently and soundly judged on the basis for which the rating has been applied. For the rated corporate, it can be a means of opening up a wider pool of investors or of securing improved debt pricing.

Once issued, a public credit rating will be continually monitored and assessed by the issuing CRA in terms of the entity's performance. This provides stakeholders with as accurate, timely and consistent a picture of that entity's relative creditworthiness as is possible.

Of course, it is up to each market constituent to decide to what extent it incorporates the rating into its decision-making. Each will call upon their own additional sources of data and information, including the more detailed 'personal' story of the target company.

CRAs

Moody, S&P and Fitch today represent the Big Three, issuing an estimated 95% of the world's ratings. They are similar of purpose, but nuanced differences are observable. Each has its own rating scale although the scales do offer equivalency, so can be said to offer a different way of expressing the same view.

However, each also publishes its own rating criteria which means an offered rating can vary from one CRA to another, based on a view of the same entity. The three main CRAs do not all operate in the same markets and there may be some jurisdictions that one covers that the others do not.

There are almost 100 other credit rating agencies and organisations spread across more than 40 countries globally. All are smaller than the Big Three, some of these concern themselves only with domestic ratings, their relative merit being based on deep local market knowledge and, arguably,

Credit ratings*

		Moody's	Standard & Poors	Fitch
Investment grade	**Strongest**	Aaa	AAA	AAA
		Aa	AA	AA
		A	A	A
		Baa	BBB	BBB
Non-investment grade	**Weakest**	Ba	BB	BB
		B	B	B
		Caa	CCC	CCC
		Ca	CC	CC
		C	C	C
		C	D	D

**These credit ratings are reflective of obligations with long-term maturities*

cost for the entity being rated. On the latter, CRA fees are typically charged for the initial rating and for the necessary ongoing surveillance of the entity's performance.

The Big Three are more widely known but the choice of CRA might depend on a number of factors. These might include the size of the rated company, the location of its operating activities and its head office or group treasury, the volume of debt being sought, and locations in which it plans to tap the capital markets, use long-term bank funding or seek direct investment from institutional investors.

Ratings advisor

The rating process can be quite straightforward, especially for listed companies used to dealing with equity analysts, although the equity analyst's focus is more on assessing share value than the CRA's emphasis on creditworthiness.

However, many businesses seeking an initial rating, or those with challenging operating circumstances (such as a difficult jurisdiction or where liquidity is a perceived issue), do decide to use a ratings advisor to ensure their business is accurately represented and thus the rating fairly reflects the perceived risk.

Advisors will often be connected to the applicant's lead bank, particularly where bond issuance is the goal, but could equally be a debt advisor in the relevant market. The advisor's job is to steer its client through the process.

Starting out

The key to success with an initial rating is effective information gathering. There are two broad corporate-specific (as opposed to general market) categories here.

Qualitative data will present factors such as industry risks, competitive position of the business, the state of corporate governance, management experience, anticipated transformative events (such as major M&A), product portfolio, geographical presence, operational scale and flexibility.

Quantitative data will also be sought, including numerical elements such as audited accounts, financial performance (cash flow, profitability and so on), financial position (including capital structure and level of gearing), and how financial risks such as funding and liquidity are managed.

There are two additional practical considerations for the corporate. The CRA will require a formal ratings presentation of the key facts and figures. This entails a detailed face-to-face Q&A session with senior management.

A decision must be taken early on as to who is best placed to meet the CRA to present the right picture. Usually this will involve the CEO, CFO, COO and the Group Treasurer. All personnel will need to be both available and fully briefed on the process. CRAs do not give advice so the presentation may be prepared in-house by the company or with the guidance of a ratings advisor.

The second point for consideration concerns the likely request by the CRA for confidential information from the corporate. A preparatory internal discussion on what can and cannot be disclosed is necessary to prevent the process from grinding to a halt but principally to help the CRA gain the most accurate impression of the business.

The corporate is not obliged to give any confidential information, but in the interest of gaining an accurate rating, the business should be prepared to be as transparent as possible.

Ultimately, a rating must be forward-looking, so history is never going to be the sole source of information. Forecast data will therefore be required. It is likely that, once all data has been aggregated, stress testing certain scenarios will help the CRA form its opinion.

