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Winter 2018

Association for Financial Professionals' Quarterly Magazine

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Developing high-potential talent

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Cross-border payments

New CTPs and CTPAs

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Results of the 2018 AFP Technology Survey

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VOLUME 38 NUMBER 4





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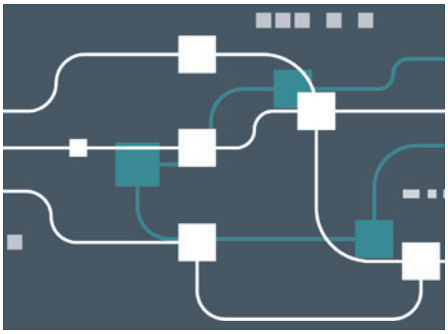

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JIM KAITZ, PRESIDENT & CEO

CHALLENGE ACCEPTED

Dear AFP Members,

Are your skills on par with your ambition?

I have been asking this question lately to treasury and finance professionals that I meet in my travels across the globe. Whether they are in Hong Kong and Singapore, where AFP recently opened its first office, or in Chicago, site of AFP 2018, their answers are similar. They are ambitious and always looking to improve their skillset.

To be sure, treasury and finance professionals around the world have their sights set high. They understand that senior management values their input more than ever. They see the value they can bring to their organizations.

At the same time, the entire treasury and finance function is undergoing widespread disruption. New technology is automating processes. New regulations mean more regulatory hurdles. And competition is fiercer than ever.

So while professionals are committed to improving their skills for the good of their career and their organization, they know that the bar has been raised significantly.

I'm happy to note that AFP 2018 can help you match your skills to your ambition. Here in Chicago, AFP 2018 offers more than 100 educational sessions, 6,500+ attendees to network with, and over 240 exhibitors with cutting-edge products and services to discover. You can choose from 30-minute presentations at the Innovation Series, attend Campfire Sessions to discuss topics in a roundtable format, and listen to visionary keynote speakers.

But even if you are not in Chicago, AFP has the certification and on-demand training to help you improve throughout the year. You can visit www.AFPonline.org to learn more.

So whether you are in Chicago, Asia or your company headquarters in the United States keep setting the bar high. AFP will help you leap over it.

Sincerely,

J Kaitz

Jim Kaitz
President and CEO

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U.S. Tax Reform Triggers a Deeper Look at Global Cash Management

Since the U.S. tax reforms went into effect this year, the near- and long-term implications have been the focus of much discussion. While multinational corporations are rethinking the cost of capital, rebalancing and reallocating debt and equity, and offshore cash repatriation, it is important to note that the reforms could also serve as a catalyst to review global cash management strategies. There may be untapped opportunities to optimize working capital across U.S.- and non-U.S. companies. Strategies such as combining pooling solutions and redistributing the return on global cash could be places to start.

There are two primary aspects to the big picture.

Fundamental to the reforms is a distinctive move towards a more global tax regime. Specifically, global earnings of U.S. companies are now included in the taxable base; both past earnings and future earnings. Coupled with additional scrutiny and limitations on interest expense deductions resulting from a U.S. company borrowing from foreign affiliates, the intent of the reforms serves to remove many of the historic incentives for retaining earnings offshore. Rather they may motivate U.S. companies to direct those earnings onshore.

Changes for U.S. Companies (U.S. and foreign headquartered)

- **Deemed repatriation of prior earnings** – The tax act imposes a one-time "toll tax" on the undistributed, non-previously taxed, post-1986 foreign earnings and profits (E&P) of certain U.S.-owned corporations as part of the transition to a new partial territorial tax regime. The act generally requires, for the last taxable year of a foreign corporation beginning before January 1, 2018, all U.S. shareholders of "controlled foreign corporations" (CFCs) to include in income their pro rata shares of the accumulated post-1986 deferred foreign income that was not previously taxed. The tax rates for this toll charge range between 8% and 15.5%. However, taxpayers can elect to pay over eight years. Since previously untaxed foreign earnings of U.S. companies are now taxed, there are fewer incentives to retain these earnings offshore.
- **Interest deductibility limitation** – The deduction for net interest expense is generally limited to 30% of adjusted taxable income and there is no grandfathering for pre-2018 debt and the interest deduction disallowed in a given year can be carried forward indefinitely

  Historically, certain U.S. multinationals may have borrowed in the U.S., equity funded in low-tax jurisdictions and then on-lent to high-tax foreign affiliates. This would have had the effect of shifting interest expense deductions to U.S. companies. The new earnings stripping rules limit these deductions. As a result, there may be less benefit in structuring intercompany funding from the U.S. to the CFCs.
- **Base Erosion Anti-Abuse Tax (BEAT)** – BEAT adjusts taxable earnings and applies a minimum tax for foreign-related party base erosion payments, thereby creating an alternative (and larger) tax base. BEAT is applicable to corporate groups where global gross receipts average more than $500 million.
  - Base Erosion Payment Percentage > 3% (2% for financial services entities)

  With the new tax law's intent of addressing earnings stripping, the interest expense paid by a U.S. company to foreign affiliates may be subject to BEAT. As a result, there may be fewer benefits in structuring intercompany loans from foreign affiliates to the U.S.

- **Expanded definition of Controlled Foreign Corporation (CFC)** – The definition of a CFC now includes 10% shareholders as measured by either value or vote.
- **Foreign participation exemption** – Qualifying dividends from U.S.-owned foreign corporations are eligible for the 100% dividend received deduction.
- **GILTI** – Income earned in a CFC that is not Subpart F income or not meeting other limited exemptions is taxable at an effective 10.5% tax rate for corporate shareholders.
- **Section 956** – Income includes loans by the CFCs to U.S. affiliates, CFC guarantees of U.S. affiliate debt or other CFC investments in U.S. property. Section 956 effectively overrides the participation exemption when triggered.

With the adoption of the GILTI regime the foreign earnings now included in the taxable base for U.S.-HQ companies is broad, with only limited exceptions to current taxation available. However, although the base is broader, the effective rate is lower. As a result, there may be less incentive to retain these earnings offshore.

Tax reform presents opportunities for both U.S.-headquartered and foreign-owned U.S. corporations and may include the following:

Implications for U.S. companies (U.S. and foreign headquartered)

- **The end of deferral could be an impetus to consolidate global cash**
  - U.S. companies are likely to be less sensitive to pooling foreign cash with U.S. cash, potentially resulting in more cross-border pooling than before because income earned by a CFC is now generally either exempted or subject to the greatly expanded anti-deferral rules. However, BEAT implications should be considered where CFCs are lending to the U.S. company and with the intent to deduct the interest expense.
  - Further, amounts taxable under the deemed repatriation create previously taxed income (PTI) accounts for the U.S. shareholders. Distributions from a CFC to the U.S. company are generally not taxed when paid out of PTI, further incentivizing those earnings to be repatriated.
  - The combination of deemed repatriation and the new system for taxing CFC earnings implies that companies may have diminished concern regarding the potential application of Section 956, as there is less incentive to structure intercompany loans from CFC to U.S. companies.
- **Clarifying the availability of interest expense deductions**
  - The interest deduction limitation applies to interest expense in excess of interest income. Where notional pools are viewed as bank deposits or credit support, opportunity may exist to maximize net interest income while minimizing interest expense in the U.S.
- **Considerations for interest expense are similar to U.S. headquartered companies with two additional points**
  - Fewer incentives to leverage the U.S. group due to lower corporate tax rate
  - The interest deduction limitation stacks on top of BEAT creating a further limitation on the tax benefits of leverage for applicable taxpayers
- **BEAT**
  - Payments made to unrelated parties, absent a conduit situation, should be made outside of the BEAT alternative tax. Where notional pools are viewed as bank deposits or credit support, opportunity may exist to optimize intra-group transfers while accessing group liquidity.

To identify and leverage competitive advantages, treasurers may want to review their liquidity management strategies while considering the following:

- Are there opportunities to optimize pooling arrangements involving U.S.- and non-U.S. affiliates?
- To what extent are notional pools treated exclusively as credit support?
- Can interest income in the U.S. be increased by maintaining positive balances in the U.S. while retaining interest expense in the CFCs?

Now could be a good time to work with your tax professional to fine-tune your treasury structure to realize tax efficiencies. J.P. Morgan has the flexible liquidity solutions to support your overall corporate goals.

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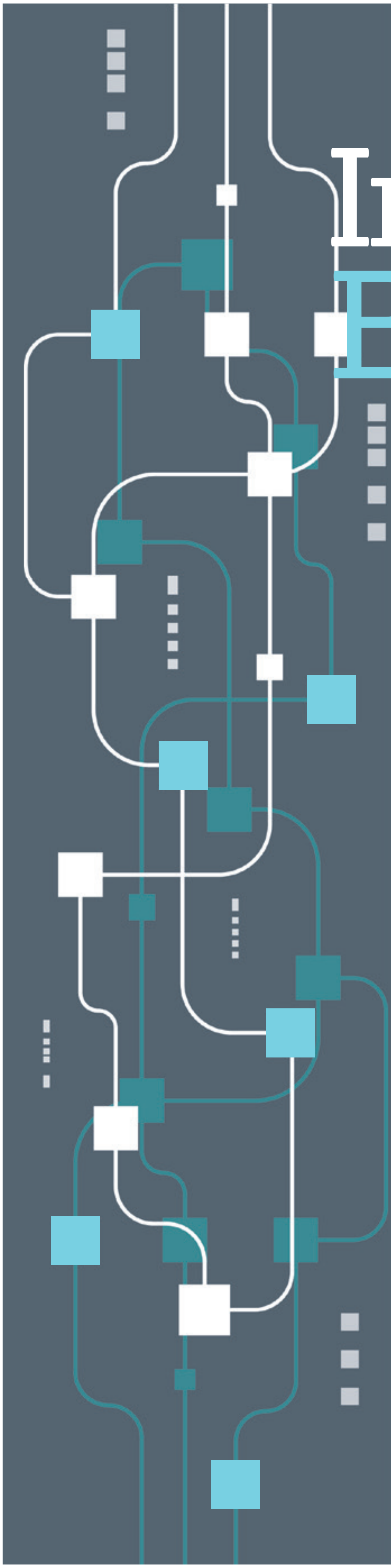

In-House via Blockchain

Blockchain finds a practical treasury purpose—intercompany transactions

JOHN HINTZE

Treasury executives are tasked today with monitoring a range of emerging technologies that vendors promise will make their jobs more efficient and less resource-intensive, so that they can focus on strategic issues and otherwise add value to their organizations. So far, however, blockchain solutions that apply directly to corporate treasury have been few and far between.

Perhaps that is because blockchain by itself has been insufficient at addressing treasury's needs. But that may be changing.

Blockchain and treasury

In a recent webinar, Treasury Alliance Group teamed up with fintech firm Adjoint to display how the latter has combined blockchain technology with related smart contracts and application programming interfaces (APIs) to create a solution that aims to dramatically speed up and reduce the costs of settling intercompany transactions.

Although Adjoint declined to name companies it has been testing its Adjoint Smart Treasury solution with over the last year, it did relay some client input. According to a treasurer at what Adjoint described as a Fortune 500 company, the solution has helped their organization greatly reduce major pain points in typical processes, such as cross-border payments and labor-intensive billing.

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The CFO of another large multinational estimates "annual savings of $10 million from transaction costs and labor costs from just a simple implementation across a few subsidiaries."

The solution allows corporate treasury departments to operate their own private permissioned distributed ledger, a security feature that enables them to choose which internal corporate entities and third parties can access the network. Smart contracts then automate regulatory and corporate compliance requirements for transactions such as intercompany loans, FX and netting, which lowers the cost of booking transactions between subsidiaries. And the movement of critical information from banks and data providers, as well as between corporate entities, is enabled by APIs.

"It performs much of the key functionality of in-house banking using blockchain, and does it at a very low cost," said Daniel Blumen, partner at Treasury Alliance Group.

Simplifying intercompany transactions

Companies have pursued lengthy implementations of enterprise resource planning (ERP) systems and treasury management systems (TMS) that enable them to do intercompany transactions. Those systems, however, tend to batch transactions and settle them overnight, and transactions such as FX and intercompany loans often require using third-party banks and their related fees and other costs.

With Adjoint's Smart Treasury solution, "This takes place much faster, at a much lower cost, and it will actually accept feeds from the banks using APIs, which then feed the ERP—again, using API—and it carries all of the information necessary through smart contracts," Blumen said.

Somil Goyal, chief operating officer at Adjoint, explained that companies can essentially consolidate costly, physical bank accounts into a selected number of blockchain virtual accounts. Money can then be debited or credited among those accounts as needed, using smart contracts and APIs to make the make the necessary FX translations, apply interest on intercompany loans, and similar calculations.

For example, Goyal said that one corporate subsidiary, A1, may have to make a payment of €50, but holds €20 in its virtual account, even though the account has plenty of U.S. dollars. It could go to its bank to do an FX trade, settle it in a master account held at the bank, and pay a fee to do so. Or, using smart contracts on the distributed ledger and sourcing an exchange rate of 1.1 from a trusted market source such as Thomson Reuters or a bank, it could do a swap with another subsidiary, A2, whose virtual account also holds sufficient euros, saving the margin it would have used for an external execution.

"What you see happening here is that the balance A1 has in dollars goes down, because it paid $33, and A2's balances goes up, because it received $33, and the reverse happens in euros," Goyal said. "Interestingly, the external balances have not changed, because this is information management, or bookkeeping, within the virtual accounts of the distributed ledger, rather than the master accounts that have been maintained on behalf of the group externally."

Key benefits

Goyal said that a blockchain-based system such as Adjoint Smart Treasury provides three main benefits. One is visibility, enabling treasury to see balances across the company at all points in time, compared to the traditional batch-based statements that simply can't provide up-to-the minute information.

Efficiency is also a major plus, and that takes two forms. One, companies can significantly reduce fees and costs to third parties, such as transaction costs and margin. And second is increased efficiency internally.

"We're looking at upwards of a 30 percent improvement in efficiency in the treasury back-office processes," Goyal said. "It's not just cost savings, but also increased capacity for better risk management."

The third set of benefits is transformational, expanding the types of transactions that can be done, Goyal said, adding, "Can I do different forms of intercompany funding, e.g., a mix of loans, equity and hybrid instruments? Can I use liquidity better for functions like supply-chain finance, refinancing, or more dynamic discounting?"

At the end of the webinar, a participant asked whether a Smart Treasury-type solution is worth considering if the company has fully implemented ERP and TMS software that work well and treasury staff find easy and beneficial to use—an ideal likely to elicit skepticism from most treasury executives.

Goyal noted that a well-integrated solution may provide corporate treasury with good visibility, and a functioning in-house bank may already provide some efficiency. In the case of Smart Treasury, however, its APIs actually integrate smart contracts into a company's ERP, TMS and other systems, improving the way they interact.

"We see our solution as complimentary," Goyal said. "We don't see it as competing with well-functioning ERP and TMS systems, but helping them function better."

The Long Road AHEAD

Why the LIBOR transition is a marathon, not a sprint

ANDREW DEICHLER

KEY TAKEAWAYS

- Many banks and corporates do not appear to be on the same page as regulators when it comes to LIBOR.
- With contracts that go beyond 2021 potentially transitioning to new rates, treasury professionals may want to stay as flexible as possible in their fallback language.
- Because there is no central regulatory authority in control of LIBOR, corporate practitioners aren't entirely sure who they should appeal to if they want to have their voices heard.

Last month, the UK Financial Conduct Authority (FCA) and other regulators urged banks to speed up their transition away from the London Interbank Offered Rate (LIBOR). That's easier said than done, especially considering that many banks and corporates do not appear to be on the same page as regulators when it comes to LIBOR. And even if LIBOR goes away entirely, there are still questions of exactly which alternative reference rate (ARR) will be the one to truly replace it.

Surveying the damage

What kicked off this push by regulators was the 2012 revelation that multiple financial institutions had manipulated the LIBOR rate for their own gain. "They manipulated it up or down based on what they wanted banks to think about them," said Eric Juzenas, a director in Chatham Financial's Global Regulatory Solutions. "They could have really undercut or really overstated their rate."

But while this certainly looked bad for those banks and resulted in a number of investigations, fines and jail terms, measuring the actual damage this has done as a whole has proven much more difficult—and that may be why there is a question of whether moving to a new benchmark rate is truly necessary. As Juzenas noted, proving the long-term economic damages from LIBOR manipulation is close to impossible. "Even if I come up with a model, how do I convince a judge and jury that that model correctly captures what LIBOR would have been, absent manipulation?" he said.

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And while some corporate end-users have relayed to Juzenas that LIBOR manipulation has taken a toll on them, many more have little visibility into what the impact of manipulation was. "Over the years, I've had one or two say to us, 'We've paid x amount more than we should have paid on these bonds,'" he said. "But the rest of the world doesn't really know."

'Zombie' LIBOR and the cost of funding

Rather than focusing on manipulation, perhaps the better argument for doing away with LIBOR is that it may not accurately represent the cost of funding. "Our traders seem to think that long ago, LIBOR stopped representing the cost of funding for lenders," Juzenas said.

