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Spring 2019

Association for Financial Professionals' Quarterly Magazine

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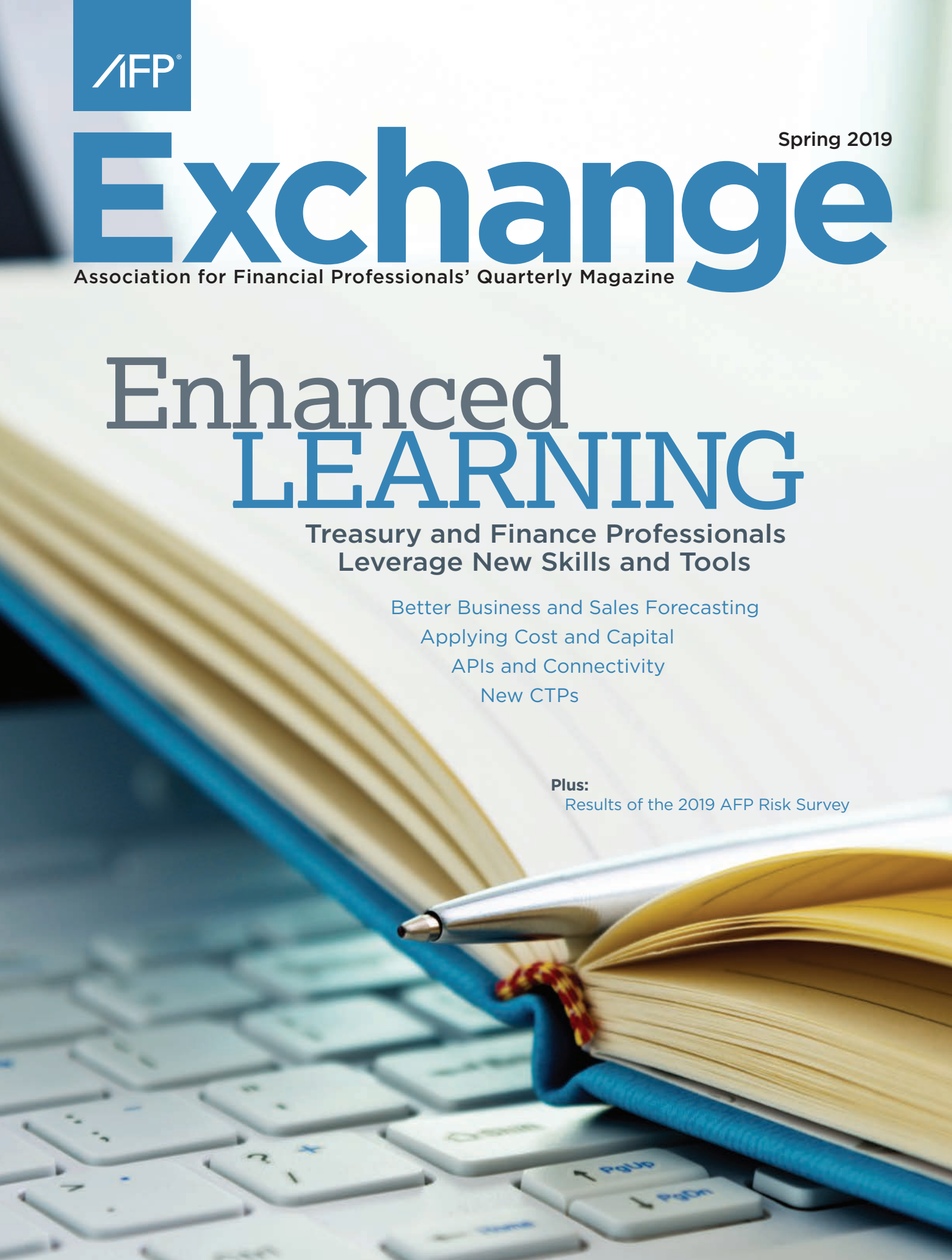
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**26**  
**AFP Research**  
Results of the 2019 AFP Risk Survey  
*AFP Research Department*

**30**  
**AFP Aware**  
Giving back to Chicago  
*Andrew Deichler*

**32**  
**AFP Pinnacle Grand Prize Winner**  
Uber Technologies drives away with the award  
*Andrew Deichler*

**34**  
**Forecasting**  
How BMC Software improved sales forecasting  
*Bryan Lapidus, FP&A*

**37**  
**Financial Planning & Analysis**  
Improving data analysis skills  
*Dr. Bill Hu, FP&A, CTP*

**40**  
**Financial Planning & Analysis**  
Digital business partnering  
*Vivek Saxena*

**44**  
**AFP 2018 Wrapup**  
Treasury and finance pros talking shop  
*Andrew Deichler*

**46**  
**AFP Conversations**  
Reb Rebele on workplace collaboration  
*Ira Apfel*

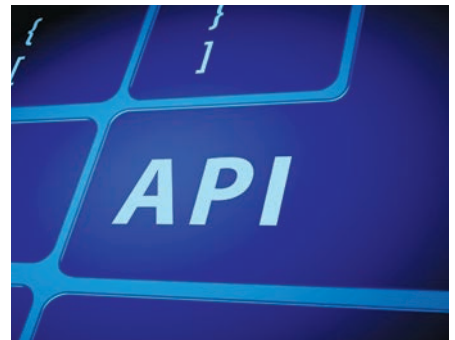
**48**  
**Blockchain**  
Blockchain's impact on treasury and finance  
*Andy Fately*

**51**  
**Blockchain**  
New blockchain applications for corporate treasury  
*Dr. Sean Stein Smith and Roberto Cruz, Jr., CTP*

**54**  
**Artificial Intelligence**  
How AI can improve lease accounting  
*Jeff Ellis and Ryan Drimalla*

**58**  
**December 2018B – January 2019 CTPs**

**64**  
**December 2018 – January 2019 Certified Corporate FP&As**



4 **From the President & CEO**  
*Jim Kaitz*

7 **Current Events**  
LIBOR replacements for cash products  
*John Hintze*

10 **Current Events**  
New IRS regs clarify tax reform  
*John Hintze*

14 **Global Treasurer**  
Regional treasury center success factors  
*Francois-Dominique Doll and Susan Xu*

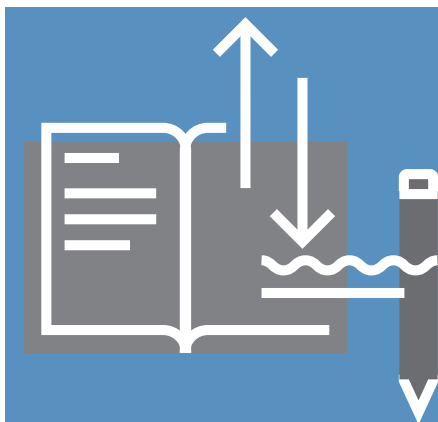
17 **FP&A Foresights**  
Applying cost of capital in corporate finance  
*Bryan Lapidus, FP&A*

20 **Risk Column**  
Treasury must lead business continuity planning  
*Andrew Deichler*

22 **Treasury Essentials**  
Best practices in treasury connectivity  
*Andrew Deichler*

24 **Payments Essentials**  
APIs: the search for ubiquity and standards  
*Andrew Deichler*

64 **The Bottom Line**  
But Seriously  
*Ira Apfel*



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JIM KAITZ, PRESIDENT & CEO

## A COLLABORATIVE PROCESS

Dear AFP Members,

Corporate treasury and finance is fundamentally a balancing act. We have to weigh the opportunity of deploying corporate cash against the increasing number of risks that could negatively impact our organization.