Fair judgement

When rating a corporate, CRA analysts will source and sift a wide range of public and private qualitative and quantitative data.

The reality of deriving a credit rating is complex for the CRA not least because it must put its view into a very broad commercial context. By assigning a rating, the CRA is not just providing an opinion and a rationale about a company and its role in its operating sector but it is also necessarily comparing it objectively to all the other companies that it rates.

Using a common language to discuss credit quality thus means an individual rating from one CRA allows an investor to compare relative creditworthiness regardless of the class of debt it is applied to. Although not all CRAs will take the same view of that creditworthiness, well-known equivalency amongst their ratings make for easy comparison.

A to D of ratings

Issuers will normally be given a rating as a business. In addition, all its debt issuances can be rated. If, for some reason, the company does not agree with the rating decision it can appeal to the CRA if it provides materially new or additional information, but there is no specific right to do so.

Ratings range from investment grade (where, for example, S&P's AAA is at the top, down to its BBB- at the bottom) to the non-investment or high-yield grade, which for S&P ranges from BB+ down to D (D being a state of default).

For all but defaulted ratings, or very low-rated issuers, where default risk is already very high in the 'C' to 'CCC' rating categories, the CRAs also offer a 'rating outlook' to guide investors on the likely direction of their rating over a one- or two-year period.

This dynamic assessment ranges between 'positive', 'stable' or 'negative'. This comes with the option of placing the issuer on a shorter timeframe (three to six months) 'rating watch' where events dictate, again citing a negative or positive stance based on the expected outcome of a major event (such as an M&A).

A ratings watch can be applied to a business when something material is expected to change its credit profile; a debt-funded acquisition that might materially affect the leverage metrics, for example. A rated company will already have agreed 'rating headroom' at its existing rating level whereby it has a degree of latitude before it would become necessary to consider changing the rating.

Being junk

Most businesses will spend a long time considering the prospect of securing a rating. If they have used the services of a ratings advisor to help them consider their options, it may become apparent that the they will not receive the expected rating. Some may not pursue it any further but there is still value in undertaking the rating process, as an input to their strategic decision-making or as a snap-shot of current performance.

For companies that know from the outset that they are not at the higher end of the scale, or for those that are downgraded, even if they are moved into 'junk' territory (junk is predominantly an emotive investor term, CRAs prefer 'high-yield' or 'non-investment grade'), CRAs will continue rating it all the while there is debt outstanding.

If the information required to maintain the rating is not available (such as if the company is in liquidation), the rating can be withdrawn by the CRA but generally, regardless of rating level, investors would want and need a rating on all outstanding debt; being able to provide it is beneficial.

Although a low rating may be seen as undesirable, the high-yield end of the investment spectrum it opens up for the holder still has an important role to play. An entity can elect to operate a capital structure that provides an optimal return for its shareholders. It could, for example, decide to operate as a highly leveraged company, possibly resulting in non-investment grade status. It is the company's decision as to what capital structure it feels is appropriate for itself and for its shareholders but there is an investor base covering all ends of the ratings spectrum.

Managing the rating

A CRA will use multiple sources of information to regularly update its rating opinions. But between CRA and corporate, there is an expectation of good communication and flow of information. A sensible and reasonable level of transparency is therefore key to the success of the relationship. All ratings are subject to regular reviews by the CRA's rating committee, to ensure its rating opinion stays current and is at least somewhat resilient to everyday market volatility.

This requires the identification and notification in advance by the corporate of any events that could influence the rating. The CRA should not be finding out about major events through media reports. Such events might include planned M&A or divestments, a new market or strategic direction, or a profits warning. A list of the company's top ten exposures, or projections for the next two or five-year period, for example, may also be requested.

Volunteering information on transformative events (such as an acquisition) avoids the risk of the corporate being placed on review, possibly for a downgrade, giving the CRA time to formulate a full opinion on the significance of that event in terms of the corporate's solvency position.

Where highly confidential information is called for, the corporate will already have made its decision on what it will reveal. But the CRA will only use that information to help inform its own opinion and prior to any public announcement (for a public rating), it will usually consult with the corporate to ensure that nothing contained therein will be to the detriment of the corporate and its stakeholders.