As noted by Risk.net and Lexology, there is an increasing concern that a 'zombie LIBOR' scenario could eventually exist, in which a small group of banks may continue to provide submissions for LIBOR past 2021, but LIBOR's effectiveness as a benchmark for lending costs is questioned. However, Juzenas believes that such a scenario may already exist. "If LIBOR no longer represents the cost of funding, isn't it already a zombie? Isn't it then just a question of whether or not we believe zombies exist?" he asked.

However, using a new rate to determine the actual cost of funding will likely prove difficult as well. "That's one of the biggest questions," Juzenas said. "If the transition occurs over time, or the term structure isn't really developed, then there is this question of what the cost of funding is and how you add that spread to a risk-free rate. I don't think that anybody really knows the answer to that. And we have some preliminary concerns. If the dealers say, 'We're going to transition, and the spread is this much higher because our cost of funding has changed', how do you evaluate that?"

Questions for treasurers

For treasurers, all this uncertainty around LIBOR complicates many of the contracts they have in place, especially considering that there is already a lack of transparency around how funding rates are calculated. Now, with contracts that go beyond 2021 potentially transitioning to new rates, treasury professionals may want to stay as flexible as possible in their fallback language. "What some of our members have done is renegotiate some of their credit lines and their five-year deals," said Tom Hunt, CTP, director of treasury service for AFP. "They just have a placeholder saying that they'll bilaterally agree to whatever that replacement rate is going to be; they'll both agree to that at the time."

Juzenas advises treasury professionals to maintain that flexibility. "We get really nervous when we see people talking about specificity in fallback language in light of the uncertainties that exist," he said. "I can see the regulators wanting banks to have some certainty about their exposure. But on the other hand, an end-user with a substantial portfolio could take a real bath. Treasurers need to take steps to address this, including creating or maintaining flexibility in loan and derivatives documentation to accommodate uncertainty as to what the alternative rates and spread adjustments will look like."

However, until corporate end-users know which ARR will take over from LIBOR, there is only so much they can do. And though the Secured Overnight Funding Rate (SOFR) in the United States and the UK's Sterling Overnight Index Average (SONIA) may be emerging as frontrunners, many things can happen before 2022. "How much authority does the U.S. have to say that SOFR is going to be the preferred rate, when other jurisdictions have their own rates with different methodologies? It depends on who has the most political capital to say, 'This is going to be the one,'" Hunt said.

Feedback on fallbacks

Speaking of fallback language, the Alternative Reference Rate Committee (ARRC) and the International Swaps and Derivatives Association (ISDA) recently requested feedback from corporate end-users on how the transition away from LIBOR could impact them. The requests center on fallbacks.

ARRC

The ARRC asked for comment on consultations on U.S. dollar LIBOR fallback contract language for floating rate notes and syndicated business loans. The consultations outline draft language for new contracts that reference LIBOR to minimize disruptions should LIBOR no longer be usable.

The ARRC aims to gather feedback not only on its proposed approach, but also the key issues involved. Any feedback it receives will be taken into account before it publishes its final recommendations for market participants' use.

The ARRC has also published a list of frequently asked questions on the LIBOR transition. The FAQ is ideal for treasury professionals seeking more information on the transition, the ARRC itself, and details on the ARRC's "Paced Transition Plan" that urges U.S. businesses to voluntarily switch to SOFR over the next several years.

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ISDA

ISDA also sought public feedback on its consultation on certain aspects of fallbacks. It is amending its standard documentation to implement fallbacks for certain key interbank offered rates (IBORs). Fallbacks can apply if an IBOR is permanently discontinued, based on defined triggers. The fallbacks will be to alternative risk-free rates (RFRs) that have been identified for relevant IBORs as part of recent global benchmark reform work. ISDA is seeking input on the approach for addressing certain technical issues associated with adjustments that will apply to the RFRs if the fallbacks are triggered. Given the differences between the IBORs and the RFRs, these adjustments are needed.

Corporate confusion

Although corporate treasury professionals need to pay attention to these developments, many of them aren't doing so. "To tell you the truth, corporates are not as worried, because it's not their specific problem; it's a global problem," said the treasurer for a major retailer who requested to remain anonymous. "When it's a global problem, people have this weird idea that somebody is going to take care of it. There are so many corporates who think that the SEC or somebody else will come in and take care of this problem, because as one corporate, you cannot."

Jennifer Earyes, director of treasury risk for Navient and a member of the ARRC, compared and contrasted the current situation with the passage of Dodd-Frank in 2010. Back then, corporate practitioners' concerns were not really addressed by regulators. "The corporates weren't used to banding together, and we weren't at the table," she said. "So now at least with LIBOR, the authorities are at least trying to get those folks at the table to talk about it. But that mentality is still there that we can't really change anything."

Furthermore, because there is no central regulatory authority in control of LIBOR, practitioners—particularly those in the United States—aren't even sure who they should appeal to if they want to have their voices heard. The U.S. Federal Reserve is pushing for a transition to SOFR, but it can't actually force businesses to make the move. "They don't have the ability to mandate through the Federal Reserve, which is not an issue for other countries," said Tom Hunt, CTP, AFP's director of treasury services. "So you have different countries producing their own equivalents, but all based on a similar methodology to SOFR."

And SOFR isn't exactly catching on like wildfire. "ISDA reported that there were only 14 derivatives referencing SOFR at the end of August," Earyes said. She added that David Bowman, Special Advisor to the Fed's Board of Governors and a leading LIBOR expert in her ARRC working group, has stressed to banks and corporates the importance of actively engaging in the consultation process and it's up to the industry to start trading SOFR-indexed derivatives.

What you can do

U.S. treasury professionals are encouraged to provide comment to the ARRC and ISDA, as well as review ARRC's FAQ if they have any questions. Senior-level treasury practitioners should also plan on attending the session, *LIBOR: The World's Biggest Number in Transition* at the Executive Institute at AFP 2018. And for more tips, be sure to visit AFP's LIBOR Transition Guide at http://view.ceros.com/afp/libor/.

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Controlling COSTS

Risk management need not be expensive

BOON LONG OH, CTP

Risk is a necessary evil that treasury and finance executives must deal with in today's complex and highly-integrated world. Generally speaking, risk can be categorized into two types: Type I risk describes the likelihood that a company will suffer losses because of pursuing a financial reward—business risk. Type II risk describes the likelihood that a company will suffer losses as a result of not taking sufficient actions to mitigate the impact of unfavorable events—country risk, FX risk, bank failure, etc. In this article, we will look into some practical actions that treasury and finance executives can take to protect their company against the impact of Type II risk without breaking the bank.

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> "Diversification is probably one of the easiest and cheapest risk management techniques which one can use to spread the risk of total fund loss."

Controllable risk

The primary root cause of each fraud and theft case can be summed up in a simple phrase: "lack of control". A company with poor finance and system controls often presents opportunities for employees, suppliers, customers, and cybercriminals to siphon funds from accounts without being detected. To combat against such risk, treasury and finance can incorporate the below practices into their daily business operations:

Choose a technologically-advanced cash management bank. When selecting a cash management bank during the request for proposal (RFP) process, it is paramount to consider how much capital expenditure was invested by the bank in upgrading its IT and security systems. A bank which invests heavily in sophisticated technologies will not only help clients combat cybercrimes but also strengthen its payment approval workflow, thereby eliminates any incident of fraud or human error.

Develop comprehensive finance and treasury policies that are easy to administer and track. A well-written policy should possess at least these three elements: ensure proper segregation of duties when it comes to payment creation and approval, eliminate free-form payments by ensuring payments are created through approved payment templates, eliminate cash and paper checks by encouraging the use of electronic fund transfers (EFT). For businesses where most of the receivables are collected in cash or checks (i.e., retail business), it will be wise to consider an investment in a debit/credit card solution to handle such receivables electronically.

Minimize funds in local banks and concentrate them in cash management bank. In the world we live in today, there is no single international bank that can meet all the business needs of a company's subsidiaries. This is especially so for subsidiaries operating in countries where capital flows are restricted, and legislations are enacted to protect local banks. Hence, a complete elimination of local bank accounts is not a possibility at the current moment and keeping minimal cash in them is the next best option.

Rationalize all bank accounts and currencies traded within the business. The foundation of an effective control lies in a simplified bank account structure that is capable enough to meet the business needs. Foreign currency accounts with low transaction value and volume should be closed as the FX spread incurred on such transactions (i.e., paying through a local currency account) is insignificant compared to the cost of maintaining it. Reducing the number of currencies traded within the business also helps to reduce unnecessary FX exposures.

Uncontrollable risk

In 2008, the United States suffered a subprime mortgage crisis and witnessed the fall of a banking giant—Lehman Brothers. This event showed the world that giants do fall, and it is never a wise choice to concentrate corporate funds with one or two banks. Below are some practical approaches which a company can take to manage Type II external risk:

Choose a cash management bank that has a track record of maintaining a strong balance sheet and credit rating. Apart from the bank's willingness to provide balance sheet support and its international reach in providing banking solutions, its ability to stay solvent in time of crisis is another important consideration in selecting a cash management bank. Although there are regulations such as Dodd-Frank Act, Basel III, CCAR to prevent another nationwide bank failure, companies should not rely on regulators alone to protect them against potential bank failure.

Diversify your corporate funds into multiple banks of strong credit rating through fixed deposits and money market funds.

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Never put all your eggs in one basket is one of the key lessons I learned as a treasurer. Diversification is probably one of the easiest and cheapest risk management techniques which one can use to spread the risk of total fund loss. Apart from eliminating concentration risk associated with holding too much cash with a single bank, it also provides companies with an opportunity to establish relationships with other banks which can be helpful for future RFPs.

Trade derivatives contracts with banks of strong credit rating. Pricing should not be the sole consideration when comes to selecting a bank who is willing to take the other side of a trade. Its ability to fulfil its contractual obligations as it falls due is also equally important. Trading with banks who do not honour their obligations is as good as not hedging at all. Sometimes, it is actually cheaper to pay more to trade with a creditworthy bank.

Control exposure in countries where there are restrictions on capital flows. In some part of the world, the central bank requires local subsidiaries to provide supporting documentation to back a transaction before it is remitted into or out of the country. For example, a trade invoice may be needed to back a trade payable, a board resolution to back a dividend payment or a loan agreement to back a loan redemption or interest payment. Ideally, companies should concentrate cash in countries where free flow of funds are allowed. This is to make the repatriation of funds back to the home country easier. Natural hedge should be used whenever possible to limit the net assets exposure a company may have in-country.

When it comes to managing risk, it is always recommended that treasury and finance executives explore cost-free methodologies like the above to mitigate or even eliminate Type II risks before considering more costly options like

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We'll help you
look at the
bigger picture.

FINANCE STRATEGY:
Re-Thinking Porter's Five Forces

BRYAN LAPIDUS, FP&A

Michael Porter first published his famous Five Forces framework in 1979, and it has since become a staple of business thought to explain the attractiveness of a market or segment. The forces are set in opposition to each other to describe who has the power to extract significant profit by examining influences sales prices and structural costs.

But what if there is a shift taking place, where the macro forces that started in information technology and are disrupting business structures could allow us to turn this paradigm upside down? Are there instances where these forces can be profit-accretive rather than profit-destructive? If the answer is yes, then finance has to re-evaluate its valuation models to capitalize on these relationships to derive value for its business.

BUYERS' BARGAINING POWER

Traditional view	Opportunity for New Approach
The buyer's bargaining power is the ability to force prices lower. Through their size they can command volume discounts, or through competition they can easily shift to other sources. Example: Walmart can demand low prices for its goods because it buys in huge quantities. Example: Customers frequently visit showrooms to test product look and feel, then buy for a lower price online.	Customers in both the B2B and B2C space have more data to share, which allows buyers/customers to integrate into the company processes. B2C context: Companies collect data through loyalty programs, search history, or as part of their XaaS (everything as a service) subscription models, then tailor products and offers to individual customers, leading to higher satisfaction and additional interactions. B2B context: Supply chains are more integrated. Example: Walmart warehouse stock levels are reported directly to suppliers who ship new merchandise automatically. Yes, this is also an example of their power, but the outcome is increased IT and logistics integration.

Implications for FP&A:

Businesses can partner with your customers and integrate the information they provide through direct purchases, browsing history or social media comments. Tips for finance:

- Customer acquisition is multiples more expensive than retention, so lifetime value models may indicate a company accept lower margins on individual transactions
- Infrastructure investments, back-end non-revenue support systems such as account receivables, customer billing, call center support, fulfillment, etc., should now be considered as part of the customer experience. Valuation is part of customer retention, not simply TCO total cost of ownership.
  The KPIs of success may need to change to contemplate integrated customers: bookings, monthly/annual recurring revenue, customer churn (attrition), LTV:CAC (lifetime value to customer acquisition costs), months to recover CAC

SUPPLIERS' BARGAINING POWER

Traditional view	Opportunity for New Approach
Suppliers can exercise power when there are few substitutes, or there is high concentration, or a high cost of switch to other suppliers. A classic example is the power of OPEC during the oil crisis of the 1970s to limit output and raise prices among buying nations and corporations.	Vendors are embedded in the company and often tightly integrated in the supply chain of information and logistics. In some cases, they simply take over what you need. See sidebar on page 30 for an example.

Implications for FP&A:

This mirrors the buyers' bargaining power, and so the opportunity to partner with your customers and integrate the information they provide. Tips for finance:

- Conceptually, think about a "lifetime value of your suppliers." Look for ways to maximize the ROI on vendor networks, potentially trading transactional costs for integration value. How do you move them the value chain with them? The low cost provider may not deliver as much long term value as a willing partner.
- Beware: Higher integration also increases costs to switch suppliers, which may lock you into suppliers. Build IT integrations in a way that maintain flexibility by using common technology that allows vendors to plug/unplug quickly.

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NEW ENTRANTS

Traditional view	Opportunity for New Approach
Profitable industries, or those ripe for disruption, will attract competitors, relative to the ease of getting into the market. Examples include AT&T purchasing Time Warner to compete with Google and Verizon on content and distribution.	Old walls that once defended industries are falling quickly as it is easier than ever to disrupt technology and scale barriers. The surplus of capital (private equity, low interest rates, tax cuts) has created an ecosystem where companies create new ideas/products/services with an eye to selling them. This ease of starting new companies make actually lead established players to outsource their R&D, that is, to buy other companies as a complement or alternative to their own research and development efforts. This trend is aided by the rise of private equity capital to grow and exist businesses. Large companies can also be new market entrants, such as Amazon entering the grocery business, or furniture, or entertainment, package delivery, etc.

Implications for FP&A:

- Strategic acquisition is as much a part of your strategy as research and development, and therefore can be as much a part of your capital strategy or investment portfolio. Consider building a market-scanning process to look for opportunities; larger companies may have resources for M&A.
- For more mature companies, incumbent status may be a detriment because established processes and high hurdle rates on the existing portfolio limit the ability to be agile and risk-taking on new opportunities. Is your investment analysis process limiting innovation?
- Partnership deals with new entrants may combine competencies; be sure the business case includes learning new capabilities.

QUESTION TO GARY MISHKIN, CEO OF ARTEMIS PLASTICS, LLC

"How do you deliver value to your customer beyond the simple transaction?"

I view our customers, and prospective customers, as partners. For my business and theirs, I always try to maximize the up-side, while minimizing the down-side. An example of this is in the design of molds for their injection molded parts. By our understanding our customers' market opportunity, we analyze and present the expected costs for both single and multi-cavitation molds and resultant part price…we help guide them by analyzing ROI for the different mold types and part prices. We also analyze our capabilities and capacities and position our company to be able to manage growth with the customer.

Other benefits we provide are secondary operations, such as labeling and final packaging. We already have the infrastructure in place to perform these operations for our customers. Although there is a cost to manage this, we price it to be cost neutral to the customer, as far as materials, parts, equipment, space, labor, quality control, etc. are concerned. This frees the customer from this responsibility, so they can focus on sales and marketing, thereby, increasing market share and profitability. We usually find a win-win solution.

As we manage our company, we must take into account all stake holders, including employees, customers, vendors, regulatory bodies, investors, etc. As we analyze our future needed resources (human and capital), we review how each investment affects each stakeholder, then with an enterprise perspective, we make informed, financially driven investments.

Blurred Lines

The more an industry can be vaporized, as Robert Tercek discussed while speaking at AFP 2017, the more difficult it is to pin down what the business is, what industry it is in, and which of Porter's Five Forces is in play. While Porter's Five Forces remains relevant in analyzing competitive forces, the macro forces changing our economy provide an example of how the distinction between the forces is diminishing. The most powerful example of this is Amazon's effect on retail. It is a new entrant that sold competing goods but circumvented the department stores' huge investment in physical buildings. It is a substitute, as it sells a seemingly limitless product set direct to consumers, replacing the physical store experience with a screen experience. It also has become a supplier as many brands sell direct to consumers from Amazon, and then helps brands to fulfill orders directly. It has led to customer buying power with price transparency; in fact, Amazon crawls the web to check on prices itself before setting them on its site. All this has driven down consumer prices and increased the retail rivalry.