This reality was made crystal clear in two recent AFP surveys. Our January Corporate Cash Indicators, which broadly measures treasury and finance professionals' willingness to deploy corporate cash, found in Q1 2019 that practitioners were open to drawing down reserves for capex, buybacks and more. That's a sign of guarded optimism.

On the other hand, our 2019 AFP Risk Survey identified three major risks that greatly concern treasury and finance professionals: strategic, cybersecurity and financial markets. They are worried about disruption caused by competitors and new technology; hackers stealing data; and turbulent markets and rising rates roiling stock prices and currencies.

We want to be optimistic and help grow the business, yet real-world concerns effect our decision making.

So what is a treasury and finance professional to do?

It helps to understand that you are not alone. AFP has 16,000 members worldwide who share

your optimism and your concerns. You can connect with them on Collaborate, AFP's private website exclusively for members. On Collaborate you can pose a question, or you can search on virtually any treasury and finance topic and get advice from your peers; there are more than 18,000 conversations to choose from!

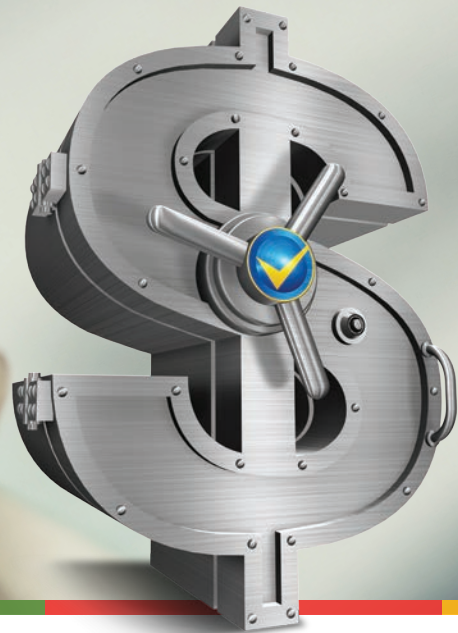
Of course, we have our world-class events for in-person networking too. AFP 2019 is slated for October in Boston while FinNext 2019 starts March 17 in Las Vegas. If you cannot attend these events there is plenty of thought leadership and peer insights at [AFPonline.org](http://AFPonline.org).

Treasury and finance professionals are not expected to have all the answers. In fact, navigating these risks and weighing them against deploying cash is an ongoing process. This journey is never over, but your peers at AFP can guide you along the way with great insight and advice.

Sincerely,

Jim Kaitz  
President and CEO

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CONTRIBUTING AFP WRITERS  
Bryan Lapidus, FP&A

ADVERTISING  
Kevin Boyle  
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CUSTOMER SERVICE  
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#### AFP EXCHANGE

4520 East-West Highway,  
Suite 800  
Bethesda, MD 20814  
T: 301.907.2862  
F: 301.907.2864  
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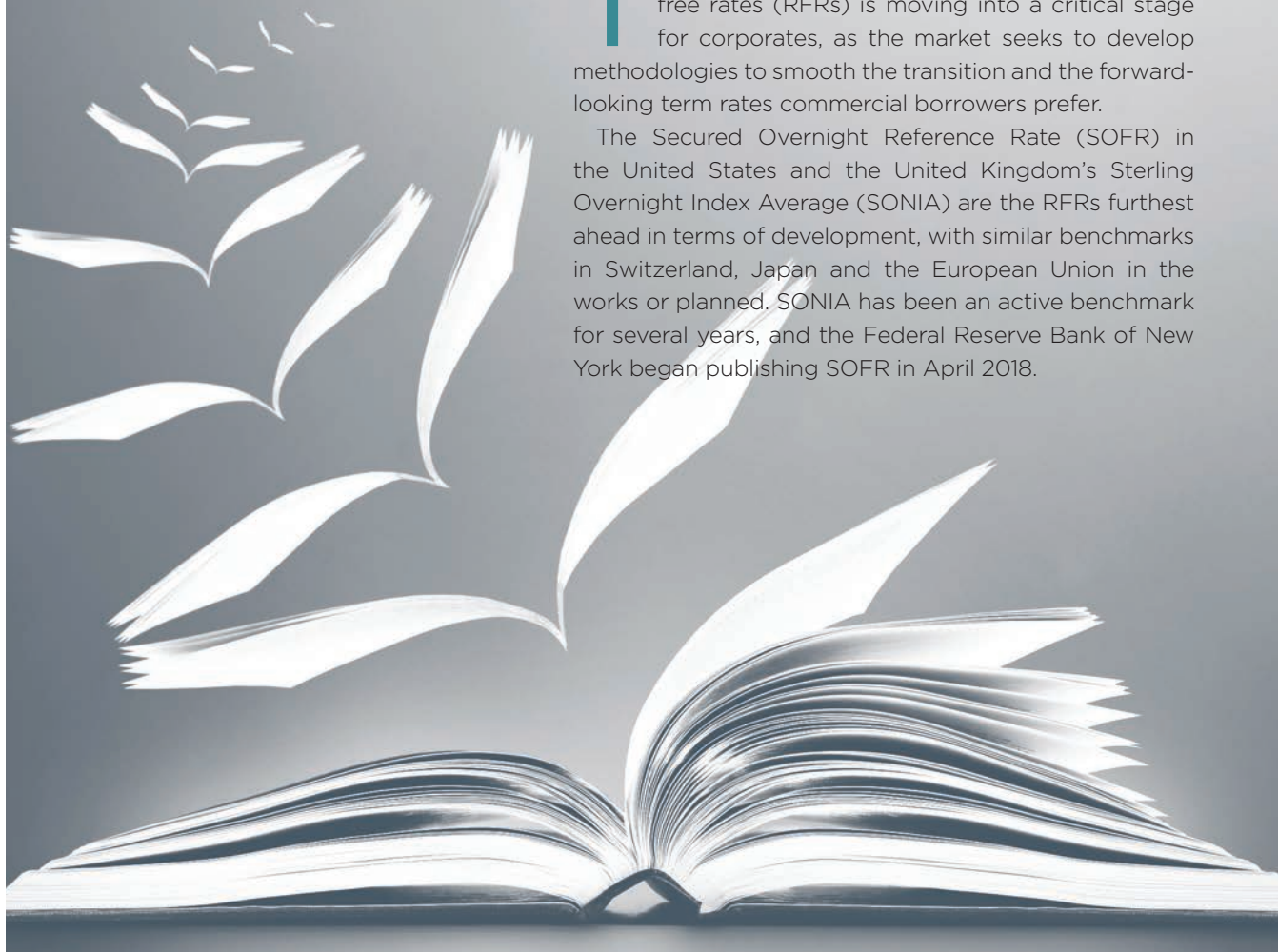
JOHN HINTZE

# New Language

## LIBOR-replacement initiative starts to address cash products

The initiative to replace LIBOR with so-called risk-free rates (RFRs) is moving into a critical stage for corporates, as the market seeks to develop methodologies to smooth the transition and the forward-looking term rates commercial borrowers prefer.