Value-adding exercise

Managing a rating is an ongoing process; for it to be useful for a wide range of stakeholders, the need is to keep it current at all times. To get the most out of the ratings process, it is advisable for the corporate not to see it as a test to be endured but instead to use it as an opportunity to add value to the business. Not only can a credit rating provide access to alternative funding sources but, in its assessment, the CRA will sometimes observe key strengths or greater risks within the organisation. Ideally, these impartial expert views should be used to make positive changes within.

Treasury Today would like to thank the following for their help in writing this article: Dino Nicolaides, MD, Head of Treasury Advisory UK & Ireland, Redbridge Debt & Treasury Advisory; Richard Anthony-Smith, Head of EMEA Business Development, S&P Global Ratings; Anjali Sharma, EMEA Head of Corporates, Business and Relationship Management, Fitch Ratings; William Coley, SVP Credit Policy, Infrastructure, Moody's Investors Service.

Working capital

“My business is struggling with working capital and payments are often too slow for our suppliers. What can I do?”

Venkat ES

Head of Asia Pacific Treasury Product, Global Transaction Services
Bank of America Merrill Lynch

Efficient and effective management of working capital is crucial for any enterprise. The traditional definition of ‘working capital’ as current assets minus current liabilities is a very simple concept but it is core to the day-to-day running of a business.

To have sound financial and operational efficiency, optimising the cash conversion cycle (days sales outstanding (DSO) + days inventory outstanding (DIO) – days payments outstanding (DPO)) is an integral part of financial supply chain management. This helps in reducing bank debt but also ensures sustainable and stable links in the supply chain.

The rapid developments in the payment landscape also mean businesses are increasingly looking to payment solutions, both traditional and modern, to unlock hidden cash to achieve effective working capital management. Businesses can explore the following:

Holistic view: businesses can adopt a holistic view of suppliers and dealers by categorising them as either strategic or non-strategic partners to gain better payment terms. Deep dive analysis of payment terms has shown that there are opportunities to leverage large dollar value supplier payments to extend payment terms, particularly with strategic vendors. Dynamic discounting is also another tool that can be effectively deployed for working capital management. Providing discounts and rebates to dealer side of the receivables may improve payment terms and cash flows.

Supply chain financing (SCF): SCF is another option that helps to stabilise financial liquidity by using third-party financing in place of the organisation’s own balance sheet to fund early payment discounts. With an increasing demand for procure-to-pay automation, more companies are showing their interest in SCF to attract and enjoy early payment discounts. Buyers can benefit by reducing spend on goods while suppliers can obtain liquidity and maintain flexibility over receivables.

Corporate cards: another great way to accelerate cash flow is through the use of purchase and settlement cards (P-Cards). P-Cards are a traditional fit for financial supply chain management as they combine payments and financing. The benefit of using cards comes from the extended payment dates. Suppliers can receive payments within a few days so they receive money quickly. On the other hand, buyers would have a longer period to pay the bank, enabling them to maximise their working capital for a longer duration.

Going digital: effective use of business analytics and intelligence, moving from paper to electronic modes of invoicing, adopting electronic modes of payments, digitalising the reconciliation processes would help the management of working capital and its efficiency.

Effective usage of real-time payment (RTP) mechanism: the mass adoption of real-time payment globally has contributed to an environment where consumers and businesses are expecting to make payments, settle bills and transfer money securely and quickly. It is all the more crucial for businesses to leverage available real-time payment infrastructure to manage cash flows and working capital.

Nicholas Soo

Director, Regional Head of Payments, Global Liquidity and Cash Management
HSBC

Like most solutions in life, there is no quick fix and patience, due-diligence and analysis are required – but you can take short-, medium- and long-term actions to rectify the issue for good.

In the short term, you should assess your relationship with suppliers, especially your more strategic partners, to determine if slow payments will pose a significant business disruption risk. If business critical, consider immediate solutions (even if they are likely to be pricier), such as bank facilities (working capital funding, or providing early payment discounts) to ensure your business can continue to operate smoothly.

In the medium term, which could be anywhere from three to six months, you should seek to undertake an end-to-end assessment of your working capital cycle – with a particular focus on the order to cash cycle. Ask yourself: where are the inefficiencies coming from? Many companies face issues in matching and reconciling incoming payments which, if resolved, can free up anything from two days to two weeks cash flow. You should also take the opportunity to consider whether terms with both customers and suppliers can be renegotiated.