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SUBSTITUTE PRODUCTS

Traditional view	Opportunity for New Approach
Substitute products and services can take away your market share by providing alternatives that meets your customers' needs. Examples include your mobile phone replacing digital cameras, compact discs, even computers and televisions.	Over time, the lines between new entrants and substitutes has blurred—new entrants may disrupt old industries through substitution. This is especially true where vaporization, meeting customer needs through software-delivered services that once could only be met with tangible goods. Substitution is a prime source of disruption. Example: Facebook acquired Instagram to keep its dominance of helping people connect to each other, and copied many of Snapchat's features to inhibit. Most major car makers have a version of an autonomous vehicle to defend against a driving substitute of autonomous Ubers transporting us.

Implications for FP&A:

The companies creating substitute products may be new to field, so the response is similar to that of new entrants. Tips for finance:

- Acquire the disrupting company to for its technology, methods or people.
- Internally, it may be useful to develop a venture capital approach of funding some risky, potentially disruptive ideas through a stage-gate process to gain learnings and test theories.
- Self-disruption may require lower returns on investment; be sure your investment processes is not leading you to favor incumbent products over disrupting substitutes.

INTENSE SEGMENT RIVALRY

Traditional view	Opportunity for New Approach
Competition between numerous strong or aggressive rivals mean that it is hard to outmaneuver and differentiate. A traditional example was retail clothing stores, where several large department stores competed ferociously.	Development of rival technologies or platforms upon which services can be offered can be a huge risk. Industry consortia can help to set standards to develop an ecosystem where all can thrive. "Coopetition" is the cooperation among competitors when it suits them. Here are a few examples: • Telecom companies that are rivals on one market may leverage each other's infrastructure (e.g., cell towers) in another. • Zelle was founded to develop a platform for peer-to-peer payments and includes rivals such Bank of America, JPMorgan Chase, and Wells Fargo. • Only Samsung can produce in quantity the OLED screens required for Apple phones • Industry consortia set standards for broad use by competitors to develop the ecosystem where they can further compete • Amazon is both a rival and a means of competing (see below).

Implications for FP&A:

Is there a sustainable competitive advantage? Working with these forces or working against them creates opportunities as well as stresses. Perhaps the only response to segment rivalry and competitive markets is a culture that embraces adaptability—the willingness to remake itself, implement new processes and technology, and upskill its employees. Tips for finance:

- Finance can foster adaptability by advocating for modernized infrastructure and investment in people, even when the ROI is hard to calculate. It is a strategic, long-range decision to carve out capital for initiatives to insure the investment is made, but it may also be the most important one.

IRA KAWALLER

Mythbusters

Debunking the myths about derivatives

The world nicely divides into two camps: companies that use derivatives to manage their various price risks and those that don't. Derivatives aren't available for every risk source, but they do cover many categories affecting the concerns of large numbers of commercial enterprises. These include interest rate risk, currency exchange rate risk, and risks associated with a wide array of prices of basic commodities and raw materials such as energy products, assorted metals and agricultural produce and livestock.

Given this wide coverage, it's reasonable to question why some firms bearing these exposures use derivatives while others don't. Ultimately, the underlying issue is knowledge and understanding—or possibly misunderstanding.

Understanding derivatives

Derivative contracts are often portrayed as the bad boys of the financial marketplace, but this characterization misrepresents most derivatives and their uses. In fact, most derivatives are plain vanilla, capable of achieving very understandable and reasonable objectives. Typically, these (or very similar) economic outcomes could be arranged without derivatives, but derivatives often offer a more efficient and cost-effective way to realize desired results, particularly when an adjustment is desired after an initial transaction has already occurred.

All derivatives are contractual arrangements that generate payoffs that depend on changes of some external reference price or index. And while these contracts can be used by a wide variety of institutional actors, they are generally used for one of two purposes: either as hedging instruments, where the contracts balance off some preexisting risk, or to speculate on a coming price change for some asset or portfolio of assets.

Generally, corporate finance applications would fall under the hedging category, where commercial enterprises with exposure to interest rates or foreign currency exchange rates or price risk would mitigate

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Derivative contracts are often portrayed as the bad boys of the financial marketplace, but this characterization misrepresents most derivatives and their uses.

these risks by entering into related derivative positions, arranging the contracts to pay off when that preexisting risk contingency is realized. A corollary to this rule, however, is that if the risk doesn't come to fruition and instead, the underlying exposure benefits the enterprise, the hedging derivative would be expected to generate a corresponding loss.

In contrast to these corporate applications, when derivatives are used for trading purposes or for investment purposes, for the most part, the derivative contracts would be used to take on risk. These uses would be speculative transactions, and like virtually any other speculation, if you're right you win and if you're wrong you lose. The vast majority of the bad press on derivatives relates to these speculative applications, where the culprit was really poor business controls rather than the derivatives, per se. Headline losses attributed to the use of derivatives weren't the fault of derivatives. Rather, they were the fault of the traders making bigger bets than they could afford and putting the viability of their organizations in jeopardy.

Returning to the commercial hedging transactions, the most typical hedge objective is locking in forthcoming prices that would otherwise be uncertain. Clearly, in retrospect, once you do lock in a price, you may end up regretting that decision if the feared adverse price change fails to develop. In this situation, the loss on the derivative obviously would have been avoided if you hadn't hedged in the first place. This possibility is part of the calculus that should be understood prior to making the decision to hedge. You have to be willing to bear this cost in order to achieve the intended protection if the market had moved the other way. In other words, the decision as to whether or not to hedge, or how much to hedge, should reflect management's sensibilities as to the probabilities associated with beneficial versus adverse market developments.

Derivative instruments

For corporate financial managers, the most widely used derivative instrument is the interest rate swap contract, relating to interest rate exposures. These days, commercial bankers often require commercial customers to borrow on a variable rate basis, thereby forcing these customers to bear the risk of rising interest rates. When these borrowers pair these exposures with an interest rate swap contract, the derivative serves to swap those variable cash flows for fixed cash flows.

The borrowing company still pays the bank a variable interest payment, but the terms of the swap contract—which might be transacted with that same bank or some other swap dealer—impose two additional cash flow obligations—a variable receipt cash flow designed to offset the original variable exposure paid to the bank, and a fixed payment cash flow. Combining the cash flow obligations of the swap with the original variable payment to the bank effectively transforms the variable rate debt into a synthetic fixed-rate debt.

Importantly, swap contracts don't require any upfront cash payments. Instead, these contracts are entered into as handshakes, reflecting a promise and obligation to make future settlements in the prescribed manner that serve to achieve the intended outcome.

Structuring synthetic fixed-rate loans in this way allows the bank to manage its balance sheet exposures more efficiently because shorter-term bank deposits typically provide the wherewithal for banks to loan to their customers. Thus, having shorter-term loans—or loans that reset their rates with relatively short term reset frequencies—tends to harmonize a bank's sources of funds with its uses of funds, thereby mitigating the bank's interest rate risk exposures. On a one-off basis, this approach would seem to benefit the bank at the expense of the customer; but in the aggregate, when banks on the whole operate in this way, they are able to offer cheaper funding to their customers than would be the case otherwise.

Put another way, if the borrower insisted on borrowing with a traditional fixed-rate loan, presumably that firm should be able to shop around and find some bank that would offer fixed-rate financing at some fixed interest rate. The prevalence of the use of swaps in coordination with variable rate funding is testimony to the fact that customers generally find the synthetic solution to be the cheaper funding alternative.

Besides locking in prices, derivatives can also be used to establish worst case price outcomes. This objective can be realized by buying caps or floors in connection with repetitive pricing exposures (e.g., a series of purchases or sales at yet-to-be determined market prices) or option contracts for individual price exposures. A purchased call option giving the right to buy a currency or commodity serves to ensure some worst-case, maximum purchase price, while a purchased put option giving the right to sell ensures a worst-case minimum sales price. These kinds of derivatives require an upfront cost—i.e., option premiums—where the cost would be different at different times, as market conditions varied.

Outcomes

Probably the most typical adverse outcome for derivatives has to do with the fact that, with derivative positions, the losing party has to pay up, in cash. Large market moves can and do stress the financial system, but to a large degree, this systemic risk has been addressed by the Dodd-Frank Act and evolving practices relating to the use of collateral adjustments in connection with derivative positions. These refinements generally serve to alleviate this concern by forcing many derivative users to settle derivative losses in cash before they have a chance to fully metastasize. Bearing this feature of derivatives in mind, derivative users need to be mindful of derivatives' cash flow obligations and constrain their use to manageable volumes.

It's also important to appreciate that when used for hedging purposes, focusing strictly on whether the derivative wins or loses likely would give a false impression as to how well the derivative has performed. When hedging, the relevant assessment should consider the combined effect of the derivative and the exposure being hedged. Measuring losses or gains on derivatives in isolation tells only half the story. The better question is whether the effective price that results from hedging conforms to the expectations dictated by the hedge objective.

In fact, derivatives reliably achieve this end. That is, regardless of which derivative tool you choose, the selected contact has a particular associated hedge objective (e.g., to lock in a price or prices or to constrain prices within specific boundaries). The ultimate effective prices that can be realized from hedging are predictable within reasonable tolerances at the onset of hedging transactions, and hedgers should have high confidence that those outcomes would be realized. Put another way, derivatives do what they're supposed to do!

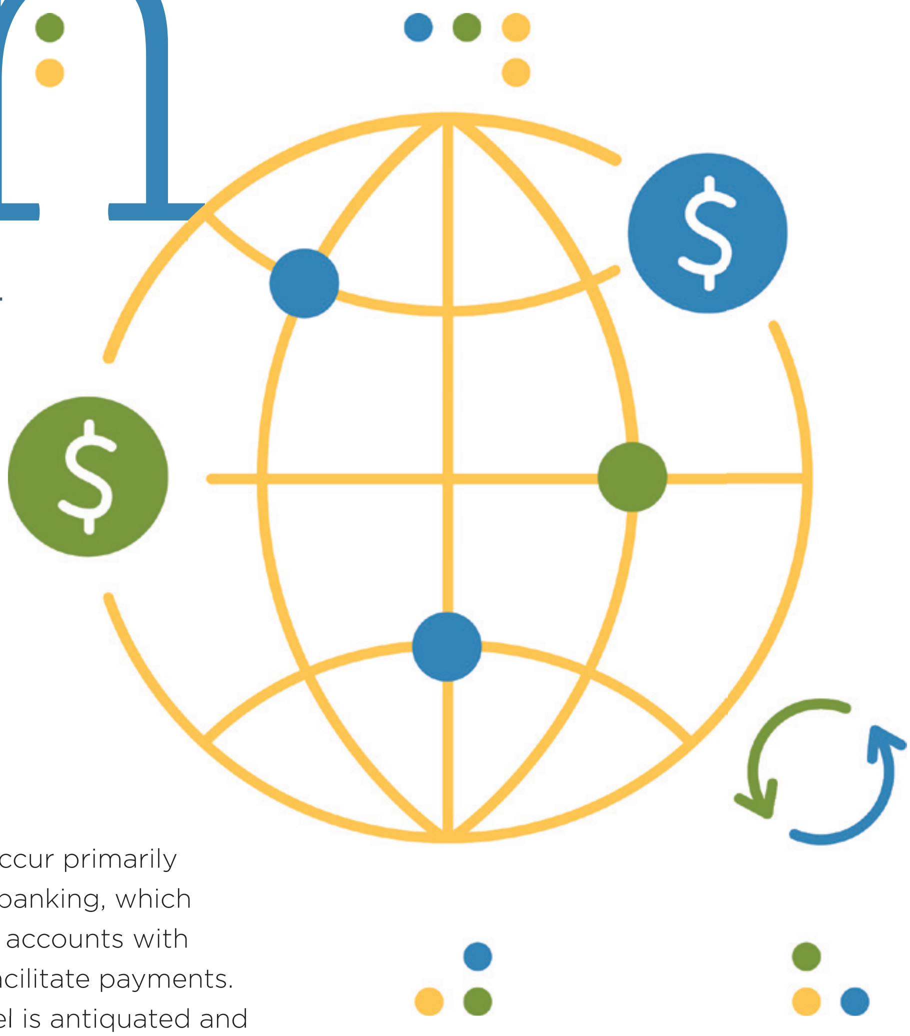
Inevitably, market conditions will arise whereby using derivatives will be an appropriate and rationale response, but you have to be ready. Accessing these markets requires making a preliminary effort to reach the requisite understanding of how these tools work, how they can be accessed, what they can be expected to deliver, and how to account for them. For the uninitiated, this learning curve may appear daunting, but it's really not. Moreover, the advantages of taking these steps are compelling. Having a facility with derivatives gives companies the wherewithal to react to changing market conditions and adjust outstanding exposures accordingly—quickly and efficiently. Otherwise, without having these tools in your arsenal, you'd be subject to uncertainties of the marketplace, without adequate recourse.

Ira Kawaller is Managing Director of HedgeStar, a consulting company that offers strategic advice, valuations, financial reporting, and expert witness services relating to derivative instruments.

Moving On

Are there better options for cross-border payments than correspondent banking?

ANDREW DEICHLER



Cross-border payments occur primarily through correspondent banking, which requires banks to set up accounts with selected counterparty banks to facilitate payments. The correspondent banking model is antiquated and inefficient, often resulting in high costs, payments not being delivered on time and illicit activity.

Inefficiencies in the current system have resulted in the emergence of new cross-border payments solutions that either improve the correspondent banking model, or replace it entirely.

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The most obvious issue is the time delay; the payment often has to flow through multiple channels. And if one link in the correspondent bank food chain has an issue, such as local regulatory requirements, the payment may be further delayed, or returned and not reach its destination at all if not addressed.

Inefficiencies in correspondent banking

The correspondent banking process begins with a corporate sending a payment from its own bank and payment system to a correspondent bank. If this bank is not the bank used by the payee, the payment goes to a second correspondent bank that converts the payment to the local currency and sends it to the payee's bank via that nation's payment system.

The most obvious issue is the time delay; the payment often has to flow through multiple channels. And if one link in the correspondent bank food chain has an issue, such as local regulatory requirements, the payment may be further delayed, or returned and not reach its destination at all if not addressed. Thus there remains a lot of uncertainty over when a payment will arrive using this current model. Even if the standard two to four-day settlement period is acceptable to both payer and payee, that doesn't mean that it can't actually take longer.

The high cost is another common problem in the correspondent banking model. The cost of sending international payments can be substantial; there are typically transaction fees at both the payer's and payee's banks, as well as fees at each of the correspondent banks and a fee for currency conversion. These fees can vary considerably, depending on banking relationships. Small and medium-sized businesses (SMBs) have been hit particularly hard be these costs; 2016 research by cross-border payments provider Covercy found that UK SMBs that make 20 $13,000 cross-border transactions a month pay over $2,700 a month in fees, on average.

These fees can in turn create other problems for companies. Oftentimes, additional "hidden" fees may result in a different amount being credited to a payee. That means that the payer will have to send a second payment to make up for the shortfall on the first one, and will be responsible for any fees that go along with that payment.

Of course, there are also other regulatory issues that go along with the correspondent banking model. As noted in a 2015 report on correspondent banking by Aite Group, banks are struggling with compiling know-your-customer (KYC) information. KYC is incredibly important in this process because correspondent banking can easily lend itself to money laundering and terrorist financing. Thus it is imperative that banks vet their customers.

KYC is also a common problem for corporate treasury professionals; oftentimes, banks are so desperate to make sure they have all their bases covered that they'll ask corporate for information that the regulators don't actually require for them. That leads to corporates compiling a plethora of private information just to ensure that transactions can be completed.

Lastly, given that there are so many links in the correspondent banking chain, transactions open themselves up to fraud. Banks typically have stronger protections than corporates when it comes to cybercrime, but as the 2016 Bangladesh Bank incident revealed, bank systems are not infallible.

Though the correspondent banking model has remained relatively unchanged for years, the attitudes of both corporates and consumers toward international payments appear to be shifting. As noted in a 2016 McKinsey report, customer expectations for faster or real-time payments have been steadily increasing. Moreover, the report warned that "digital innovators" have been attracting customers with new solutions that have the potential to cut banks out of their correspondent banking relationships and loosen their ties with customers.

Given the inefficiencies in the current system, it is no wonder why new cross-border payments services have been emerging, each with their own special features. While it's far too early to tell which one(s) will outshine the others, it's never a bad idea to see what they each have to offer corporate treasury.

Correspondent banking questions

For corporate treasury departments that are desperate to rid themselves of correspondent banking for good, there are some key questions they should ask themselves as they weigh the different options available.

How many international payments do we make on average? Fees and time delays are never convenient, however, if the overall process is relatively efficient, exploring new options may not be necessary at this time.

Are you getting full transparency into your transactions? On the flipside of the coin, if you find that you are not getting detailed remittance information or are unable to track your (often high value) payments once they go out, then it may be time to upgrade your payment model.