The Secured Overnight Reference Rate (SOFR) in the United States and the United Kingdom's Sterling Overnight Index Average (SONIA) are the RFRs furthest ahead in terms of development, with similar benchmarks in Switzerland, Japan and the European Union in the works or planned. SONIA has been an active benchmark for several years, and the Federal Reserve Bank of New York began publishing SOFR in April 2018.



## CURRENT EVENTS continued

In May, major derivative exchanges introduced derivative contracts based on the two RFRs, and they've supported active if relatively small markets in the instruments. In addition, numerous banks and governmental institutions have issued bonds and other RFR-based loan products in support of the new benchmark.

Those early steps have gone smoothly and, in some cases, occurred earlier than anticipated. The steps most directly impacting corporates and other borrowers began last fall and, if all goes as planned, should largely be resolved this year.

### Term RFRs

Key to corporate borrowers is the development of term RFRs that, similar to LIBOR, allow borrowers to look forward and understand what their payments will be at the end of each term to better manage cash flows. The pricing of most large commercial loans, for example, floats over three-month LIBOR, and borrowers know what the payment will be at the end of each three-month term for the duration of their loans.

RFRs, instead, are overnight rates, so borrowers do not know their final payment until the end of the term, when daily rate is compounded in arrears. In light of SONIA's head start, the ICE Benchmark Administration (IBA) has been able to derive a forward-looking term version of the RFR from the trading of SONIA-based futures at the Intercontinental Exchange, an affiliate. It displays that rate as well as the compounded-in-arrears rate for the one-, three- and six-month RFR, allowing comparison with the term version.

The ICE website ([www.theice.com/marketdata/reports/244](http://www.theice.com/marketdata/reports/244)) also provides daily settings for active RFRs, currently SONIA, SOFR and Japan's Tokyo Overnight Average (TONA).

The Alternative Reference Rates Committee (ARRC), the NY Fed-sponsored body that chose SOFR to replace LIBOR, announced last fall that it planned to begin an indicative term rate for SOFR early this year. When that happens, the ICE website will be able to display the forward-looking SOFR; it already provides SOFR compounded in arrears.

The clock is ticking to develop term RFRs, in part because the IBA may be unable to publish LIBOR after 2021, when large banks' obligation to submit their interbank lending rates expires, requiring existing LIBOR-based products to use another benchmark rate. In addition, banks' submissions are dwindling and often amount to less than \$1 billion a day, compared to

the \$800 billion in transparent overnight repurchase agreements used to generate SOFR. That has raised concerns about LIBOR disappearing even sooner than the 2021 deadline.

Such a scenario is especially problematic for cash products, such as loans. They make up only about 5 percent of the \$200 trillion in financial products referencing LIBOR, but they finance commerce globally. The other financial products are derivatives, highly standardized contracts for which it is much easier to develop contractual fallback language. Many cash products, instead, are bespoke and changes must be negotiated individually.

The ARRC released consultations in late September that sought public feedback to help develop fallback language for syndicated loans and floating-rate notes. In early December it issued similar consultations for bilateral business loans and securitizations.

### Fallback language

The consultations provide descriptions of fallbacks envisioned by ARRC, comprising representatives from mostly financial companies. A key issue is whether to take a "hardwired" approach, favored by banks because it would facilitate adjusting the thousands of lending contracts they hold with customers, or a more flexible "amendment" approach. One exception is the Bank of Nova Scotia, which supports a hardwired approach but expressed concern that for syndicated loans the ARRC has proposed a term SOFR to be the primary fallback rate, "although this benchmark has yet to be developed."

However the term RFRs and fallback language for various financial products shape up—and the International Swaps and Derivatives Association is developing fallback language for derivatives—corporates should begin preparing for the transition away from LIBOR by familiarizing themselves with the fallback language the ARRC suggests in the consultations.

Eric Juzenas, a director on Chatham Financial's global regulatory solutions team, said there will very likely be variations to ARRC's fallback language, driven by differences in products and market segments, but it will be used as a starting point for most dealers and lenders updating their documentation. Given the uncertainty about when ARRC's fallback language will be operational, "corporates must preserve the flexibility to protect themselves if the fallbacks do not operate as planned," Juzenas said. "Particularly the ability to negotiate an appropriate spread adjustment in the event of LIBOR unavailability."



“We expect to see increased focus on LIBOR transition as 2019 progresses. In particular, since a spread adjustment is the safety valve in any LIBOR transition protecting against value transfer, corporates should begin conversations with their banks about how a spread adjustment might be handled in the event of LIBOR unavailability.”

Spread adjustments are essential because the methods to calculate LIBOR and the RFRs are very different and so result in different rate levels, and unwanted “transfers of value” could result. Juzenas said language from the ARRC proposals has already started to show up in some loan documentation. He added that the hardwired approach provides contractual and legal certainty should Libor become unavailable but given term rates and spread adjustments have yet to be developed, it is uncertain how they will work in practice.

The amendment-based approaches, instead, contemplate negotiation or reasonable consultation

between parties to determine a successor rate and spread adjustment. However, Juzenas said, negotiations inherently risk one party exerting leverage over the other, resulting in an outcome that diverges from the originally negotiated intent.

“We expect to see increased focus on LIBOR transition as 2019 progresses,” Juzenas said. “In particular, since a spread adjustment is the safety valve in any LIBOR transition protecting against value transfer, [corporates] should begin conversations [with their banks] about how a spread adjustment might be handled in the event of LIBOR unavailability.”

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# More REGS

IRS issues new regulations to clarify corporate tax reform

JOHN HINTZE

**T**he Internal Revenue Service is finalizing a bevy of regulations in anticipation of the 2018 filing season that will clarify and tighten up ambiguous language in the recent Republican tax reform bill, potentially impacting corporate cash.

The rushed passage of the Tax Cuts and Jobs Act on Dec. 22, 2017, and the resulting sparse or fuzzy language on important provisions has left corporate taxpayers and their advisors flustered about how precisely to apply the law. With the 2018 tax-filing season starting in earnest in March, regulators are

“We had the law we were working from, and now we have a lot more guidance out there which may present upside and often downside, or things that need to be addressed.”

seeking to provide more detailed guidance on several fronts. Much of that recently issued or proposed guidance may impact companies' available cash, whether that cash remains overseas or is brought back to the United States, and the amount of debt or existing capital the company uses to pursue acquisitions or capital-intensive projects.

“If treasury hasn't talked to the tax department lately about the impact of these regulations, it needs to be able to engage them,” said Kathleen Dale, principal, international tax, at KPMG. “We had the law we were working from, and now we have a lot more guidance out there which may present upside and often downside, or things that need to be addressed.”

### Regulatory themes

She said that a common regulatory theme has been anti-abuse provisions that give the government “significant discretion in disregarding or re-characterizing transactions entered into with—and this is the term [the IRS uses]—‘a principal purpose of avoiding the application of the provision.’”