From client conversations, we have also learnt that undergoing a stocktake of credit terms across both suppliers and buyers, as well as seeking opportunities for standardisation, is an important step in tackling such issues.

As your payment is someone else's collection, you may also want to consider speaking to your supplier on their reconciliation challenges and whether you can structure your payment (ie providing the right payment in the right place) accordingly to ease their administrative burden.

Such engagements could benefit you by providing improved chances of discussing favourable terms, or at the very least assist to eliminate some processing float.

Then there's the long term. At HSBC, we've observed that market trends, changing buyer behaviour and enablement via technology are dramatically changing the distribution channels for our clients. These include selling directly online and participating in marketplaces, among other digital platforms. Embracing technology to improve efficiencies is a game changer in the market, and we'd recommend exploring how these opportunities can supplement your business strategy and have a positive direct impact on your working capital model.

François-Dominique Doll
Director, Treasury Advisory Services
Deloitte Southeast Asia

When talking about working capital, it is worth highlighting that it is made up of three main components: receivables from customers, payments to suppliers, and inventory levels of primary or finished goods.

The dynamics of these three components can vary depending on the type of business and/or industry. For instance, retail companies and others in the service-driven industry will not have the same working capital issues as an industrial manufacturing group.

For treasurers, while they may have little direct control over inventory management, they are able to directly influence receivables and payables.

Where collections are concerned, it is about establishing the right level of agreement with the customer, either through open account or letters of credit, to ensure that payment is made on time for the goods and services delivered.

A key index for collections is DSO, whereby the CFO is able to see the status of the payment terms – are they on track or behind? Minimising the DSO involves having the right controls and procedures to reduce any delays in payments and therefore, translating receivables directly into cash.

Utilising electronic collections can help reduce the float on receivables as well. Banks offer a number of solutions to improve working capital, including corporate credit cards, virtual accounts and lockboxes, all of which enhance the collection reconciliation process and identify early any late payments from customers.

On the payments side, recent surveys in Europe show that there is a significant increase in late payments from corporations, which is often not sanctioned. Some companies voluntarily delay their supplier payments to make a gain on working capital. It can be a matter of size where large players take advantage of their smaller suppliers, knowing that some SMEs cannot do without their business.

While it is good practice to minimise payment cycles to once or twice a month to optimise resources, the reduction of bank fees through automated payment method such as ACH makes it possible for companies to support their suppliers by putting in place a number of SCF programmes. These can be done through the banking partner, and suppliers can be onboarded in order to be paid earlier on their receivables and they can also get an extension on the DPO.

SCF is a key topic for treasurers in 2018. Yields on cash invested are still at low levels and treasurers realise that they can better leverage their working capital by offering financing solutions to their suppliers. Over the last few years, a number of fintech companies have emerged to connect directly suppliers with customers. These collaborative tools work by proposing dynamic discounting or by agreeing to a rate for payables based on supply and demand. This tends to be a win-win for both parties where working capital can be optimised in exchange for better returns.

With all these metrics, it then becomes essential for treasurers to use data analytics to regularly measure the value they contribute to the business and justify their importance to their senior management.

Next question:

"To what extent is treasury being changed by consumer behaviour?"

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

Virtual accounts

Evolution of different types of virtual accounts has created a potentially confusing array of solutions of different levels of sophistication and serving different corporate needs. This article looks at the different types of virtual accounts and clarifies where they should fit in the treasurer's toolkit.

Different virtual account types

Early virtual accounts were designed to facilitate accounts receivable reconciliation – the first idea being to assign one virtual account number to each customer.

Account owner	Free format
<root>	<customer>
Corresponds to the legal account owner identifier (often four characters).	Any corporate customer identifier (subject to clearing system constraints).

Early virtual account systems required corporates to ask their bank to load each customer virtual account into their back-end systems – often, ironically, on paper forms. This was called static virtual account. An early natural enhancement was the dynamic virtual account where any customer code – so long as the root account number is correct and the whole complies with clearing rules – is accepted by the bank.

Some corporates have experimented with unique virtual account numbers for each invoice. This can work for collections from retail customers but corporate governance around procure-to-pay processes makes it unwieldy for business-to-business collections.