How well does this new system integrate with your TMS or ERP? This is perhaps the most important question to ask. There are many service providers out there and if the service you're considering doesn't work with the software that you're using for all of your other tasks, then you may want to move on to something that does, or wait until that service can offer you what you need.

How well do we know the countries where we are sending payments? Different countries have different requirements for their payments. Treasury practitioners should talk with their bank before sending payments into a new region to educate themselves on what may be required to complete a transaction. "Make sure you fill out all the fields those countries require," said Magnus Carlsson, AFP's manager of treasury and payments. "If you miss even some obscure little detail that they require to process a payment, they'll hold it. That creates an additional delay and potentially more fees."

Which new cross-border platforms might you be able to use now? It's a good idea to talk with your banking partners about which cross-border payments services they may be able to offer you, or may be adopting in the near future. And it's also worth talking with your vendors to see if any of them are open to using one of those services for payment. Convincing all of your vendors to move to a service like SWIFT global payments innovation (gpi) or Ripple may not be possible at this stage, but you might be able to sway some of them.

How well do you understand the technology? The recent rise in fintech companies has left corporate treasury professionals fascinated by technology like blockchain. But do you really understand the capabilities of these technologies, or are you simply relying on what a salesperson is telling you? Take some time to researching these new cross-border payments platforms and the technology behind them. That way you'll know whether they'll truly benefit you.

Fear of the unknown

For corporate treasurers, correspondent banking is a hassle, particularly if you miss filling in some obscure information detail that delays the payment, but it's also something they know very well. While you may want to move to a new solution for cross-border payments, it simply may not be high on your priority list at the moment.

And even if it is, there is much to consider when choosing a cross-border payments solution. Every company out there will tout their system as the best of the best, but right now, treasurers would likely be best served by being cautious. None of the current offerings are used by the majority of banks at the moment. How do you know the new solution will be in place for the long term? So while you might want to rid yourself of correspondent banking for good, it may be best to proceed with caution until a clear winner emerges.

This article is an excerpt from the latest AFP Payments Guide, The Advent of New Cross-Border Payments Systems, underwritten by MUFG Union Bank. Download the full guide www.AFPonline.org/publications-data-tools/reports/guides/afp-payments/

Managing the Globe

Two paths to navigating a worldwide card program

Companies that operate across multiple regions can significantly boost cash flow, buying power and visibility by creating a single global card program.

There are several ways for treasurers to roll out a single card program to thousands of users across many countries and currencies. While every business faces different circumstances and every company's needs are unique, there are many best practices that can help you launch, expand and consolidate globally.

Key takeaways

- Creating a global card program can help boost working capital and visibility while reducing risks
- The best practice is to plan ahead and design a phased approach where small groups of countries go live at the same time
- If you need to move quickly, work closely with your bank to make sure you get the details right

Path 1: The phased approach

In an ideal world, you'll have many months — even a year or more — to plan your global rollout. This may seem like an abundance of time, but you can use it to strengthen your business case, secure buy-in from senior management and other internal stakeholders, and closely investigate regulatory nuances in each country where you plan to launch.

After securing support from finance leadership, shift your focus to the central challenge: issuing, activating and managing cards in all of the places where you do business. If you're going live in many countries, a phased approach can help you take gradual steps toward a full implementation. As an example, if you'll need to go live in more than 20 countries, you could divide them up into phases in which a new wave of countries goes live every 45–60 days. If you'll be launching in several neighboring countries within a single region — Latin America, say, or Asia Pacific — consider grouping them together into a single wave. Staggering your roll-out can be a great way to surface issues in a smaller setting and fix them before they affect you globally.

Collaboration with your bank will prove essential during each step, especially when it comes to understanding local regulations. Every country has different rules, in particular when it comes to Know-Your-Customer (KYC) regulations, which can vary greatly. Bank of America Merrill Lynch has people on the ground who can help you understand how to navigate each market, provide the right documents and work with local-issuing banks where needed.

If you work at a large company, building relationships internally can enable you to draw on other departments to help ensure the success of your global card program. One way to do this is to partner with communications and training to design materials that help cardholders get up and running quickly.

Path 2: The accelerated approach

For some clients who have launched globally, time has been of the essence. Due to a range of circumstances, they've needed to get up and running quickly — without months of advance planning or the luxury of launching in staggered phases.

In one case, a client with operations on several continents faced an emergency when its main card provider retreated from the market. We were able to standardize their program globally, going live with thousands of new cards within weeks so that our client could avoid costly business disruptions.

While this example may be extreme, there is a clear playbook for issuing plastic in a more accelerated timeframe, especially if you're consolidating multiple card providers into a single program. The first step is securing executive sponsorship, since help from senior leaders can be crucial to expediting your implementation. Build a clear business case by highlighting the working-capital benefits of a single card program, along with the increased visibility and control over employee spending.

Choosing the right bank is also essential. In addition to the KYC nuances and local-issuing bank relationships mentioned above, there are significant details that can unnecessarily delay your launch unless your bank helps you anticipate ways to solve for them. For example, every country has a different online application process, requiring their cardholders to enter their birth dates in different formats. And in some countries the application requires cardholders to upload a verification code, which they'll also need when it's time to activate their card. If you're in a rush to launch, it is crucial to get those things right the first time.

Close bank collaboration also pays off when it's time to issue the cards. In some cases, we can send plastic overnight — with local-language support — so that employees can use the cards within days.

Best practices for launching globally

- ✓ Create plans well in advance of implementation (when possible)
- ✓ Establish global project managers and local, in-country teams
- ✓ Solidify executive sponsorship by highlighting working-capital opportunities
- ✓ Understand local-market variations, including Know-Your-Customer (KYC) requirements
- ✓ Draw on other internal teams, such as training and communications, to make things easy for cardholders

Conclusion

Every company's needs are unique, and your path to a global card program will be one of a kind. Whether you have time to launch in phases or need to expedite issuance to keep key projects on track, we can work with you to tackle the details and get your cardholders up and running. The financial and operational benefits are simply too great to ignore.

AFP CONVERSATIONS

Nation's CAPITAL

Why Alexis Glick believes Washington is the new financial capital

IRA APFEL

Alexis Glick has worked in front of the camera and behind it before moving on to nonprofit leadership. She anchored NBC's The Today Show and CNBC's Squawk Box before helping to launch the Fox Business Network. She's interviewed President Obama, Hillary Clinton and Warren Buffett among others. More recently she founded GENYOUth, a nonprofit dedicated to nurturing child health and wellness.

With her experience in strategy, business development and communications she's a frequent advisor to CEOs of Fortune 500 companies. And that also makes her a perfect speaker for AFP 2018, where she will discuss how treasury and finance can cope when uncertainty is the new normal.

Glick recently spoke to AFP Conversations podcast about the state of finance and uncertainty.

Ira Apfel: Unemployment is at 4 percent. The GDP rose 4 percent last quarter, and corporate profits are at their highest in seven years. So the top line results look good, but what gives you pause?

Alexis Glick: You're absolutely right. The numbers we're seeing feel like across the board, record numbers and optimism among corporate America is very high, and arguably optimism even as you survey CFOs is pretty high. The issue is the divergence between, what I'd argue, is sort of corporate America and small businesses. Small business is everything down to the mom-and-pop, all the way to what's happening specifically in the agricultural industry. So while you look at the top line, or the headline numbers and you say, "Wow, things couldn't be better", unemployment is at a record low, corporate profits, as you said, are at a near decade high, but the issue is, is that things like tax reform. Things that have been really beneficial to corporate America are not necessarily translating to the mom-and-pops of the world, and/or to areas like the agricultural industry, which actually is taking it very, very hard on the chin, given what's going on with tariffs in the past six weeks.

Ira Apfel: Let me flip the question. So if there is so much uncertainty as you just talked about, then why are the top line numbers so robust? Is it an issue where some large companies like Apple are skewing the picture?

Alexis Glick: No. I mean, look, if you look at whether it's sales, whether you look at consumer demand, whether you look at consumer debt, right, the consumer is pretty bullish with the exception of the fact that, yes, we do have low unemployment, but we've had relatively stagnate wage growth. We're starting to see a little bit of the tea leaves of some tiny wage growth but remember when we go back to those tax laws going into effect, particularly on behalf corporate America, the hope was and certainly what the President hoped is that corporate America would use those dollars to invest in people and in wage growth and some of that for capital expenditures and they are doing it for capital expenditures.

The issue is a lot of companies are putting that extra money to work in one of two ways either a, to buy back their stock, or b, because they're looking for mergers and acquisition opportunities in particular the MNA market overseas has been really, really high over the past six months of this year. So it's not that corporate profits are not strong. That is absolutely the case and that is why you're seeing record numbers in this second quarter. The issue is that the individual, the consumer, who is working for the Apple or working for some of these other companies, while you see a low unemployment rate, they really haven't seen as much wage growth as you would argue corporate America has seen in benefits in regards to both taxes, just global growth as whole because interest rates have been so low, access to capital has been so cheap and opportunistic for them so they've really, in corporate America, had an opportunity to really take advantage of the global marketplace in the U.S. is arguably been stronger than any other economy in the world.

Ira Apfel: How should CFOs and treasurers think about all of this? There are perhaps record profits at their own company but there is still all this uncertainty?

Alexis Glick: Well, I think if you're a CFO, you've been pretty bullish, and I think you've been bullish because as we talked about before, access to capital and interest rates have been very, very low, productivity has been growing, growth has been pretty strong. Obviously, we just saw this recent GDP number in Q2 which was very, very strong. Although, you cannot find one economist on Wall Street who is not skeptical about growth in the second half of the year and large measure because of the tariff conversation but if I'm a CFO sitting in a period of uncertainty and let's be real. If you sat down with any CFO in America, frankly with any CEO in America, they're going to tell you there always operating in a period of uncertainty. It's just this one, given

the global stage and particularly given the fact that the U.S. is such a big global trade partner, it's something that's making them think a little bit more closely about how they use that powder, that cash, on the book at a moment like this with not knowing where these trade discussions are going.

But think about it for just a second. If you're looking at unemployment below 4 percent and wage growth pretty stagnate, your workforce is saying, "Why are the returns not coming to me?" So you're at moment in time where your people are feeling like they should be paid better and that the job force is stronger; therefore, they have more opportunities in the labor force. So if you're CFO and you're thinking about this internally, you're looking at things like rising health care costs, you're looking at a workforce that is thinking about, "Hey, what piece of the pie am I garnering? And oh, by the way, if you don't give me that piece of the pie, I'm going to make a move over to x or to y which could be one of your competitors." So I think those are kind of some of the internal head winds that as CFO you're thinking about, but the external head winds certainly are, particularly right now front and center, is what's happening in Washington, D.C. and how does that ultimately affect the balance sheet.

Ira Apfel: With trade wars under way it seems like previously corporate America was able to ignore the uncertainty, but now it sounds like they can't.

Alexis Glick: One-hundred percent. I think that new normal ... really, the new normal truly began in 2007. It's not that we ever truly believed that that Wall Street was 100 percent the financial capital of the world, but for all intents and purposes, because Wall Street was the place where you raised funds, you did secondaries, was really the capital markets of the world, where the funds got raised to whatever you needed to do in corporate America. That pendulum shifted very heavy to D.C. and D.C. really became the financial capital of the world dating back to 2007 and if you just look specifically at what the Federal Reserve had to do in order to keep the market afloat, whether it was bail outs for the financial institutions or for the auto industry, that's ground zero and that has not affectively changed since 2007.

Enter into the equation what are really, if you look at it in many cases, unfair tariffs that exist with our trade partners and so I think there are many, in corporate America, who would argue or may who would agree with this administration that we need to shift the pendulum and get ourselves to a place of greater parody particular when you look at our deficits, certainly with China, and arguably with the EU, but the problem is the rhetoric right now is so severe that we're already starting to see the pain in a relatively short period of time.

I think what they're trying to do is level the playing field but in the process, because the rhetoric is tenuous at this stage in time, particularly with China, we're seeing commodity prices get hammered, particularly in agricultural industry. I mean, at this rate, just in the dairy industry alone, if prices continue to decline at the rate that they're declining, you could lose 3,000 dairy farms in the course of year. I haven't even touched soybean prices. That's a major crisis with what's going on with China.

So I would just say to you, that right now, I believe Washington, D.C. is the financial capital of the world. They are dictating policy. The discussions that they are having as it relates to the trade negotiations is something that every CEO in corporate America is watching and certainly every CFO and they've got to navigate in that period of uncertainty knowing that either they may have to increase the degree that they are importing or increase the degree that they're exporting in advance of a continuously uncertain environment.

Read about Alexis Glick's upcoming AFP 2018 session at www.AFP2018.org.


Transparency Dashboard

The Future of WORK

AFP 2018 speaker Nancy Giordano chats with members

STAFF WRITERS

AFP recently hosted an "Ask me anything" chat with AFP 2018 featured speaker Nancy Giordano. A futurist who helps organizations strategically address technological shifts, Giordano will speak about reinventing leadership for the age of machine intelligence at AFP 2018.

Giordano's AMA, lightly edited for clarity, is excerpted below:

Anonymous: Thanks for doing this! What is the best way to keep my skills applicable in the changing technological environment?

Nancy Giordano: For years I have preached there are four skills (at minimum) we should nurture in children to help them better prepare for the future; seems they apply to us as well: Curiosity, Empathy, Agency and Grit (Compassion).

Curiosity is a necessary skill we need to both support and better incentivize. How many times have we wanted time or financial help to take a class, go to a cool conference or simply spend time learning more about another department… often to be told that isn't relevant? In contrast, Brian Glazer, a very successful Hollywood producer has taken a different person outside of his industry to lunch every two weeks… for 22 years!! And just this month, the cover story on the Harvard Business Review is The Business Case for Curiosity.

Empathy takes many forms, but it is the root of Human Centered Design and Design Thinking. It's also what makes us not ask an employee to "close" by closing a retail location at midnight and open it again at 5am. We need to pay more attention to how we hold folks in the systems we create.

Agency means having confidence that we can take action. For kids that means giving them room to take on more responsibility and decision making. For adults, I would say it means building capacities to develop new skills AND giving room to learn (aka "fail") ,while constraining risk.

And grit is hopefully something adults understand better than most kids do, so perhaps for us we reframe it as compassion. We need to be kinder to ourselves and others as we all face a very fast changing landscape and trust we are each doing the best we can. (This, btw, is also what is driving the rise in Mindfulness and meditative practices. But that is a whole 'nother topic!).

"My worry lies more in our ability to let go of what is no longer serving us and the dire need to restructure short-term incentive frameworks that benefit a small group and the expense of a much larger one."

Anonymous: Who will suffer the greatest loss in the new technological future?
Nancy Giordano: There is a great deal of debate around this … and whether there will be net more or less jobs, access, privacy, etc. in the future? I personally believe the structure of work, economic exchange (i.e., sharing economy, cryptocurrencies, etc.) and society will shift dramatically in the decade ahead.

This will cause dislocation and confusion for some (as we are already seeing) and huge opportunities for others (ditto!), but we can minimize the "loss" by embracing the upsides these create for both our collective and individual well-being.

Hanging out with so many visionaries who are building the future, I am very optimistic. My worry lies more in our ability to let go of what is no longer serving us AND the dire need to restructure short-term incentive frameworks that benefit a small group and the expense of a much larger one.

We will be able to solve huge problems and create what we see as a thriving and regenerative society, but we need to be careful not to create even bigger issues along the way. How we use emerging tech to serve (vs stalk) and what new models for economic distribution need to be considered are two of the areas I spend a lot of time thinking about.

Anonymous: What are your top 3 coolest AI driven solutions put to practice? What readings would you propose a must on the topic? Thanks!
Nancy Giordano: "What readings would you propose a must on the topic?" Well it depends on which topic, but readings that have impacted my thinking recently include:

- The Shift Commission study on the Future of Work: They pulled together 100 forward thinking experts, who, armed with a range of research and insight, identified a long list of variables that will impact the how we will work. They eventually narrowed it to two: will be have more work or less and will that work be gig/project assigned or formally hired… and from this they created four very thoughtful scenarios with implications for each. The reality is that no one know definitively how things will shift, and so we need to be building scaffolding in many directions.
- Bryon Reese, a tech pioneer, entrepreneur and close friend, recently wrote The Fourth Age to help us all get a better handle on our expectations for AI. He also helps explain why thought leaders like Elon Musk and Mark Zuckerberg can have such opposed views and fears of how AI will impact our lives and offers many helpful frameworks for us each to develop our own POVs.
- Author Douglas Rushkoff's recent article on Survival of the Richest really makes you think! And reinforces that our work here is not to simply protect what we own, but rather to use the resources we all must impact and build a better, safer future for all.

And I'll throw in two bonus articles I loved:
- On how the Pentagon is Building a Dream Team of Tech Savvy Soldiers because it showed how have come to appreciate and better support the talent within the organization: "The military thought the problems they were facing were because of a lack of talent," Bereknyei says. He thinks Jyn Erso's work has proven that theory

wrong. "We changed their environment. We changed their support and gave them designers to work with," he says. "It made all the difference in the world."