The new law, for example, lowers the corporate tax rate to 21 percent and eliminates corporates' ability to defer overseas earnings, although its global intangible low-taxed income (GILTI) provision provides a route to cut the rate on those earnings in half. Still, 10.5 percent is more than if the taxes were deferred indefinitely under the old regime, and there are other unfavorable aspects, Dale noted. She added that some corporates have consequently restructured their operations to limit the earnings subject to GILTI, to minimize the impact of that tax.

The proposed regulations, for which comments were due Dec. 9, 2018, and have yet to be finalized, essentially disregard those types of transactions.

“To the extent companies planned to delay the effective application of the GILTI regime, they need to be aware of the ‘anti-abuse provisions’ in the proposed regulations that disregard many of those transactions,” she said.

Since the introduction of GILTI, it is more likely that American companies' overseas earnings will be taxed in the United States, in some instances at the lower rate, creating more of an incentive

Continued on page 12

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Sculpture by Kristen Visbal

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<sup>2</sup> State Street Global Advisors as of December 31, 2018.

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Another factor in whether to repatriate cash, will be the so-called “participation exemption” in Section 245A, permitting certain U.S. corporations to receive a 100-percent dividend-received deduction on the distribution of dividends from their foreign subsidiaries.

for them to bring cash home. Joseph Calianno, tax partner and international technical tax practice leader in BDO’s national tax office, noted several factors U.S. companies should consider when making that decision. They include: whether the foreign subsidiaries actually have the cash and whether it’s needed to fund their operations; and whether the cash is needed in the U.S. to make an acquisition or expand their facilities. In addition, the foreign jurisdiction may impose legal restrictions on distributing the cash to the U.S. parent, or a withholding tax.

Another factor in whether to repatriate cash, Calianno said, will be the so-called “participation exemption” in Section 245A, permitting certain U.S. corporations to receive a 100 percent dividend-received deduction on the distribution of dividends from their foreign subsidiaries. The earnings that will generally qualify for the participation exemption are those of the foreign subsidiaries that have not already been taxed under certain anti-deferral rules. The new provision could enable a company to return overseas earnings in the form of a dividend, without being taxed.

American-based multinationals have been issuing record volumes of debt especially in Europe, to take advantage of ultra-low rates. In late November, the IRS issued a proposed rule under Section 163J that may limit a US company’s ability to deduct interest expense.

“Depending on the company’s makeup, it will have to analyze the rules to determine whether it will be able to deduct the interest on the debt it issues,” Calianno said. “After doing the necessary modeling, it could affect the company’s decision whether to incur debt to fund an acquisition or expand operations.”

Dale noted that companies will have to reconsider the assumptions underlying their business decisions. “If there’s incremental debt in the system that’s going to disallow interest expenses under 163J, then the company might decide it doesn’t want to deal with that and make a capital contribution instead of funding through debt,” she said. “The company won’t get any deduction from a capital contribution, but if [the interest-expense deduction] is already limited, it may just be simpler that way.”

New regulations published Jan. 22, after being issued in proposal form last August, clarify how U.S. companies must pay repatriation taxes under Section 965 of the tax code. Dale said that companies made best efforts to calculate their mandatory repatriation tax liability for the 2017 tax year, based on guidance at that time. There are differences in the final regulations, however, and companies may have to recalculate that liability. There’s no materiality standard in tax, so accuracy is paramount to avoid triggering an “accelerated event” that could result in significant financial consequences, she added.

“If you elected to pay your tax liability over seven years, and a company doesn’t do it the correct way, its taxes could become due all that year,” Dale said. “That would be a bad day for a lot of companies.”

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# GENERAL HOUSING OPENS **MARCH 21**

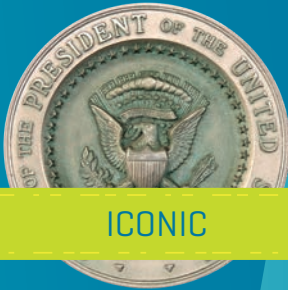
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MARCH

21

# Center of Attention

Four success factors for a regional treasury center

FRANCOIS-DOMINQUE DOLL AND SUSAN XU



**A** leading practice in treasury management is to centralize operations into a treasury center, and an in-house bank (IHB) is considered as a best-in-class structure of a regional or global treasury function. The concept of IHB is not new and the benefits are self-explanatory. However, only a small number of companies have adopted this structure.

The IHB's roles and responsibilities include:

- **Cash management**—to concentrate cash and to make or collect payments via payment and collection factories
- **Intercompany transactions**—to perform nettings and arrange intercompany funding
- **Risk management**—to monitor interest/foreign exchange/commodities/credit risk and enter into hedging scenarios where necessary
- **Bank relationship management**—to manage bank accounts and negotiate terms & conditions
- **Treasury framework custodian**—to standardize and enforce treasury policies and processes.



Compared with decentralized or less centralized structures, IHBs will benefit companies with better visibility, stronger control, and a higher degree of standardization and economies of scale. The concept of IHB is not new and the benefits of having an IHB are self-explanatory. However, so far, only a small number of companies (usually industry leaders) have adopted this structure.

A reason for the low adoption could be that companies are hindered by the lack of knowledge to successfully transform their existing treasury operations.

### Key steps

#### Operating model

Ideally, all treasury activities are conducted within the IHB; however, it is not always feasible in practice depending on a company's geographic reach. A single treasury center is possible for a company with footprints in free markets alone; this structure might not be a good fit for a company with footprints in regulated countries where cross-border cash concentration and nettings are usually not permitted. A global treasury center supported by local or regional treasury functions is a typical operating model to address the complexity of varying regulations. This model is also a prevalent approach if a company has to transact across multiple time zones.

#### Stakeholders

Centralisation of treasury functions requires substantial spending and cross-functional collaboration. Therefore, it is vital to have senior management champion the initiative in order to secure financial support and to obtain active inputs from other internal business partners. Within the treasury function, centralization means an organizational restructure. Treasury teams may experience changes to their team dynamics with new additions and exits. In such cases, it is critical to have an effective knowledge transfer to minimize interruption. A secondment

“The concept of IHB is not new and the benefits of having an IHB are self-explanatory. However, so far, only a small number of companies have adopted this structure.”

arrangement from professional services firms is a common solution to address a temporary talent shortfall during the transition period.

Meanwhile, ongoing engagement with internal stakeholders is essential for a successful transformation as treasury activities such as cash forecasting and trade finance rely heavily on efforts from other functions within a company. The treasury team needs to inform their internal business partners of the changes in treasury operations and elaborate on the benefits to each stakeholder. The team should also articulate the follow-up actions that are required, setting KPIs where necessary. By doing so, internal stakeholders are no longer passive information receivers but active contributors in the treasury transformation. A balanced change management approach is necessary to ensure project success and positive outcomes.

Beyond the organization, engagement with external stakeholders such as banks and technology providers is equally important. As the treasury function evolves to become an IHB, current banking relationships and system capacity should be relooked. Can existing banking relationships serve a new proposed cash management structure? Are legacy systems robust enough to execute treasury

activities, support increased volumes and generate reports on an IHB level? The treasury team needs to consider these questions as early as possible to assess if any replacement or upgrading is needed so that additional budget and human resources can be discussed and planned for.