Once dynamic virtual account came along, creative minds quickly realised that the <customer> free format segment could be segmented in different ways to suit corporate requirements.

Account owner	Free format
<root>	<profit-centre><customer>
Same legal account owner identifier.	Multi segment corporate identifiers.

Virtual accounts beyond reconciliation

Once the dynamic virtual account had brought in the concept of multiple segments in the free format section of the virtual account number, more functionality became conceivable.

As shown above, while <root> must identify the legal entity owning the account, the free form part can be used for profit centre, cost centre, business unit, or other organisational entity within the account owning legal entity.

After the concept of including multiple organisational entities within the virtual account gained acceptance, the next evolution was to extend beyond reporting to bank account operation and authorisation. Using a virtual account for reconciliation is simply a reporting exercise – the single bank account can be viewed and reported as if it was multiple virtual accounts corresponding to each customer or to each profit centre and customer segment. This has no impact on the account from an operational perspective – no change to authorisations and other governance, and no major change to ebanking for example.

To make the virtual account work more like a normal bank account requires full operational capabilities by virtual account with different signatories and governance for each organisational entity within the virtual account structure. Then virtual accounts can be used for payments and indeed can fully replace what might have previously been separate legal bank accounts.

Multi-entity virtual accounts

With the virtual account evolving beyond the reporting functionality required for reconciliation to full bank account functionality, the next logical step was to go multi-entity, following the IHB concept.

Account owner	Free format
<root>	<subsidiary><customer>
IHB is the account owner.	Multi segment corporate identifiers.

Normally IHB is run on ERP or TMS software which segments flows into separate participating entities. In this scenario, the bank's virtual account software is providing IHB functionality for the corporate – not without irony.

Multi-currency virtual accounts

A further evolution comes from the increasing popularity of multi-currency accounts. In many ways, multi-currency accounts resemble virtual accounts – one legal bank account which is segmented into different sub parts. In the case of multi-currency accounts, it is segmented into different currencies. In the case of the virtual account, it is segmented into different organisational entities.

Once we have the concept of multiple segments within the free format section of the virtual account number, we can combine the two.

Virtual account functionality

We can summarise the evolution of virtual accounts as follows:

Reconciliation. Segmented reporting.

Multiple organisational entities. Segmented governance and ebanking.

Multiple legal entities. Functionally similar to above, includes legal entities not just departments.

Multi-currency. All of the above plus multiple currencies.

It is important to be clear that even a sophisticated multi-currency multi-entity virtual account structure can still support reconciliation of both collections (eg by customer) and payments (eg segmenting direct versus indirect procurement). As virtual accounts become more sophisticated they have retained the basic functionality. In other words, the extra virtual account functionality is additive.

Cash management landscape

It is also helpful to situate virtual accounts within the cash management landscape. Cash management requires that treasurers manage flows and balances to optimise 'cost effective risk reduction' (CERR).

Cash management	
Balances	**Flows**
Concentration Pooling	Payments Collections

There are two ways to pool cash balances – as intercompany balances and as bank balances.

Balance management	
Intercompany balances	**Bank balances**
Intercompany loans ZBA and sweeping IHB	Notional pooling Interest optimisation

Intercompany balances require journal entries into the general ledger and give rise to withholding tax in the many countries where withholding tax on intercompany interest applies. Bank balances generally require less accounting and most countries do not apply withholding tax on bank interest.

Managing flows focuses on cost reduction, process efficiency and control.

Comparing virtual accounts

Virtual accounts combine different functionality that touches on different parts of the cash management landscape.

Reconciliation. Helps flow process efficiency, especially for collections and accounts receivable.

Multiple organisational entities. Primarily helps flow process efficiency and also helps balance management through account rationalisation.

Multiple legal entities. Helps balance management by pooling different legal entity balances into one account, generating intercompany balances, analogous to IHB.

Multi-currency. Helps balance management by pooling currency balances, analogous to single entity multi currency notional pooling.

The basic reconciliation functionality helps flow management by improving flow process efficiency, especially for collections. It can have a benefit for balance management when virtual account permits account rationalisation.

Account rationalisation solves the common historical problem of excess bank accounts often set up to facilitate collections management – for example, one account per department or per business unit. With a virtual account, these can be combined into a single bank account balance without losing control over collections. In fact, virtual accounts normally improve collection efficiency by allowing one virtual account per customer.