– And if you want to really look around the corner, read The future of Cloud Computing – it introduces you to Holo + Holochaing, projects I'm helping champion.

Anonymous: "What are your top 3 coolest AI driven solutions put to practice?"

Nancy Giordano: Off the top of my head, I am really intrigued by these because of the uses and ways they are employing AI in very traditional, fundamental fields:

Lemonade insurance – they combine AI with behavioral econ insight to create entry-level products that meet customer needs in completely new ways… and show what is possible.

Plenty + AERO – pioneers in vertical farming. This entire industry is harnessing the power of emerging AI, robotics and many other advances in data and science to address growing problems in food security, affordability and access. And this, in turn is helping fuel and giant industry shift to plant-based proteins and whole new categories of food. I am very excited about what is possible here!!

Amazon's Go stores – heading to a cashier-less future.

Learn more about Nancy Giordano's upcoming presentation at www.AFP2018.org.

Happy Birthday

The FX Global Code turned one, and adoption is exceeding expectations

JOHN HINTZE

"You can only expect counterparties to credibly adhere to this ethical behavior if your company is committed to do the same."

Last year saw the debut of the voluntary Foreign Exchange Global Code (FXGC), a set of principles and guidelines to promote the integrity of the foreign exchange market. One year later in August 2018, the Global Foreign Exchange Committee (GFXC), which developed the code, has published an update. The document is a must-read for any corporate treasury executive with FX responsibility for their organization.

The GFXC's August review of the code's progress shows that the effort has so far exceeded expectations in terms of the "statements of commitment" (SoC) signed by market participants so far. More than 300 had decided to sign the SoC, well above the 250 who said they would the previous September, and as of mid-September 2018 the list contained 459 names.

Adrian Boehler, co-chair of the GFXC and global co-head of FX local markets and commodity derivatives at BNP Paribas, said that number was heavily skewed toward sell-side firms, about 75 percent, with the rest a mixture of vendors and buyside firms, including eight nonfinancial corporates. "We've created a working group focused specifically on buy-side outreach that is targeted at raising the number of SoCs from the institutional buy-side and corporates," Boehler said. "It is important that the types of organization signing up to the Code reflect the diverse ecosystem of the FX market."

That outreach so far includes getting promoters of the FXGC on the relevant conference circuits as well as working with industry groups. So far, the GFXC has communicated mostly with non-U.S. associations, perhaps part of the reason none of the SoC signatories so far are U.S. companies. Current corporate signatories include Airbus, Air Liquid Finance, RTL Group SA, Financière Rémy Cointreau S.A and Shell.

However, American firms are on the radar. "You can only expect counterparties to credibly adhere to this ethical behavior if your company is committed to do the same," said Claas Carsten Kohl, head of treasury reporting and middle-office at Airbus and a member of the Market Participants Group (MPG).

The MPG developed the FXGC along with the FX Working Group established by central banks. Over a two-year span, they took into account more than 10,000 comments from all types of market participants and associations.

In addition, Kohl said, mapping the code's 55 principals against a corporate's own FX infrastructure and policies and procedures should enable treasury executives to better understand their bank relationships: What banks are doing with their information and trades; the risk banks are taking on and why they take certain market actions. Bank counterparties adhering to the principals will also be more transparent about the role they are taking on in a transaction, such as whether they are acting as principal or agent, and how they price transactions. "And all market participants, including central banks, have an interest in ensuring the market is fair," Kohl said.

> "Many principles do not apply to corporates since they are purely price takers."

Airbus notes on its website that more than half of its revenues are denominated in US dollars (USD), prompting it to use hedging strategies to minimize the impact on its earnings before interest and taxes (EBIT) from the USD volatility. It also notes that the GFXC was developed by major central banks and private sector FX participants globally to restore trust and to ensure integrity, fairness, liquidity, transparency and effective functioning of the FX market.

"Airbus is therefore committed to the [FXGC] and has already previously been acting in accordance with its leading principles and will continue to do so," the company says. "Airbus sees adherence to the code as a way to demonstrate towards its stakeholders' compliant behaviors in the context of a wide ethics and compliance framework."

Kohl noted that a challenge the GFXC faces in signing up corporates is their treasury department's often sparse staff. Large multinationals may have several people focusing specifically on FX, but a still sizable company with subsidiaries in 20 countries may have one treasury executive handling all the treasury functions.

However, Boehler said, for some market participants, perhaps including corporates, not all principles will be relevant, while others may want to consider most to be in their scope.

"As co-vice chair of the GXFC, I encourage all types of market participant to sign up for the good of the industry. Not all adherence is created equal given that different principles will apply to different types of market participant, but all adherence is important," Boehler said.

Seeking proportionality

Corporates that are less active in the FX market may determine that fewer principles are applicable and so must be adhered to, although most if not all of the principles are worth at least considering. Kohl said that feedback from nonfinancial companies when the code was being developed suggested they wanted proportionality, so that the smallest and largest market participants could adhere to it.

"Many principles do not apply to corporates since they are purely price takers. However, it is an opportunity to understand much better how banks are determining prices," Kohl said. "For a corporate not having the capacity to check every price in detail, transacting only with banks who adhere to the code should ensure that it can trust more than in the past that the bank's prices are fair."

The increased transparency required by the FXGC could change the way FX market participants operate. Curtis Pfeiffer, chief business officer at trading-technology vendor Pragma Securities, said a key component of the FXGC is trade execution, requiring banks to be more transparent about whether they are acting as a principal or agent and how they demonstrate best execution.

Among the several factors that go into measuring best execution is transaction cost analysis (TCA), which allows institutions to analyze trade data and measure whether they are achieving high-quality execution.

"The FXGC may indirectly influence the adoption of more algorithmic execution," Pfeiffer said. "One of the biggest contributory factors in the growing use of TCA has been the growth of algorithmic trading. Not only can algorithms minimize market impact, but the granularity of the recorded trading data can be fed back into the decision-making process for future orders."

Boehler added that he sees significant benefit in reading and understanding all the principles, while leaving each market participant to do its own analysis to determine the principles that are relevant to their own activity. Furthermore, an institution signing up to the FX Global Code sends a strong message to other market participants about where it stands in terms of market behavior.

For corporates, "expecting similar standards from counterparties gives strong assurance to shareholders that the transactions, order flow, information and other aspects of the corporate's FX activity are being handled in the right way," Boehler said.

DUAL ROLES

A conversation with Kemmy Koh, CFO and entrepreneur

IRA APFEL

Being chief financial officer is challenging enough. But Kemmy Koh, Group CFO of Chinese Global Investors Group in Sinagpore, also is founder and managing director of Singapore-based Kglow SkinLab. Koh spoke to Exchange about her dual roles.

Exchange: What are your current job responsibilities?

Kemmy Koh: I am Group Chief Financial Officer at Chinese Global Investors Group, an investment holding company listed on the Singapore Exchange Securities. As a member of the executive management team and the risk management committee, I am largely responsible for the strategic financial management of the group, including

> "My experience as a finance professional has set the stage for me to incubate my own business—Kglow SkinLab. I wanted and needed a new challenge and I felt I had enough under my belt to make a bigger impact out of the corporate landscape."

corporate affairs and investor relations. I am responsible for developing business strategies, as well as pursuing and evaluating business opportunities in Asia. This includes acquiring, structuring, due diligence and the documentation processes of new businesses as well as evaluation of development of business. In addition, I take charge of the overall planning, directing and controlling of the financial activities of the group, constituting 20 subsidiaries, including business operations, and merger and acquisition in the South East Asia sector.

I am also the founder and managing director of Kglow Prestige Group operating Kglow SkinLab and Kglow Diamonds. Kglow SkinLab is a boutique anti-aging skin care and body aesthetics wellness clinic dedicated to offering the best science-based personalized treatments while Kglow Diamonds is a bespoke jeweler and designer for gemologist certified conflict free lab grown diamonds.

This includes:

- Planning, implementation, managing and running of all the finance activities of the group, including budgeting, forecasting and negotiations
- Providing leadership, direction and management of the finance accounting team
- Providing strategic recommendations to the chairman, board and members of the executive management team
- Managing the processes for financial forecasting and budgets, and overseeing the preparation of all financial reporting
- Advising on long-term business and financial planning
- Establishing and developing relations with senior management and external partners and stakeholders
- Reviewing all formal finance, HR and IT related procedures.

Exchange: What is your biggest challenge right now?
Kemmy Koh: As the traditional role of finance has evolved because of new technologies, we are now looking into a cloud-based solution to help automate processes and overhaul business models and operations. We are also exploring using integrated data and analytics to help us identify opportunities for profitable growth which sorting the adoption of digital technologies to help us make better decisions. Another challenge is driving growth strategy from mergers and acquisitions to geographic expansion and organic growth over the next 12 months. And, despite the return of economic growth, controlling cost is also a constant challenge.

Exchange: What do you like about your role?
Kemmy Koh: I love being a finance leader. I am involved in every project, every strategy session and every critical decision the company make. It gives me great job satisfaction that significantly outweighs the hours, the stress and the hard work. They are all part of my life, but the payoff is having an impact on the accountability and responsibility for the company.

I enjoy seeing the financial aspect of things, I like knowing how well the company is doing financially. Providing feedback and offering insights to process improvements. Being a CFO allows me to see the technical side of accounting as well as the operational side of business. Being a valued resource gatekeeper, I get to not just interact with the CEO and the board but with other stakeholders of the company.

Exchange: How did you start your career?
Kemmy Koh: I started my career journey as an external auditor before progressing into commercial accountant. It was a decision to venture into the capital market that led me to change my focus to exploring a fund accountant position with a private equity firm. It was at that time that the PE firm which I was interviewing for was on the search for a financial controller for one of its pre-IPO companies. By a turn of events, I got the financial controller position instead. It was my very first listed company role and I was thrown in the deep end immediately handling pre-IPO, listing and post-IPO and eventually de-listing of the company. It was a steep learning curve, but it came with great exposure. I was based in China for a few years before deciding to return to Singapore to take on my current position.

Exchange: What is your next big career goal?
Kemmy Koh: I have been in the C-suite for more than 10 years and having the exposure to roles such as internal audit, corporate finance, management accounting, company set up and implementation of software, there is a strong desire to pursue my own vision and agenda having delivered the agenda of others for so many years. My experience as a finance professional has set the stage for me to incubate my own aesthetics wellness business—Kglow SkinLab. I wanted and needed a new challenge and I felt I had enough under my belt to make a bigger impact out of the corporate landscape. I am fortunate to have a very good team of therapists to assist me in the running and operations of the business while I am juggling my CFO role and business-owner role at the same time. My future plans would be to expand my aesthetics business overseas and scale up within the next three years.

Exchange: What was the most important lesson you have learned in your career?
Kemmy Koh: Finance is a powerful function. Business decisions often hinge on our financial acumen and analytical skills. However, in today's challenging landscape, the ability to influence, collaborate and communicate effectively with others is just as important. My journey as CFO has taught me the importance of emotional intelligence to help me be bolder in my decision-making as it gives me the framework to understanding the consequences of decisions and how they might impact people, and for incorporating that understanding into decision making itself.

The second lesson is self-awareness—understanding one's strengths and weaknesses and acting on that knowledge. CFOs are defined by the teams they build. I build my team with the skillsets that supplement my abilities. I then rely on their abilities, delegate responsibility and allow them to do it their way as by delegating, it makes them more effective as they respond by working hard to live up to the responsibilities entrusted to them.

Lastly, my career has forced me to develop my business acumen and a greater understanding and appreciation of business and how business works. Finance to me is no longer just reporting historical facts but setting the direction of the business.

Exchange: What is your favorite book or publication that you recommend?

Kemmy Koh: Lean In, by Sheryl Sandberg, on how to get more women into business leadership roles.

Exchange: What is your favorite quote?

Kemmy Koh: An idea is only one thing; execution is everything.

Exchange: How has your forecasting and planning process changed in recent years?

Kemmy Koh: We are now leveraging real-time information that underpins decision making through concise reports and easy to understand visualization. This includes the ability to instantly model what ifs as well as scenarios based on risk awareness.

Exchange: How do you manage through volatility?

Kemmy Koh: In a changing world it is not the fittest who will survive; it is the most adaptable. Hence, we must build in resilience. With this mindset, I adopted a resilience strategy in volatile times: defend, diversify, decentralize and define. We have a team trained to respond in times of crisis on top of having insurance against any form of catastrophe.

In addition, diversification is something the company looks at every day. We started as a waterproofing business and have since diversified into funds and investments. Our operations, infrastructure and solutions are all kept in different location to enable us to cope with unforeseeable disruption. Lastly, we define our strategy to ensure every team members' goals are aligned with what we have.

Exchange: As the CFO, you are responsible for financial controls and capital integrity, but companies today are focused on a "bias for action" and "moving fast to break things." How do you balance these opposing forces?

Kemmy Koh: Do not get lost in translation—meaning, translate the numbers but do not tell people what happened. Tell them about the trends, what the impact of those trends is and how they can be used to grow the business or manage risk. As CFOs we influence people in everything we do, we need to think about being consistent and reliable.

Exchange: What source of data is your finance team under-utilizing?

Kemmy Koh: My team is currently using accounting software whereby too many hours are spent pulling together the monthly financials. We are looking at alternative enterprise resource planning systems that will meet our needs.

Exchange: How are you training and "upskilling" your team?

Kemmy Koh: I believe intelligent technologies will lead to a better and more productive future. As these changes unfold, we must take a people centric approach to supporting the team, which includes re-skilling and helping them adapt to newly shaped roles because of Artificial Intelligence.

Exchange: What do you think will be required to become a CFO in five years?

Kemmy Koh: CFO roles have rapidly evolved with the rise of automation as well as the complexity of globalized capital and markets, regulatory and business drivers. Financial function used to be charged with protecting enterprise assets by maintaining accurate books and guarding against financial risk. That role has expanded to include providing insight and direction for decision-making across the company's functional and market-facing areas, as well as increasing support in strategic and operational decision making in business in addition to fulfilling traditional stewardship responsibilities relating to governance compliance and control and business ethics. In summary, future CFOs will have to spend more time on strategic leadership, organizational transformation, performance management and big data and technology trends.

Finance of the Future

Keys to developing high-potential finance talent

RACHELE COLLINS, PH.D., AND NATHANAEL VLACHOS, PH.D.

KEY TAKEAWAYS:

- Finance professionals of the future will be expected to have expertise not only in technical skills related to their jobs but also in the use of data and technology.
- High-potential development programs are targeted learning and professional growth programs for individuals who have been identified by management as having long-term potential for performing successfully as leaders.
- Best practice high-potential development programs often include the following key elements: Coaching, job rotations and stretch assignments, relationship building and networking, real-world cases/action learning projects, and partnerships.

For best practice organizations, the finance function is evolving beyond its traditional accounting role to become a valuable partner in planning, analysis and strategy. Recognizing that the skillsets required for future finance leaders are changing, these organizations are effectively leveraging high-potential development programs as part of a suite of career development interventions to cultivate finance professionals who are data-driven, tech-savvy and confident in driving growth through analytic and strategic expertise.

This article provides highlights from a recent research project by APQC—Developing High-Potential Talent in Financial Management—and shares best practices from APQC's extensive body of research.

> 78 percent of survey respondents feel it is likely or very likely that financial transaction processing will feature some measure of robotic processing automation in the next two years.

Needed finance skills of the future

Finance professionals of the future will be expected to have expertise not only in technical skills related to their jobs (such as financing, accounting, or budgeting) but also in the use of data and technology. The development of these skills is a priority for management; 87 percent of respondents to the APQC study noted that in-depth training in predictive analytics to finance high-potentials is an important or essential priority for their CFO or finance director.

Survey respondents also recognize the importance of data-driven decision-making and becoming skilled at managing new technologies, such as robotic process automation (RPA). For example, more than half of those surveyed say there is a likelihood that their organizational culture will become increasingly data-driven, and 78 percent reported that it is likely or very likely that that financial transaction processing will feature some measure of RPA in the next two years. Furthermore, most respondents (74 percent) feel that it will be moderately important or very important for high-potentials to learn to drive productivity gains by leveraging robotics in transaction processing.

Respondents also identified strategic knowledge and skills as crucial for high-potential finance talent development: 85 percent of respondents said it was moderately or very important that high-potentials receive training in strategic planning, while 89 said it was moderately or very important for high-potential finance talent to be trained to assess business risk.

In addition to some of these more emerging skills expected of future finance leaders, soft skills are a perennial need for development of high-potential finance talent. For example, training in communication skills was rated moderately or very important for 85 percent of survey respondents. Respondents also noted that it was moderately important or very important for high-potentials to be trained in change management (84 percent), listening skills (82 percent), emotional intelligence (81 percent) and cross functional collaboration (81 percent).

High-potential development programs are part of a robust suite of development offerings that help prepare the finance talent of the future in these and other critical skills.