Ultimately, establishing a treasury center is a full programme management, with several projects and initiatives running in parallel.

### Location

Ideal IHB locations are countries/regions with low corporate income tax and wide tax treaty networks, given that there are benefits such as reduced or exempted withholding taxes on interest of cash pooling and intercompany lending. Singapore has been the most preferred location for treasury centers in Asia because of its attractive tax rates, liberal currency control, competitive business environment, efficient infrastructure and high-quality talent pool. Hong Kong, an equally popular location in Asia, is seeing a growing trend of corporates setting up treasury centers since it rolled out its CTC (Corporate Treasury Centers) tax incentive in 2016 to compete Singapore's FTC (Finance and Treasury Center) incentive. People may say Singapore is the gateway to Southeast Asia while Hong Kong is for corporates with strong commitment to Chinese market, but this is just a general pattern observed. It would be unfair to say which one is a better choice as the selection of location for treasury centers is determined not only by tax regime but also by other considerations including business strategies, cultural proximity and local banking and government relationships.

Aside from Singapore and Hong Kong, other potential locations in Asia including Shanghai, Manila, Bangkok and Kuala Lumpur for treasury centers are emerging mainly due to their cost-effectiveness and gradual deregulation. However, due to factors such as business environment and availability of talent, these locations currently act, in most cases, as regional treasury centers or shared service centers, not as an IHB.

### Technology

The motivation to set up an IHB is to improve effectiveness, efficiency and transparency of treasury activities. Previously, the capabilities of treasury centers were constrained by technological limitations. Treasurers had visions but did not have

effective tools to help realize them. Today, technology is advancing at an exponential rate, making once impossible targets now possible, and turning insights into foresights. The move towards treasury centralization offers a good opportunity to rethink the company's treasury technology. To plan for this, these key points need to be considered:

- Are there any gaps between the centralization vision and current technology capability? For example, in order to achieve centralization, an automated payment process is expected. Will the existing connectivity be able to support this automation? If status quo is no longer valid in the context of a new treasury structure, what will be the solution? Would it be to improve the legacy system or to deploy a new one?
- Besides mainstream solutions, are there any other new technology that can be adopted? Fintech has become a buzzword in the treasury space and there is great potential with Robotic Process Automation (RPA) to automate repetitive, labor-intensive and high-volume processes. Blockchain based solutions for KYC, supply chain, payments and confirmations are also emerging. At present, treasurers are still cautious towards the application of Fintech but this will change as Fintech gains wider adoption.
- As companies increasingly utilize cutting-edge treasury technology, it is important to integrate between the treasury system and other internal/external platforms such as ERP, accounting and the banking system. Effectiveness and efficiency will be compromised if the information cannot be interfaced cross platforms automatically, the objective being to achieve real time availability of data and full visibility.

The transformation of the treasury function towards the centralized IHB structure is not a one-time endeavor but a continuous effort to do better. The business landscape is constantly evolving, providing an environment ideal for innovation. The treasury function needs to keep adapting in order to create sustained value with its business partners.

*Francois-Dominique Doll and Susan Xu are, respectively, Director and Manager, Global Treasury Advisory Services, Deloitte Singapore. The views expressed are their own.*

# What's the **COST**

Applying cost of capital  
in corporate finance

BRYAN LAPIDUS, FP&A

I have previously written about cost of capital, covering the components of the calculation, where to find the data, and comparison to cost of equity and cost of debt. In this article, we discuss how corporate finance professionals apply the cost of capital in their daily work.

## How the 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
<b>Project 1</b>	10	10	10	10	10	10	10	10
<b>Project 2</b>	25	50	5					

When used this way, the cost of capital 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 cost of capital 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? Cost of capital 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 cost of capital adjusts to reflect the change in financing mix over time.

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

Are the cost of capital and hurdle rate 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*	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 cost of capital, includes growth, infrastructure, strategic and regulatory investments

*\*Return metrics need to be consistent with the cost of capital 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 noncash treatments.*



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ANDREW DEICHLER

# When DISASTER Strikes

Treasury needs to be a leader in business continuity planning

**E**xtrême weather events like Hurricane Florence in 2018 and Hurricane Maria in 2017 are happening more and more frequently. That’s why it is more important than ever for companies to have a business continuity plan in place.

Since the treasury function is at the forefront of a company’s money, there may be no better department to be a leader in business continuity planning (BCP). But to be successful, treasury needs to have a well thought-out strategy in place. A recent Treasury in Practice Guide, underwritten by Kyriba, provides tips on how treasury departments can implement successful business continuity plans, so that the next time disaster strikes, you’ll be ready.

## **Determine your critical assets**

The first thing a treasury department needs to do when creating a business continuity plan is figure out all of its critical assets. One of the best ways to determine this is by calling a meeting with the CEO and CFO to hash out the business’ priorities and the risks that can impact them. That way, when an event occurs—be it a natural disaster, a power outage, or a change in the marketplace, a change in a certain customer environment—the company will fall back on the “vision” it has set for itself.

It is important to note that meeting with the CEO and/or CFO is not a one-time thing. A company’s priorities can change, and treasurers need to stay on

top of those changes. Therefore, treasury should be meeting regularly with high-level executives.

### **Use a template or standard**

Once you iron out the business' priorities, it's time to actually write the plan. Writing out a plan is not easy, however, which is why many organizations utilize BCP templates to get started. Jeff Johnson, CTP, CFO of Amesbury Truth and former Chairman of AFP's Board of Directors, believes that treasury departments should begin with a generic BCP template and adapt it for their needs. "The challenge a lot of organizations have is that often they want to put something together but they have no template," he said.

Sample templates can be found rather easily online. Although corporates may not always be the target audience for a particular template, many of these samples can be adapted for their uses. A good plan will provide an overview of the organization, identifying key assets and the risks to them. It will specify the measures that can be taken in the event of an emergency, what their objectives are, and who is tasked with putting them into motion. It should also include a full distribution list of the plan recipients, as well as tables where any updates to the plan can be recorded.

### **Don't forget the basics**

In early 2015, Akamai Technologies, a content delivery network (CDN) and cloud services provider, had to exercise its business disaster recovery plan. Cambridge, Mass., where Akamai is located, was forced to close its offices for non-network operations command center employees due to snowstorms. "In order for our employees to be able to work from home, our company failed over to our disaster recovery center elsewhere in the country," said David Neshat, treasurer for Akamai. "Had that not happened, working remotely would not have been an option. Employees wouldn't have had the ability to logon to emails/ERP systems/HR systems/etc."

But if work email is down, that's when treasury needs a "plan B" to communicate. Members of the treasury staff should have each other's mobile numbers and even personal emails so that they can get in touch with them as needed. It's also a good idea to have personal contact information for key members of the IT staff, as well as departments that treasury works frequently with, like accounting. "If you can't reach them through work email, how do you reach them?" Neshat said. "BCP goes back to simple things

like that. People should have a folder at home with that contact information."

Sarah Schaus, assistant treasurer and assistant vice president for Allianz Life Insurance Company of North America and chairwoman of AFP's Treasury Advisory Group, explained that her company has actually appointed a business continuity management (BCM) team to be the "first line" in any type of black swan event. Should the event last longer than 24 hours, then a second line gets called in. "Everyone knows their accountability before we get into a situation," Schaus said. "We even make little laminated business cards for people so everyone has the phone numbers of the team that is part of that first line."