Virtual account structures including multiple legal entities are in many ways functionally equivalent to IHB. Because multi-entity virtual accounts outsource the system work to the bank, this can be an attractive solution for corporates who struggle with IHB. This is typically because they have heterogenous accounting systems and/or do not have the resources to implement IHB with an ERP or TMS.

Multi-currency virtual accounts – to the extent that they allow negative balances (overdraft) in some currencies – are functionally equivalent to single-entity multi-currency notional pooling. They solve the cross-currency problem which is not intrinsically addressed by any of the intercompany balance management solutions. This can be attractive for established IHBs using their ERP or TMS to manage intercompany current accounts (and who therefore may not need the other virtual account functionality described above).

Conclusion

Virtual account technology is wonderful for cash managers. To make best use of virtual accounts requires understanding of their different functionalities and how they compare with other cash management tools that are available.

David Blair, Managing Director

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

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david.blair@acarate.com | www.acarate.com

The views and opinions expressed in this article are those of the authors

INSIGHT & ANALYSIS

Harnessing the opportunities of payment innovation

With progress in the payments space seemingly gathering new momentum every day, we look at how treasurers can make best use of the available technologies and still make provision to incorporate future developments.

TECHNOLOGY

Utilising the power of big data

Big data sounds like it may provide the answer to every treasurer's dream: everything you ever wanted to know about your business, on tap. However, with so much more to manage, unless the data is entirely relevant and accurate, and delivered in a timely manner, it can become a major problem. And then there's the analysis. We look at how to derive the greatest benefit from big data.

TRADE

Strategies for efficient intra-Asia trade

With vast regional trading prospects continuing to appeal to businesses within Asia but issues such as regulatory diversity sometimes confounding smooth transactional flows, how can treasurers lay the groundwork for efficient intra-Asia trade?

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

Kristian Luoma, Head of OP Lab, OP Financial Group; Andrew Ng, Chief Scientist, Baidu, and an Associate Professor, Stanford University; Matt Armstrong-Barnes, Chief Technologist, Hewlett Packard Enterprise; Husayn Kassai, CEO, Onfido; Alex Housley, Founder and CEO, Seldon; Yeng Butler, Senior Managing Director and Global Head of Cash Business, State Street Global Advisors; Maeve Robinson, Assistant Treasurer, Omnicom; Tim de Knegt, Manager, Strategic Finance and Treasury, Port of Rotterdam; Thomas Olsen, Partner, Bain & Company; Ebru Pakcan, Head of Treasury and Trade Solutions, EMEA, Citi; Mark Smith, head of Global Liquidity for Global Transaction Services, Bank of America Merrill Lynch; George Dessing, Senior Vice President, Treasury & Risk, Wolters Kluwer; Yera Hagopian, Head of Liquidity Services, Barclays Corporate Banking; Bikash Mukherjee, AVP – Head of Treasury, Amway India; David Blair, Managing Director, Acarate; Christine Lagarde, Managing Director, IMF; Kathy Walsh, Professor of Finance, University of Technology Sydney; Sandip Patil, Managing Director and Region Head, Global Liquidity and Investments, Asia Pacific, Treasury & Trade Solutions, Citi; Frankie Au, Head of RMB Products, Transaction Banking, Standard Chartered; Vina Cheung, Global Head of RMB Internationalisation, HSBC; Yin Yong, Deputy Governor, People's Bank of China (PBOC); Ernesto Pittaluga, Asia Pacific Sales Head, Treasury and Trade Solutions, Citi; Venkat ES, Head of Asia Pacific Treasury Product, Global Transaction Services, Bank of America Merrill Lynch; Nicholas Soo, Director, Regional Head of Payments, Global Liquidity and Cash Management, HSBC; François-Dominique Doll, Director, Treasury Advisory Services, Deloitte Southeast Asia; Matthew Davies, Head of Global Transaction Services EMEA, Bank of America Merrill Lynch; Stephanie Wolf, Global Head of Financial Institutions for GTS, Bank of America Merrill Lynch; Hubert J.P. Jolly, Global Head of Financing and Channels, Bank of America Merrill Lynch.

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