High-potential development programs

High-potential development programs are targeted learning and professional growth programs for individuals who have been identified by management as having long-term potential for performing successfully as leaders. The term "potential" generally refers to the fact that an individual is already performing at a high level and is likely to continue to achieve and grow further at the organization. For finance, most organizations (81 percent of those surveyed by APQC) feel that such programs are moderately important or very important to develop and retain high-potential finance talent.

Most organizations identify high-potentials utilizing performance appraisals/evaluations, 360-degree feedback, and skills-gap assessments—a multi-pronged approach. Almost half of survey participants reported that they designate somewhere between 11 and 20 percent of total finance talent as high-potential. Selecting the right number of high-potentials for development programs is important. Selecting too few may not yield a robust enough group of future leaders, while selecting too many may be expensive and weaken the purpose of the program. APQC recommends selecting between 16 and 20 percent of the eligible pool.

Ideally, high-potential development programs are part of a comprehensive suite of learning and retention programs at organizations. While many organizations leverage high-potential development programs as incentives for recruiting new finance talent, these programs are more than a perk. High-potential development programs are a valuable source of training that helps finance professionals continue to mature their skillsets as they prepare for a future in leadership at the organization.

Elements of a robust high-potential development program

According to APQC's research, best practice high-potential development programs often include the following key elements:

Coaching

Through coaching, high-potentials are mentored by top executives to ensure they are succeeding in their skills development and advancing along their career path successfully. For example, as part of its high-potential development program, high-potentials at Ford Motor Co. receive executive coaching as part of the annual Global Leadership Summit, and six additional hours of executive coaching with company leaders outside of the summit. Most APQC survey respondents (85 percent) said that coaching for finance high-potentials is incorporated into talent development programs every time or almost every time.

Job Rotations and Stretch Assignments

Most respondents (89 percent) also note that as part of their organization's high-potential development program, finance high-potentials are given the opportunity for new jobs and rotational assignments in new locations. For example, as part of their developmental career paths, finance talent at Schneider Electric is expected to progress through new jobs and rotational assignments every three to five years. To progress in their careers, finance leadership

talent often rotates across regions, as well as jobs, working in the front office, back office, manufacturing and other sectors. This variety of internal work experience empowers finance leadership talent at Schneider Electric with a more comprehensive view of their organization.

On a related vein, stretch assignments typically place high-potentials in a challenging project or task to help them "stretch" their current knowledge or skills outside of their usual comfort zone. For example, Schneider Electric's high-potential development program involves training programs, stretch assignments, action learning projects, exposure to senior leaders, accelerated career movements, and targeted apps.

A Focus on Relationship Building and Networking

Relationship building and networking are key objectives of high-potential development programs. Best-practice organizations consistently encourage and provide opportunities for high-potentials to build relationships with other high-potentials, employees and executives to promote collaboration and problem solving. For example, participants of Ford's high-potential development program gather for up to a week at a time as part of the annual Global Leadership Summit. Participants stay at the same hotel, where they have opportunities to learn about different areas of the business and build personal and professional networks that empower them to resolve cross-regional and cross-unit challenges.

Real-world Cases/Action Learning Projects

Best-practice organizations consistently integrate real-world cases and challenges as an important component of finance talent development. This hands-on experience allows valued finance talent to gain experience while meeting the concrete goals and needs of a company. At Maersk, for example, an entire day of its four-day face-to-face training sessions for finance business partners focused on working on real-world cases using a problem-solving framework.

Action learning is an interactive learning process typically involving small groups collaboratively working on real-world problem solving. At SAS, the early-career high-potential program features an action-learning project and proposal to SAS executives.

Partnerships

Partnerships with external learning and development organizations are also valuable features of high-potential development programs. Colleges, universities, and other organizations can provide targeted training for skills in predictive analytics, modeling, and statistics, as well as more strategic and softer skills. For example, Cardinal Health's Inspire program, created in partnership with Ohio State University, helps executives develop global and strategic thinking skills in order to drive a more agile and innovative culture.

Conclusion

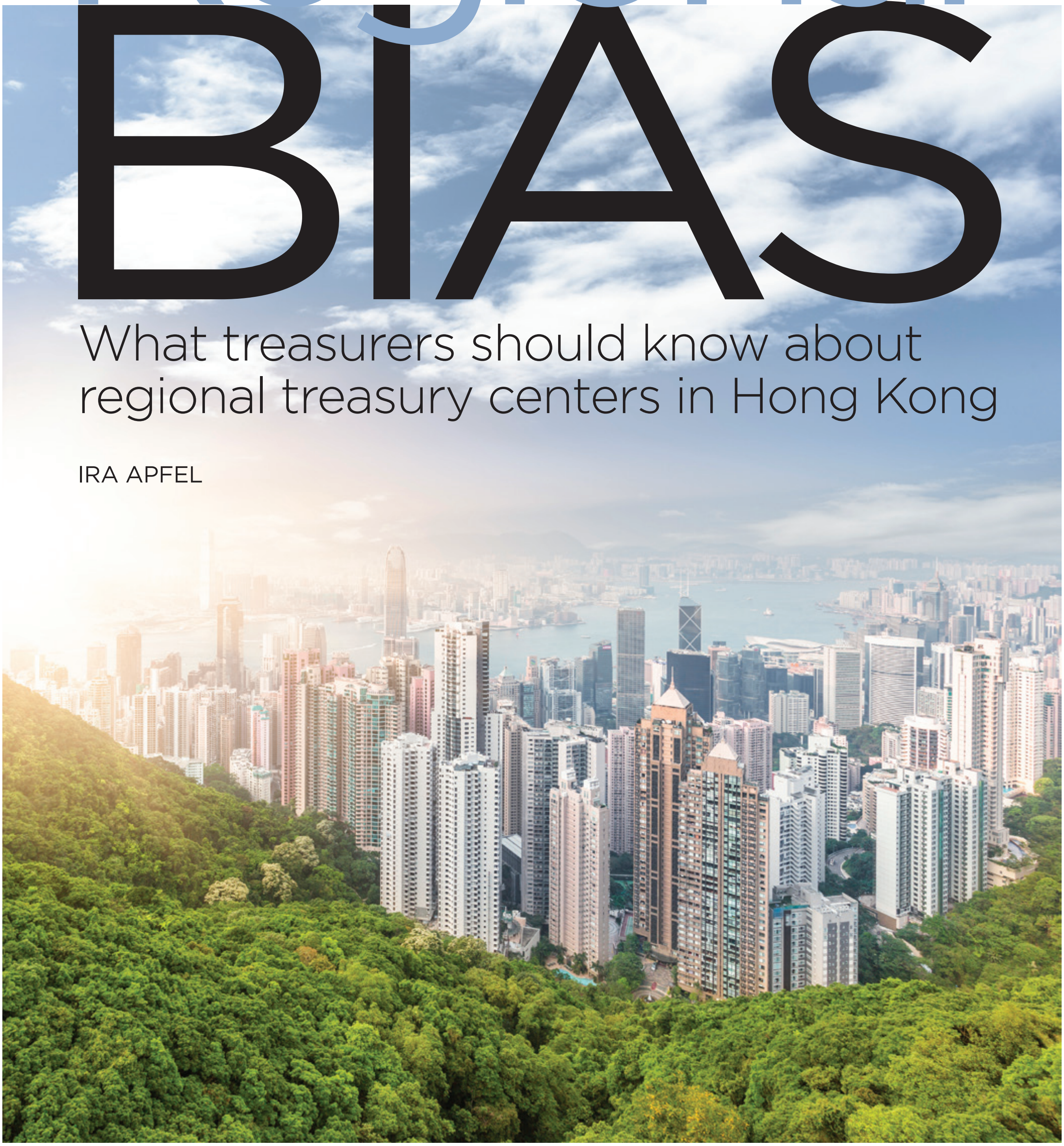
The finance leaders of tomorrow need skills that go beyond their traditional expertise in finance and accounting. Best-practice organizations realize that the future of finance is data and tech-driven and leverage high-potential development programs as part of a comprehensive portfolio of career development offerings to empower their high-potential finance talent to lead effectively. These programs offer opportunities for key skills development, coaching from executives, and job rotations that help high-potentials with a bird's eye view of their organization. High-potential development programs also inculcate soft skills that are critical to success. Ultimately, finance is a critical support function for all organizations, and finance high-potential development is key to helping organizations attract and retain their valued finance talent and maintain a competitive edge in the marketplace.

Rachele Collins, Ph.D., senior research analyst, and Nathanael Vlachos, Ph.D., are both with APQC.

Regional BIAS

What treasurers should know about regional treasury centers in Hong Kong

IRA APFEL



As companies based in the United States expand overseas, many are choosing to open regional treasury centers to support operations. Where to locate the RTC, then, is perhaps the first and most important question treasurers must answer. One possible location is Hong Kong, which recently enacted new regulations to encourage RTC location there. Enoch Fung, Head of Market Development for the Hong Kong Monetary Authority, spoke to Exchange about why American companies should establish their RTC in Hong Kong.

Exchange: What should companies know about the new rules for RTCs? What has changed about the rules, and why did the rules change?

Enoch Fung: Hong Kong has been an international financial center (IFC). Many multinational corporations have set up their regional headquarters and offices to leverage on Hong Kong's strengths as an IFC for their Asian business. Corporates can also make use of Hong Kong's low and simple tax regime, as well as our world-class financial platform including an extensive banking network, deep capital markets, robust financial infrastructure and effective professional services for their corporate treasury activities.

While corporates appreciate Hong Kong's competitive financial services platform, there are also some feedback that some of our tax policies can be improved to make our overall package even more competitive. Therefore, we have further enhanced our tax rules to facilitate more cost-effective cross-border intra-group financing for corporates. The Hong Kong Government introduced a new tax rule in June 2016, which enabled Corporate Treasury Centres (CTCs) to deduct the interest expenses arisen from their intra-group financing from associated corporates under specified conditions. To further promote the development, the government also provided a 50 percent profits tax concession for qualifying CTCs, i.e., profits tax rate reduced from 16.5 percent to 8.25 percent. The types of activities eligible for this tax concession include profits arising from typical treasury functions such as financing, liquidity management, investment, and risk management. This CTC initiative covers not only corporates setting up the global treasury centers in HK but also the regional treasury centers.

Corporates' response to the regime has been positive. In the first year of introduction, there were already over 140 corporates benefitting from the above amendments.

Exchange: What advice would you give to a company that wants to create an RTC in Hong Kong? What mistakes can they avoid?

Enoch Fung: Financial management is an integral part of a corporate's operations. Many multinational corporations are expanding their presence in Asia, on the back of the growing importance of Asian markets in their overall business. As the scales and complexities of their businesses increase, corporates are advised to structure their CTCs carefully based on their own business requirements and stages of development. Therefore, it is important for corporates to identify the right partners such as banks, accountants, legal advisors and consultants who could help tailor their CTC structures to their needs and are also familiar with the local market conditions. It is worth mentioning that Hong Kong has a deep pool of talents and experts who are well-experienced in assisting corporates to structure their CTCs for managing their treasury businesses in Asia.

When it comes to comparing the tax implications of setting up a CTC in different places, many corporates only look at the headline tax rate of the CTC tax regime, and do not take into account the various indirect taxes. For example, Hong Kong only has three types of tax: profits tax, salary tax and property tax. We do not have any goods and services tax, value-added tax, estate duty or tax on capital gains. We also do not have withholding taxes on interest and dividend payments, which save costs for CTCs with cross-border activities. In fact, Hong Kong has a very competitive tax environment even without the CTC tax regime. According to the study, "Paying Taxes 2018," conducted by the World Bank and PwC, out of 190 economies in the world, Hong Kong is the third most tax-friendly economies, after Qatar and United Arab Emirates. Corporates should examine a city's CTC tax regime together with its overall tax environment to gain a more holistic view. Again, choosing a trusted and expert tax advisor is the key.

Exchange: What are the economies of scale a typical company achieves by setting up a treasury function in Asia?

Enoch Fung: Multinational corporations (MNCs) have been active in developing business operations in the Asia region. Not only does Asia provide a promising market for business development given its huge population and rapid economic growth, it is also an important region in MNCs' supply chain management as they set up their production facilities or source goods locally. With the increasing complexity of their Asian business operations, corporates face greater challenges such as differences in time zones and diverging local practices, thus making management of treasury activities from remote headquarters less effective. Having a regional CTC in Asia, ideally close to their regional headquarters, enables an operating structure more scalable to support business requirements in the region.

As a regional business hub for many MNCs, Hong Kong is an ideal location for their CTCs in Asia. As of June 2017, there were 283 regional headquarters and 443 regional offices set up by various U.S. companies . Newell Brands Inc., LyondellBasell Industries and WPP are some MNC examples that have already set up CTCs in Hong Kong. MNCs can also make use of Hong Kong to manage their business relationships with their peers in Asia. Mainland China has more than 100 companies on the Fortune Global 500 list 2018, many of which have set up their international headquarters in Hong Kong.

Exchange: As RMB grows in popularity, what are the benefits for corporates to use Hong Kong to manage their RMB positions?

Enoch Fung: Hong Kong is the world's largest offshore RMB center. It has the world's largest offshore RMB liquidity pool, exceeding RMB 600 billion. As the world's largest hub for offshore RMB payments, it also processes over 70 percent of international RMB payments through SWIFT. Hong Kong's RMB Real Time Gross Settlement system has a turnover of around RMB 1 trillion per day. Meanwhile, Hong Kong's RMB FX average daily trading volume reaches USD 77 billion, leading other international financial centers.

Corporate can use Hong Kong's holistic platform to support their various offshore RMB transactional needs. For example, many corporates have set up RMB cross-border two-way cash pooling channels within Hong Kong and Mainland China to facilitate working capital management flows. Hong Kong has always been the testing ground for Mainland's new opening policies. For example, the Shanghai-Hong Kong Stock Connect, the Shenzhen-Hong Kong Stock Connect, and the Bond Connect were launched between 2014 and 2017 to enable mutual access of stock and bond markets between Mainland

and Hong Kong. Therefore, corporates in Hong Kong can also enjoy the first-mover advantage in the process of the Mainland's continuous opening of its financial markets.

Exchange: If a company operates an in-house bank domiciled in Hong Kong, what areas do corporates need to consider (e.g. separate legal entity requirement, currency restriction and withholding tax on interest) in terms of doing notional pooling, cash pooling, intercompany netting, across various Asian countries—primarily APAC?

Enoch Fung: Hong Kong provides a regulatory environment conducive to corporate treasury activities. Corporate treasury activities listed in the question are considered ordinary commercial activities in Hong Kong. There is no specific legal entity requirement to set up a CTC unless a corporate is considering specifically applying for the 50 percent profits tax concession for qualifying CTCs. Hong Kong is also one of the few jurisdictions in Asia which do not impose any control on capital flows or foreign exchange transactions. There is no restriction for corporates in Hong Kong to make cross-border fund movements.

As mentioned before, Hong Kong does not impose withholding tax on interests and dividends, which is an important advantage when it comes to cross-border cash pooling. Regarding the withholding tax charged by other jurisdictions, Hong Kong has so far signed Comprehensive Double Taxation Agreements (CDTAs) with 40 jurisdictions, with an aim to expanding the network to over 50 jurisdictions in the coming years. These CDTAs can help corporates further alleviate their withholding tax costs. Many of these CDTAs also provide highly competitive withholding tax rates when compared to some other jurisdictions in the region.

Exchange: How can corporates leverage Hong Kong's financing markets? How does the Hong Kong government attract corporates issuing bonds in Hong Kong?

Enoch Fung: Hong Kong has long been an ideal financing hub in Asia, leveraging our well-developed financial platform, good mix of investors and issuers coming from local and international markets, as well as availability of professional service providers. Hong Kong's stock market ranked No. 1 globally in IPO fundraising in five out of last 10 years . Hong Kong is also a major banking hub in Asia, with total banking assets amounting to around US$3 trillion in 2017. G3 and local currency bond issuance in Hong Kong totalled US$467 billion, ranking third amongst countries/economies in Asia ex. Japan, just behind Mainland China and Korea.

Read the entire interview at www.AFPonline.org.

Machine PREDICTIONS

Machine learning for finance is applicable and accessible

CHANDU CHILAKAPATI
AND DEVIN ROCHFORD

There are several misperceptions that lead many corporate finance teams to avoid investing in machine learning. Machine learning for finance is applicable and accessible.

Finance teams avoid machine learning

A recent PwC study found that over the next two to three years "basic and intermediate AI," or machine learning, will be the single most important technology impacting the finance function. It's easy to see where the respondents are coming from: The finance function, by nature, is forward looking and machine learning's ability to make accurate predictions will lead to faster, more informed decisions. Despite this, a recent Workday survey found that only 35 percent of corporate finance teams are making extensive use of advanced analytics, including machine learning, in key finance areas such as planning, budgeting, and forecasting. This begs the question, why is there such a disconnect between the perceived benefits of machine learning and the application of the technology?

We believe there are four misperceptions leading to approximately two-thirds of corporate finance teams not investing in machine learning:

- Machine learning requires big data
- Machine learning requires staffing data scientists
- The cost is high with limited or unknown benefit
- It is more science fiction than true science.