### **Test it out**

Once you've drafted your plan, it is crucial that you test it. If you don't, how do you really know if it works? Even treasury departments who have strong plans in place often find some aspects need to be tweaked once confronted with a real black swan event. So testing, and testing regularly, is a very important step in implementing BCP.

Schaus noted that Allianz performs regular BCP exercises across the organization, including groups like treasury, investment and operations. "We do tabletop exercises, where we'll sit in a closed room for three hours and go through a scenario," she said. "We'll say, 'There's a fire on the fourth floor, it's noon and no one can get back to their desks or get home.' Then, the next level is, 'Now it's 5:00 at night, these people are stressed and they need to get their kids from daycare. They're starting to panic.' So we do all that scenario role playing."

### **Be a leader**

Although BCP is not, and should not be, treasury's sole responsibility, it is an area where treasury must be a leader. Again, who better to make sure things stay up and running better than the one function that truly understands the inner workings of the business? Treasury is heavily involved in risk management, is accustomed to taking an analytical approach to address problems and is well-versed in compliance—simply put, treasury a perfect fit for BCP.

*For more insights from treasury practitioners, download [Business Continuity Planning: Why Treasury Needs a Plan B](#) at [www.AFPonline.org](http://www.AFPonline.org)*

# Connecting the DOTS

## Best practices in treasury connectivity

ANDREW DEICHLER

**C**onnectivity is the glue that holds all of the key functions in modern corporate treasury together. Without it, there's very little that a treasury department can accomplish.

In the latest Treasury in Practice Guide, underwritten by Kyriba, AFP examines best practices in treasury connectivity. We go through the systems that treasury connects to; the different connectivity protocols; external connectivity through treasury management systems (TMS) and internal connectivity through enterprise resource planning (ERP) systems; and new technologies that are, essentially, the future of connectivity.

### **What to know**

Bank connectivity is among the most essential for treasury teams. There are multiple facets to bank connectivity, from downloading reports, to uploading payments, to considerations around how technology is changing.



“When we start talking about bank connectivity, most will think about bank formats,” said Bob Stark, vice president of strategy for Kyriba. “While formats are a big part of connectivity, it’s best to start with the protocol—how you actually connect to a bank.”

When connecting to banks there are many options that treasury can choose. In North America, FTP (File Transfer Protocol) is typically the standard for domestic connections, whereas SWIFT is the most common for connectivity to international banks. While there are global protocols such as EBICS that are for specific countries, these are not often used by American companies.

However, as banks begin to open up their platforms via APIs, many predict that both FTP and SWIFT connections could become obsolete, especially as banks identify opportunities to expand real-time cash management services via APIs that were not possible using protocols such as FTP.

When it comes to bank formats, there are many choices, largely dictated by geography. For bank reporting, we often see BAI files in North America and MT formats internationally. Banks are starting to offer XML ISO 20022 CAMT files as an alternative to these traditional formats. Many expect XML CAMT formats to become the market standard, a position SWIFT has endorsed as it looks to replace MTxxx formats with ISO 20022.

### What to choose

To determine the most appropriate methods for bank connectivity, a good place for treasury to start is with its banking profiles. For example, if you have three domestic banks, and one is your “lead” bank, that network would likely be best managed by host-to-host connections. You probably won’t require third-party software or the use of a network like SWIFT to be able access your banks. You can connect to them through FTP or an API directly, which would allow you to download statements and upload payments without any middleware or intermediary networks.

The treasury department at telecommunications giant Sprint typically uses the online portals that its banks offer. Treasury manually logs in and pulls the bank file and imports it into its treasury workstation. “Because we’re on the website for multiple reasons like initiating payments, we just go ahead and download the BAI formats that our banks offer for our workstation,” explained Howard S. Smith, CTP, treasury manager. “It’s a small enough operation. We just got in the habit of doing it this way so we don’t have to compete for IT resources. And we have an older

workstation; some of the newer workstations have an easier setup in the cloud. So we’re probably on the back half when it comes to automated connectivity.”

Sprint has used its treasury workstation for about a decade and is in the market for a new one, and will likely go with a Software-as-a-service (SaaS) module that is managed by a TMS vendor. And connectivity between the treasury workstation and the banks could possibly be simplified, depending on the relationship between the TMS vendor and the banks. “If the vendor already has a relationship, then it could just be a matter of signing an authorization,” Smith said. “It could be as easy as flipping a switch. Or maybe it works well with the bigger banks, but maybe with the smaller banks, you have to involve IT.”

Most corporations that have large domestic and international banking relationships will look to an intermediary for some or all of their bank connectivity needs. The volume of what treasury sends and receives becomes much more important, because an intermediary such as SWIFT factors transaction volumes into its pricing.

Nevertheless, sometimes choosing different bank connectivity methods can ultimately save money. The treasury department at multinational courier FedEx is in the process of moving over to SWIFT for all of its payment files. Currently, when a bank wants to send treasury an MT940 statement, it has to go through one of FedEx’s two aggregator banks. “We connect to the aggregator, and they transmit a BAI file to us and those files are structured like MT940s,” said Kyle Kremser, CTP, treasury systems and controls principal for FedEx.

But now by moving to SWIFT, treasury will be able to connect to those banks around the globe and receive those statements directly. FedEx should achieve substantial cost savings with this effort. “Internationally for treasury we see that the connection will be more expensive, but we are eliminating the aggregation in the U.S. as well, and net we will be saving money for our treasury connections,” he said.

This is part of a larger initiative from FedEx’s treasurer to move to SWIFT payments enterprise-wide. “We are already moving to SWIFT for the treasury payments, but we’re being challenged additionally to move everything to SWIFT, including accounts payable and reconciliation statements coming in,” said Kremser.

*For more insights, download [Best Practices in Treasury Connectivity](#) at [www.AFPonline.org](http://www.AFPonline.org)*

# Setting the Standard

## APIs: the search for ubiquity and standardization

ANDREW DEICHLER

Application programming interfaces (APIs) are emerging as the key to improving payments between corporates and banks. And with new initiatives like the Revised Payments Services Directive (PSD2) in Europe, APIs are quickly infiltrating the psyche of businesses around the globe. But without standardization, APIs cannot be as effective as they need to be.

### Open banking initiatives

A number of initiatives have been launched over the past several years that have brought APIs to the forefront. Some of these endeavors are centered on APIs themselves, while others apply them as a critical component to achieving a goal.