We will break down these misperceptions to show how applicable and accessible machine learning can be in the finance function.

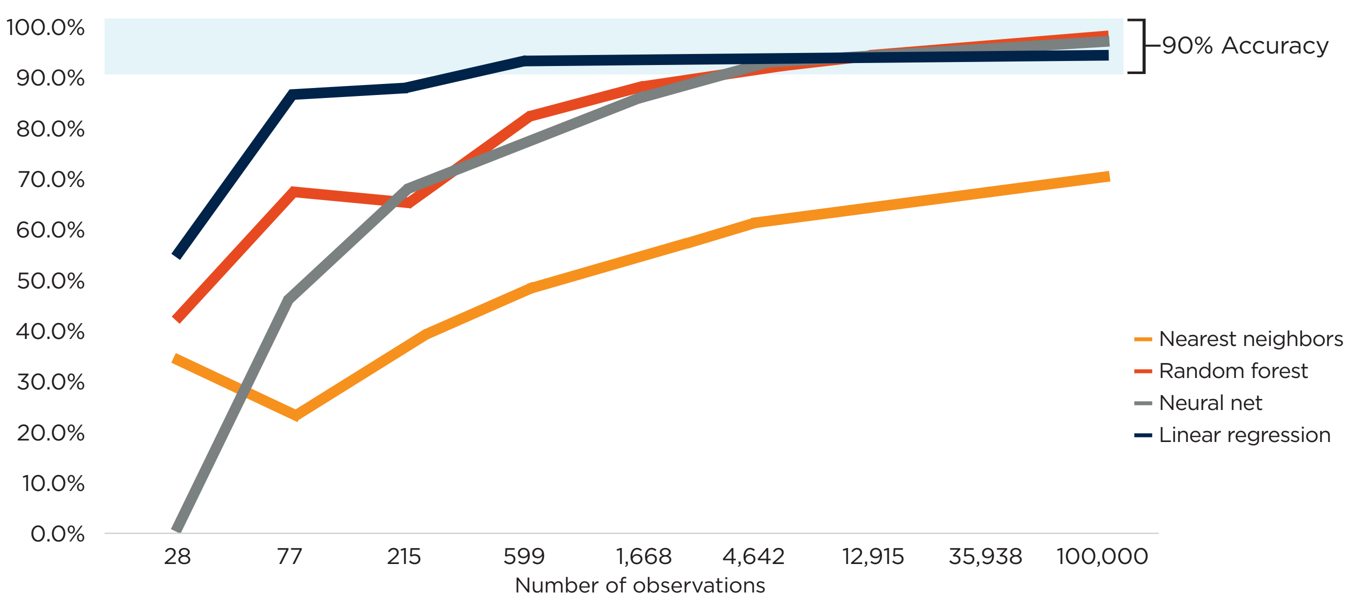
MISPERCEPTION: Big data is needed

Currently, the perception of many finance professionals is that machine learning is a solution that requires big data. Most FP&A departments don't have big data. Machine learning can produce extremely effective results with small or medium data sets as well. To illustrate this, we devised an experiment where 30 inputs were manipulated through a variety of mathematical techniques and then randomly weighted to generate an output. To confuse any prediction algorithm further, we gave half of the inputs no weighting at all. Only the inputs and the single output were fed into our platform, all manipulations and weightings were hidden. By any conventional statistical methods, our outputs resembled chaos.

We then tested selected prediction algorithms on a scale from 10 to 100,000 observations. The results showing the accuracy of the algorithms by number of observations are illustrated in the graph below. While certain algorithms struggled with smaller data sets, others were able to learn very quickly showing decent results with as few as 1,000 observations, and most algorithms were over 90 percent predictive once the number of observations increased to 5,000. This is a clear example that the machine learning tools don't need a lot of data to predict better than humans. We also see that certain algorithms are a better fit for certain data than others. Analysts tend to use the same tools for all problems and datasets, but with the power of processing we can use the right tool to solve different problems.

To use a real-world example, we were able to utilize machine learning to produce a model to estimate S&P Credit Ratings using only publicly available data with approximately 40,000 quarterly observations of public company filings. Our model SCRE (Sample Credit Rating Estimator) started with those observations and 400 features (data components) per observation to produce a final model that required fewer than 10 features and outperformed any of the commonly used models.

Figure 1: Prediction accuracy by sample size



Measuring the impact of data size on the accuracy of selected algorithms using Alvarez & Marsal's Machine Leaning Platform.

Source: Alvarez & Morsal

From: https://imgs.xkcd.com/comics/machine_learning.png

MISPERCEPTION: Data scientists are required

By removing the need for big data from the picture, the job description of people who leverage machine learning to make more accurate predictions stops resembling the qualifications of a data scientist and starts resembling that of a traditional analyst. Someone who can not only work with numbers but also understand the meaning behind those numbers. A finance function will never get completely sanitary or clean data, it will always be heavily contextual. No matter what you are doing with the data, you will need people who can understand its context and limits. Those are your analysts and managers, not necessarily a data scientist.

It will be important to find the right partner or staff that understand how to apply and interpret the machine learning results, but that person isn't necessarily a data scientist. While having resources with knowledge of the underlying models and concepts is undeniably important, it would be useless without team members who understand the underlying data and business. This understanding will guide how you tune your models and feed it the right data to train the model.

MISPERCEPTION: Prohibitive cost

Most assume that implementing machine learning will be complicated and expensive. Combine that with unknown benefits and it is easy to see why only 35 percent of Finance departments have invested in it. Our view is that these techniques will be commonplace in Finance functions such as FP&A and Treasury within the next few years. That growth will increase competition among vendors and reduce costs. The primary perceived cost to running algorithms is processing power. However, the cost of processing power is already low and decreasing. Moreover, for "finance functioned sized" datasets the processing power required isn't nearly as great as originally imagined.

We built our Alvarez & Marsal Machine Learning Platform (AMMP) using Python and open source libraries with processing and data storage powered by AWS. In developing SCRE, our increased monthly costs on AWS over the development period was in the hundreds of dollars. Processing and storage on demand is inexpensive due to the competition between cloud service vendors and technological advances in material science and hardware development.

Once you jump the cost hurdle the bigger obstacle to move forward is the feeling that the benefit is unknown and potentially intangible. Two key takeaways that we learned from building out SCRE that might highlight the benefits are: the machine corrected for our bias and outperformed any of our prior models, and the end product created tangible and intangible benefits beyond our stated purpose.

Imagine running a scenario analysis to determine what your performance would be under certain market conditions. To do this, even the best analysts will have to make certain general assumptions, take shortcuts and potentially introduce certain biases in the processes. This isn't necessarily a fault of the analyst, it's just that reexamining every single assumption in light of updated information is difficult and time consuming. In this example, machine learning techniques could be applied and continuously updated over time to ensure that the predictions are both more accurate and reflective of the most current possible information. Not only will this produce better results, it will also lead your analysts to doing what they do best: asking questions and searching for insight.

MISPERCEPTION: Science fiction

Many finance professionals feel that artificial intelligence, deep learning, or machine learning is still science fiction. Or if it isn't science fiction it is only for marketing, robots, tech companies, or tech companies marketing robots. The truth is that tech companies are developing and using these types of tools and have been for over a decade. The trickle down to the Finance department is happening now and it is science no different than statistics or regression analysis. The difference is that this science is now accessible to everyone.

The science fiction or magical part of the process is that we can combine technology and financial know-how to collate disparate, unstructured data sources into a useful dataset. It is no longer science fiction that we can capture data at the SKU (stock keeping unit) level and combine that with purchase data for the ingredients in that product. Combining those means that we can have a machine predict when the next sale will be and therefore the next ingredient purchase.

In our opinion, the biggest misperception that keeps machine learning investment at bay is the idea that the process is working. Machine learning is here now, and it is accessible and applicable to all sizes of data without the need for an army of data scientists. The benefits are tangible and intangible and ultimately lead to a competitive advantage. The costs are negligible, providing you have the right partner to guide you through organizing your data and making the platform user friendly for your current data analysts. Machine learning isn't science fiction anymore, it is already common in all our daily lives. Most importantly, the Finance Department is responsible for providing the informed and accurate analysis to drive decisions and growth using the best tools available. As part of this mission, machine learning is an essential part of the modern finance skillset.

Chandu Chilakapati is Managing Director and Devin Rochford is Director Alvarez & Marsal, Valuation Services.

How MUCH

Cost of capital, inside and out

BRYAN LAPIDUS, FP&A

Cost of Capital is a term that encompasses several other, more technically precise terms that are used by corporate finance practitioners to help trade off risk-return. **Cost of Equity** is the CoC as applies to equity holders; **Cost of Debt** applies to debt holders; and the blended average, weighted by the ration of equity to debt to other capital forms is the WACC, **Weighted Average Cost of Capital**.

Key assumption: Management is hired by investors/owners to manage their investment by running the company in a productive and ethical manner that satisfies their expectation of the amount of money they expect make given the risk they have accepted in the business.

It works this way:

From an external perspective, the CoC represents the equilibrium of risk and returns that an investor is willing to accept to put money into the company. For example, if the CoC is 12 percent, investors may be willing to put $100 on the expectation that they will receive $12 in return each year (on average, plus compounding principal); a company with a 15 percent return may offer the promise of more money but at additional risk.

The internal business manager knows that the owners/investors of the company expect this return, and so need to manage the business in a way that satisfies that return, or risk being fired or having the owners exit the company. Management will choose a mix of projects to grow the company to at least satisfy that return. The minimum acceptable level of returns for a portfolio becomes the CoC, the "bar" over which investments must hurdle, and is therefore known as the "**hurdle rate**." The hurdle rate may be compared to the IRR for specific project to determine which should be accepted.

Terms of the WACC

The formula for WACC is relatively straightforward, but the challenge lies in the assumptions, especially within the cost of equity. Keep in mind that the WACC derives from the external market perspective brought inhouse. The basic formula is as follows:

WACC		
Cost of Equity * % of capital	**Cost of Debt * % of capital**	**Cost of Other * % of capital**
Rate of return equity investors require to make an equity investment in a firm	Cost to the firm of borrowing funds to finance projects.	Other capital raised by the firm
Risk free rate + Beta* (Market risk premium)	Interest rate* (1-tax rate)	

The percent of capital is simply the share of that component divided by total capital:

Value of equity Value (Equity+Debt+Other)	Value of debt Value (Equity+Debt+Other)	Value of other capital Value (Equity+Debt+Other)

Formula and Terms	Definition	Usage
Cost of Equity = Risk free rate + Beta * (Market risk premium)		
Risk free rate:	An asset without risk of default, highly liquid and trustworthy.	Example: US Government Treasurys, due to presumed security and ability to print more money to meet debt obligations. The duration of the security should match the duration of the investment, i.e., 2-year, 10-year or 30-year bonds
Beta:	Variance (volatility) of a company's returns relative to the variance of the market	Calculated by most data brokers (Bloomberg, Google Finance, Yahoo Finance, etc.). For unlisted companies, it is best to find a market proxy, that is a similar company in the market.[1] Inside a company, different betas may be used for business lines or markets with different risk profiles.
Risk premium, calculated as Rm-Rf	The extra return required for investors to choose to invest in the market (Rm) over a risk-free asset (Rf).	The precise number to use here is a subject of tremendous debate and varies by country. To simplify, I recommend this site: http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ctryprem.html

The term Beta* the Risk Premium really means the expected return relative to the market. Once you have decided to be an equity investor, it is assumed that you have a diversified portfolio, or "the market portfolio."[2] The beta is how a company correlates to the market. Therefore, the investment is a company's expected return relative to the market's expected return.

[1] The formula requires the use of a "levered" beta, meaning one that reflects the debt/equity ratio of the company. Most data services provide levered betas. If you think your company will be changing its debt/equity ratio, as in the case of a levered buyout, you would want to unlever the existed beta, then re-lever it at the targeted debt/equity ratio.

[2] Why is this? It is for the same reason that you don't put all your eggs in one basket. A portfolio of one stock is more volatile than a portfolio of 10 stocks. The non-correlated factors will move idiosyncratically and lower the aggregate risk. "The Market" is the maximum number of stocks, therefore the maximum diversified risk.

Formula and Terms	Definition	Usage
Interest rate* (1-tax rate)		
Interest rate:	Blended rate of various debts, revalued at market rates.	Should reflect market trading rates if available. If not, accounting (historical) rates may be applied as a proxy. Large corporations will have multiple debts (bonds of different maturities, notes, etc.) This can be found by looking at financial statements and calculating the interest rate paid divided by debt outstanding at that time.
Tax rate:	The marginal tax rate most likely to be used in the future.(Rm) over a risk-free asset (Rf).	Without specific information, the effective tax rate is a good proxy. Apply (1-tax) because interest is tax deductible, and we want to measure cash flows rather than accounting income. Use the marginal rate because the assumption is that we are analyzing the next dollar of investment.[3]

Formula and Terms	Definition	Usage
There are different types of capital that may be integrated into the company structure. Preferred shares is common, but others exist as well. If the value of the other capital is small, the impact on the WACC will also be small.		
Cost of preferred stock = dividends per preferred share / market price per preferred share		

How Cost of Capital helps valuation

Investors often faces the challenge of how to compare different sets of cash flows. For example, from an external perspective, how do you compare the value of companies that range across different sizes, maturities, industries, markets, and management? From an internal perspective, how do you select projects with many of these same variables?

You can view both companies and their component projects as cash flow streams, then apply a net present value calculation using the cost of capital as the **discount rate** to create a risk-reward trade-off that allows for comparisons.

The challenge of comparing project with different cash flows and time characteristics								
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Project 1	10	10	10	10	10	10	10	10
Project 2	25	50	5					

When used this way, the CoC cost of capital helps solve many different kinds of challenges for investors and business managers

- **Time value of money.** Which would you rather have, $100 dollars today, or the promise of $100 dollars in 10 years? How about $1,000 in 10 years? We understand that risk increases over time, so we value near-term payments more than distant payments due to the eroding effects of inflation, the risk of non-payment, or the option to take the money today and put it to work for the future. The discount rate devalues payments further in the future.
  - In the above example, if both projects are discounted by the same cost of capital at 12 percent, Project 2 is preferable with its higher NPV). The variables of time and discount rate have an impact on the NPV; note that if the CoC is 4 percent, then Project 1 has a higher NPV as cash flows further out become more valuable.
  - This analysis enables us to compare projects with very different cash flows on a similar basis.

- **Apply across risk:** Which is more valuable, a forecasted $100 from an investment in a new international market or $100 from an established market? CoC can be adjusted for different risks based on where the company operates or product is sold. Emerging markets would have a higher rate than established markets. In the above example, if project 2 is in a new, emerging market, as opposed to a higher, current market, it will have a higher discount rate which would give it a lower NPV; Project 1 is then preferable.
- **Standardizing comparisons across assets.** Which is more valuable, a marketing campaign that brings in $1000 of revenue, or automation investment that saves $100 of cost? By focusing on net cash flows (revenue less expenses for marketing, and expense savings for infrastructure), or other hard-to-value measures, investments can be standardized across different businesses. If both projects reflect net cash flows to a company, it does not matter that one is revenue based and the other is expense savings, they are compared on their cash flow relative to company capital charge.
- **Apply across capital stack:** As an investor, is it riskier to have a company or project that has capital contributions that are 0 percent, 50 percent or 100 percent debt financed? The CoC adjusts to reflect the change in financing mix over time.

Quick aside, always use cash flows for valuation. Accounting returns include non-cash distortions such as amortization/depreciation and revenue recognition.

Are CoC and hurdle rates absolute determinants?

If a project is independently financed, then yes, you may choose to make an investment determination based on whether its return is greater than the cost of capital. This is because the company capital is entirely aligned with the project (independent of other capital uses), such as buying a company (and its capital stack) or investing in a project with its own project financing, such as a joint venture, legal entity or subsidiary.

If you are inside a company and looking at specific initiatives, the answer becomes murkier because a company's capital is expended over items that drive sales, others that are overhead (the CEO needs to be funded somehow!) Here is a hypothetical portfolio of investment options and how a CFO may think about the investment decision.

Project	Return metric[4]	Decision
Project 1: Sales	18 percent	Approved, higher than hurdle rate
Project 2: Marketing	14 percent	Approved, higher than hurdle rate
Project 3: Infrastructure	13 percent	Approved, higher than hurdle rate
Project 4: Sales	13 percent	Not approved, other projects are more highly rated
Hurdle Rate:	**12 percent**	
Project 4: Infrastructure	8 percent	Potentially approve; it is possible that not all returns to an infrastructure project are accounted for.
Project 5: Sales	8 percent	Not approved; revenue generating projects generally need to have higher hurdle rates
Project 4: Marketing test	3 percent	Potentially approve; possible that the strategic or educational benefits are worth the low returns
Project X: Regulatory requirement	0 percent	Approved, required for compliance
Weighted average portfolio IRR	13 percent	Higher than CoC, includes growth, infrastructure, strategic and regulatory investments

[3] The 2018 Tax Cut and Jobs Act changed details about the tax shield of interest expense. For most businesses, the amount of interest shielded is 30 percent of EBITDA through 2021, and 30 percent of EBIT thereafter, exclusive of interest income. Businesses with annual revenue below $25 million over the previous three years are exempt.

[4] Return metrics need to be consistent with the CoC used. IRR can be compared to WACC, after-tax cash flows (EBIT*(1-tax rate) can be compared to WACC, and return on equity can be compared to cost of equity. Accounting earnings are discouraged due to timing and non-cash treatments.

ROLE

CALL

ANDREW DEICHLER

Practitioners debate the role of FP&A

How should an organization build up the FP&A function? What should capital structure look like? What, in fact, is FP&A's role within the organization at large?

Financial planning and analysis practitioners discussed these weighty topics and more at the recent FinNext 2018 event. FinNext 2019 will take place in Las Vegas, March 17-19. Visit www.FinNext.org to learn more.

At a special FP&A Roundtable discussion at FinNext 2018, sponsored by Peloton, the group was primarily focused on different ways to build up an FP&A function.

Bryan Lapidus, FP&A, AFP's director of FP&A and host of the event, began by asking the group what FP&A should actually "be" as a function.

Jonathan Crane, FP&A, CTP, senior manager for FP&A for Hamilton Company, responded that what FP&A should be to an organization largely depends on that particular organization's needs. "FP&A's role is to help the company with where they're going and help them get there," he said. "FP&A should be that part of the company that can speak on the finance and operational side, and depending on the company and where it's going, that can mean different things for different people."

> "FP&A's role is to help the company with where they're going and help them get there. FP&A should be that part of the company that can speak on the finance and operational side, and depending on the company and where it's going, that can mean different things for different people."

Hamilton's FP&A department grew out of its cost accounting group about three years ago, Crane noted. Since that time, FP&A has developed into hybrid function involved in strategic planning and forecasting, as well as working with IT to provide solutions for different parts of the company. "That was a need that our company had, and we grew to fill that vacuum," he said.

It is not uncommon for FP&A professionals to move over from the accounting side, or for FP&A departments to grow out of functions like cost accounting. But while FP&A often gets conflated with accounting, there is one key difference. "Accounting is very focused on transactions," said Peter Geiler, FP&A, fiscal director for Child, Family and Community Services. "Transactions are the history. FP&A is focused on planning—the future."

> "Though I have an accounting background and a CPA, figuring out where the last $15.43 need to be booked wasn't very exciting for me—I like to round to the million and move on."

A third attendee agreed, noting that FP&A is simply a more interesting role. "Though I have an accounting background and a CPA, figuring out where the last $15.43 need to be booked wasn't very exciting for me—I like to round to the million and move on," he said. "So I always had an accounting manager under me and he was in charge of the history, and I'm in charge of the future."

Capital structure

One area that FP&A struggles with is how far into the future it should look. That brings up questions in terms of capital structure and FP&A's role in it. "I like to think that we are the planners and we look into the long-term," said one practitioner. "And so you think about capital structure and do you have a picture of your capital structure five years down the road? I think [capital structure] is an FP&A function, but maybe if we had someone from treasury, they would say that it's their responsibility."

Lapidus then asked the group whether FP&A or treasury has ownership of capital structure at their organizations.

Geiler responded the question of responsibility over capital structure largely depends on the time scale and the type of industry. "In construction, if you're building a high-rise, it's not a 30-day job—it's four or five years. But you look at other industries like nonprofits, which is where I'm at, we rely on the federal government for funding. We're worried about the next 90 days because that's all we have funding for. So there's a huge difference around industry when you look at your planning horizon," he said.

Another FP&A practitioner responded that, again, it comes down to industry. In his sector, real estate, treasury is primarily focused on short-term investment. "But really, what's happening at a property that's generating revenue and that's possibly for sale—it's really going to be FP&A that is going to provide treasury with what that longer term cash outlay for inflow is going to be," he said.

Capital structure is forward-looking and is, in some ways, dictated by Wall Street, said another attendee. "Depending upon where you're bond ratings are, it will determine where your capital structure should be, and a lot of that is based on benchmarking in your particular industry," he said. "So if you're trying to improve your credit rating, part of that is your capital structure that you're trying to build. Are you overleveraged, or not leveraged enough? I think that is all taken into consideration."

The practitioner added that, at his organization, capital structure is handled by a combination of FP&A and treasury. "We have the long range financial forecast, but we work with our treasury group," he said. "Oftentimes, we'll work on different financings that they might be able to carry out going forward, which will adjust our capital structure to try and meet what rating agencies are looking for."

Involvement with operations

FP&A has also generally become more and more involved with operations. Lapidus next asked the group to what degree FP&A is involved across the organization.

Crane responded that his FP&A function is "heavily involved" in the operations. He meets with the operations people on a daily basis, sometimes more than he meets with finance or accounting. "In our situation, we're a fast-growing company in biotech. And we do manufacturing, so it's a lot capital," he said. "We have to plan our capacities to produce according to our demands, which keep skyrocketing. So I've been working with operations on a continuous daily basis so we can look forward enough and make sure we have appropriate infrastructure for when we grow to a certain spot."

Jake Bailey, FP&A, vice president and CFO of Crestline Investors, said that he essentially sees FP&A as a hub. "Of course, we all want to think we're the center of the company," he said. "But traditionally, accounting and finance were siloed. FP&A grew out of the need for people who can learn technical aspect, who can work with IT and operations."

At one of his former companies, Bailey was actually moved out of accounting to work directly under the COO. "I had become such an important business partner that the accounting department didn't really know what I was talking about anymore but the COO did," he said. "I think part of FP&A's job is to break those siloes down and be the center of the company, in a way. And because of that, I think the executive team can look to FP&A and say, 'These guys always know what's going on everywhere.'"

Learn more at www.FinNext.org.

On the FENCE

AFP RESEARCH DEPARTMENT

Results from the 2018 AFP Technology Survey

Corporate treasury and finance executives are enthusiastic about emerging technologies such as blockchain, artificial intelligence and robotic process automation. Yet, new research by the Association for Financial Professionals reveals that many treasury and finance professionals have yet to implement these technologies within their functions.

Based on 708 responses, the 2018 AFP Technology Survey, underwritten by BELLIN, not only found that implementation of emerging technologies is low, but in addition many organizations do not have plans to deploy them. Only 6 percent of firms utilize blockchain or distributed ledger technology; 79 percent have no plans to do so. Just 11 percent utilize artificial intelligence; 70 percent have no plans to do so.

Although implementation levels are low for these emerging technologies— Robotic Process Automation (RPA), Machine Learning, Artificial Intelligence (AI) and Blockchain/Distributed Ledger Technology— many respondents believe these technologies will have a positive impact on efficiency, even if only to some extent.

Fully 41 percent of survey respondents believe treasury and finance staff haven't considered that new technologies could make them obsolete at their jobs, while 34 percent are expressing some unease. Only 7 percent are extremely concerned that these technologies could leave them unemployed while the remaining 17 percent are indifferent as they are equipped to work alongside these new technologies.

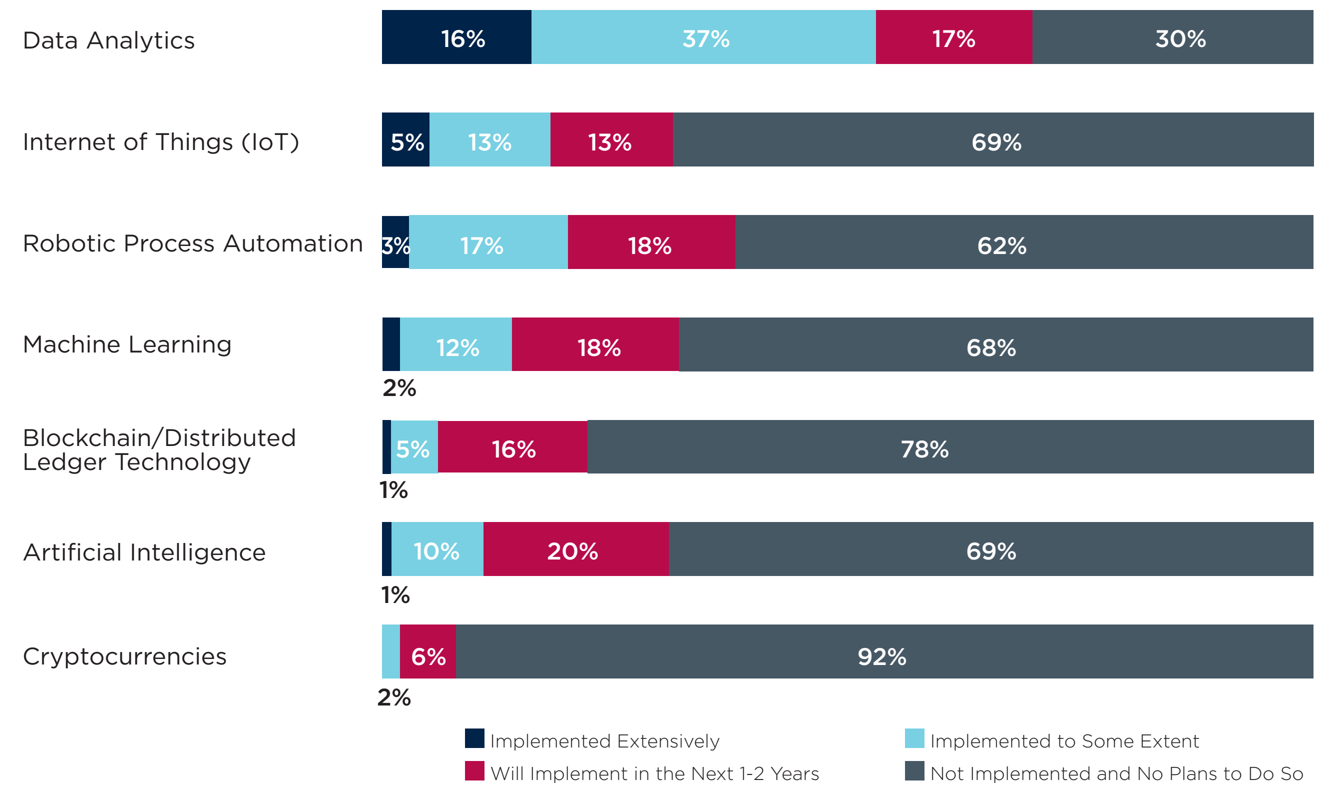
"The gap between enthusiasm for emerging technologies and implementation is very troubling," said Jim Kaitz, president and CEO of AFP. "These technologies are disrupting every organization— especially the finance function. If treasury and finance do not embrace these emerging technologies and implement them to help make their organizations more successful, they risk being left behind by innovators inside and outside their organizations."

Low implementation Emerging Technologies is Low

Implementation of emerging technologies is currently low at a majority of companies, and many organizations do not have plans to implement them either. An exception is Data Analytics; 53 percent of organizations have either implemented it extensively or to some extent.

IMPLEMENTATION OF EMERGING TECHNOLOGIES WITH TREASURY AND FINANCE FUNCTION

Percentage Distribution of Organizations



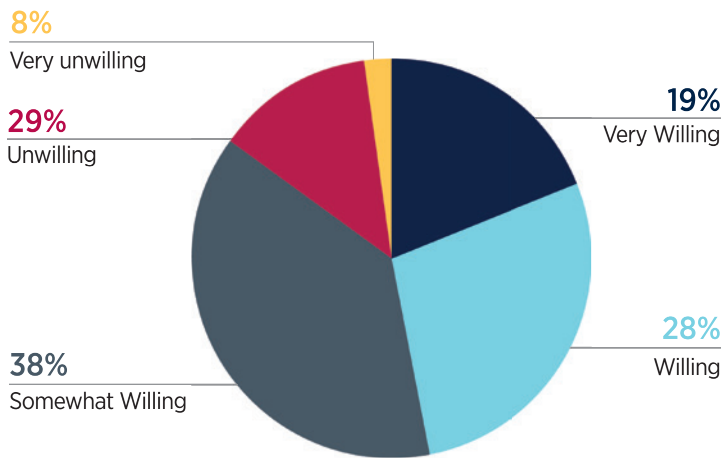
Source: 2018 AFP Technology Survey.

Senior management on board

Nearly 50 percent of senior management at organizations are either willing or very willing to adopt these emerging technologies. A larger share of decision makers at larger companies (with annual revenue of at least $1 billion) and those from publicly owned organizations are more eager to implement these emerging technologies than are their peers from smaller companies or privately held ones.

A smaller but material percentage of treasury and finance professionals do report that senior management at their organizations is reluctant to implement these technologies. The primary reasons are high implementation costs and uncertainty about the return on investment (ROI).

WILLINGNESS OF SENIOR MANAGEMENT TO ADOPT EMERGING TECHNOLOGIES
Percentage Distribution of Respondents



Source: 2018 AFP Technology Survey.

WHY SENIOR MANAGEMENT IS UNWILLING TO ADOPT EMERGING TECHNOLOGIES
Percentage of Respondents

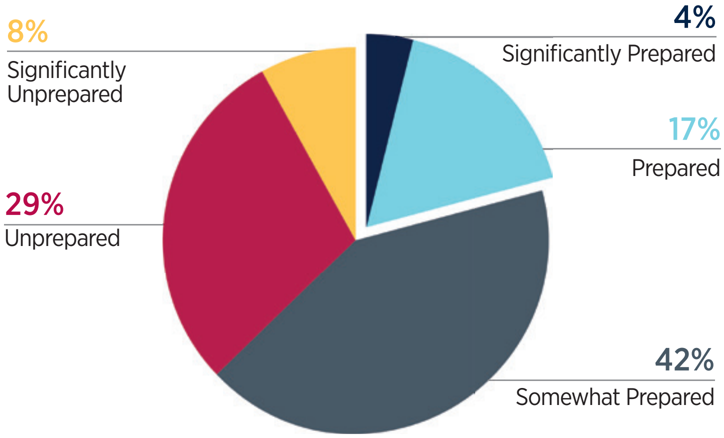
High implementation costs	52%
Unsure of ROI	51%
Resistance to learning the emerging technology/technologies	35%
Want to avoid change	25%
Overwhelmed by staff training required	20%
Other	22%

Source: 2018 AFP Technology Survey.

Treasury only partly prepared

About one in five treasury and finance staff (21 percent) indicates that their teams are fully prepared to work with emerging technologies, while 37 percent are unprepared. The remaining share believes they are somewhat prepared.

PREPAREDNESS OF TREASURY AND FINANCE STAFF TO WORK WITH EMERGING TECHNOLOGIES
Percentage Distribution of Respondents



Source: 2018 AFP Technology Survey.

THE REASONS STAFF ARE UNPREPARED ARE VARIED, BUT THOSE CITED MOST OFTEN ARE:

- Culture of organization does not lend itself to implementing these technologies cited by **57 percent** of respondents
- Organization has not provided adequate training resources **52 percent**
- Technology advancement is rapid and difficult to keep up **52 percent**

Read the entire survey at **www.AFPonline.org/research**.

AFP would like to recognize all of the newly designated CTPs and CTPAs from the 2018A (June-July 2018) testing window.

When working in treasury and finance, achieving the Certified Treasury Professional designation denotes credibility in your profession. These are professionals who have demonstrated the required knowledge, skills and abilities to meet this global standard of excellence.

The following financial professionals have successfully completed the rigorous examination requirements to earn their CTP or CTPA designation. They should be congratulated for their achievement and praised for reaching this level of finance professionalism.

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BOWL GAME

IRA APFEL

It's time for the AFP annual conference, better known as AFP 2018. Or, as I call it: Podcast Bowl II.

What's Podcast Bowl II, you ask? And when was Podcast Bowl I?

The inaugural Podcast Bowl was held last year at AFP 2017.

There's more. Podcast Bowl takes place at the AFP annual conference. When I am at The Biggest Event in Treasury and Finance it's my job to record the AFP Conversation podcast that I've been hosting every week for more than two years now. State Street Global Advisors is generous enough to sponsor the recording of AFP Conversations podcast at AFP 2017 and 2018.

Naturally SSGA wants more than just one podcast recorded at the AFP annual event. And it's my job—and that of my AFP colleague, sound engineer Glenn Douglas, to exceed our sponsor's expectations. So we are recording 15 podcasts at AFP 2018 over the course of two days.

While attendees sit in on educational sessions and walk the exhibitor floor, Glenn and I will be recording—not round-the-clock but close.

Now you see why I call it Podcast Bowl. The pressure is on, the sponsor deserves great service, and our podcast subscribers demand informative and fascinating new episodes of AFP Conversations.

Glenn and I are ready. We've got our game faces on. We've got lots of coffee. We've got a hyperbaric chamber to keep oxygenated.

Okay, we don't have a hyperbaric chamber; we couldn't fit it in the AFP 2018 budget.

But we will be recording at AFP 2018. And we'd love to see you. Stop by our booth on the exhibitor floor and say hello.

And if you can't attend AFP 2018 don't worry—we'll be rolling out the podcasts soon.

Visit www.AFPonline.org/conversations to listen.

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