The use of APIs in treasury is a fairly recent development, largely

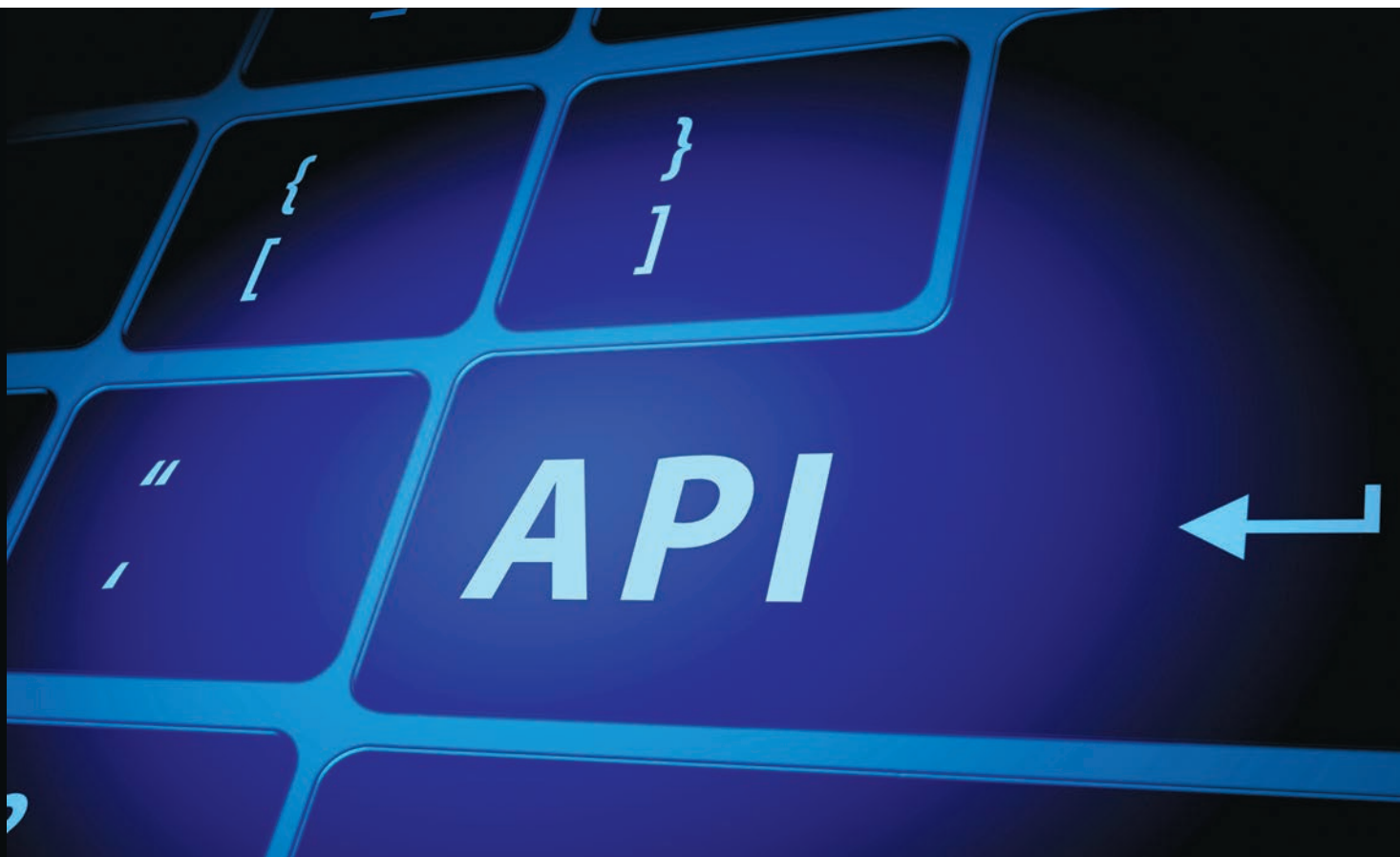
following the adoption of the EU Directive, the Revised Payments Services Directive (PSD2) by the European Commission, which went into effect in Europe a year ago. The directive's goal is improving competition in banking and payments in the European Union.

Similar open banking initiatives have also arisen in other regions. In the UK, the Competition and Markets Authority directed nine banks to allow their customers to share their data with other banks and third parties. In Australia, the four major banks are slated to begin to sharing information with other financial services providers next year as part of a government mandate. And in Japan, regulators have been taking cues from Europe and have amended the Banking Act, requiring at least 80 banks to open their APIs by 2020. Hong

Kong, Singapore and Mexico have also embarked on API initiatives.

As for the United States, it is unlikely that there will ever be a mandate like PSD2. Nevertheless, U.S. banks have begun to migrate towards open banking, as it presents significant opportunities for them. As Magnus Carlsson, AFP's manager of treasury and payments explained in a 2018 article, "there do seem to be some indications that U.S. banks are already realizing that this trend would actually open up not only their data, but potentially also new business opportunities."

Open banking also presents opportunities for corporates; Carlsson noted that if corporate customers grant them permission to use their bank account details and receive the payment straight from the customer's bank, they



could bypass intermediaries. “In other words, this could mean that corporates could get paid directly, and potentially much cheaper,” he wrote.

#### **API standardization**

In the United States, no organization has been more proactive on APIs than NACHA. Over the past year, the payments organization has made major strides in furthering the progress of API standardization.

In a recent whitepaper, NACHA made the case for standardization, noting that banks currently use “disparate and customized formats to share information, employing different nomenclatures for common terms and processes. Without standardization, every time a developer tries to create or update an app, changes to that

app will be required to interact with each bank. With standardization, a developer could design and implement one app that would interact with countless banks without needing modifications.”

NACHA noted that if 1,000 banks enable a common service using 1,000 different APIs, that’s far from efficient. Thus standardization—and standardization with the proper governance—is a “critical component to ensure consistency, compatibility, effectiveness, sustainability and interoperability.”

In the fall of 2018, NACHA took its biggest step in its push for API standardization with the launch of a new organization and three new APIs that could benefit corporate treasury functions.

The ASIG and IFM partnership is now known as Afinis, a membership-based organization

that supports long-term standards and adoption. According to NACHA, Afinis is a collaborative venue for developing API products for financial institutions, technology providers, businesses and governments.

Janet Estep, president and CEO of NACHA, called API standardization “critical” for the financial services industry to achieve its full potential. “Afinis is a membership-based organization that collaborates openly with groups from around the world to share learning, reduce duplicative efforts, and create and adopt standards that lessen friction and improve the ability to bring innovations more quickly to market,” she said.

*Download APIs: The Search for Ubiquity and Standardization at [www.AFPonline.org](http://www.AFPonline.org).*



# The Big

# 3

## Results of the 2019 AFP Risk Survey, Supported by Marsh & McLennan Insights

AFP RESEARCH DEPARTMENT

**T**reasury and finance professionals believe that strategic, cybersecurity and financial risks will remain the top areas of concern for the next three years, according to new research by the Association for Financial Professionals.

In a poll of nearly 400 practitioners, the 2019 AFP Risk Survey—The Evolving Treasury Ecosystem, supported by Marsh & McLennan Insights, found that 60 percent cited strategic risk factors such as competitor and industry disruptions as their biggest area of concern. Cybersecurity risk ranked second at 51 percent while financial risk stemming from credit, liquidity, currency and interest rate risk came in third at 39 percent.

While fintech is a growing challenge and opportunity for treasury and finance, only 34

percent of respondents anticipate using more non-traditional vendors in the future. Non-traditional vendors include vendors other than banks that are offering niche services, such as technology providers, payment providers, fintechs and task-oriented contract employees.

Treasury professionals believe they will mostly use non-traditional vendors within treasury services technologies and merchant services technologies. Flexibility, adaptability and customization are the primary reasons treasury practitioners are choosing to use these vendors. The survey found that despite the challenges, treasury professionals are anticipating, treasury departments expect to maintain their current level of full-time staffing over the next three years, the survey found.

“With the top three risks having a direct link to the treasury department, corporate treasury more than ever needs to become a stronger business partner to management and other business units,” said Jim Kaitz, president and CEO of AFP. “Additionally, the skills within treasury will need to evolve with the increasing use of non-traditional vendors and technologies.”

**Strategic risk and cyberrisk**

As companies’ scope of operations widens, their risk profiles are becoming complex. The majority of survey respondents (60 percent)

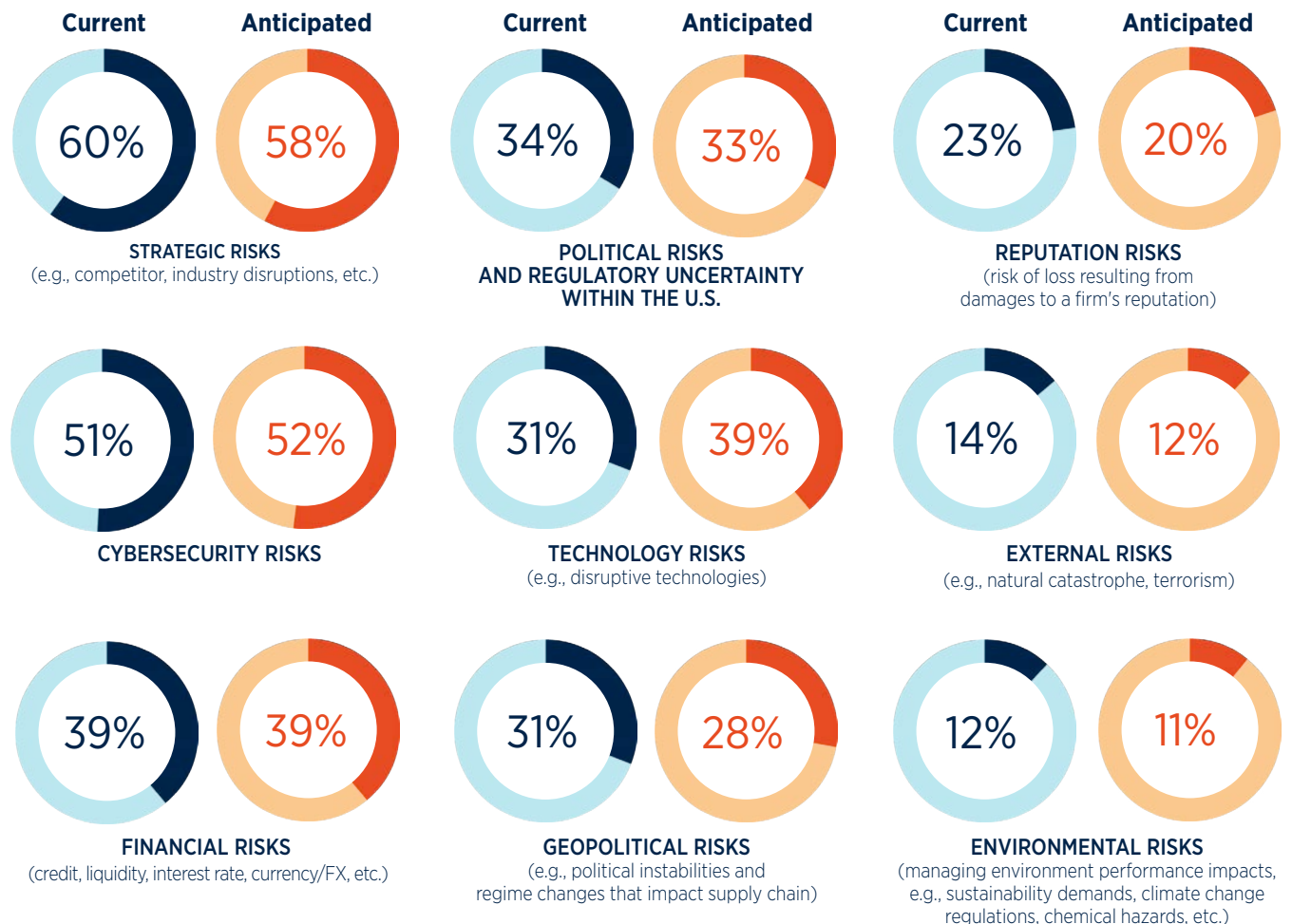
rank strategic risks, which include competitor and industry disruptions, as the top risk impacting their organization. This percentage is slightly lower than the 62 percent from the 2018 AFP Risk Survey.

Meanwhile, 51 percent report that cybersecurity risks need to be watched closely, a result similar to the 52 percent last year. Ranked third is financial risks, cited by 39 percent of respondents, followed by political risks and regulatory uncertainty in the United States (34 percent). In last year’s survey, political risk and regulatory uncertainty ranked third followed by financial risks.

**Strategic Risks and Cybersecurity Risks are of Significant Concern**

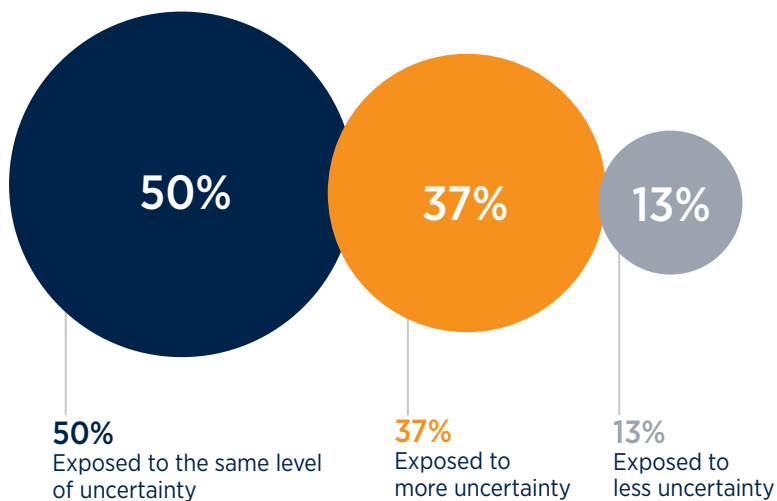
**Current Risks and Anticipated Concerns for Risks over the Next Three Years**

(Percent of Respondents Who Rank Risks in Top Three)



Source: AFP 2019 Risk Survey.

**Earnings Uncertainty Today versus Three Years Ago (2015)**  
(Percentage Distribution of Organizations)



Source: AFP 2019 Risk Survey.

**Less Exposure to Uncertainty**

A lower percentage of treasury professionals report their organizations are exposed to greater uncertainty compared to three years ago (37 percent versus 49 percent). At the same time, half of respondents report no change in the level of uncertainty, a larger share than last year’s 40 percent.

**Staffing levels**

The typical organization currently has six full-time employees in its treasury department, on average has 14.75 FTEs, and anticipates only a slight increase in the number of FTEs over the next three years. Larger organizations with annual revenue of at least \$1 billion and publicly owned companies have on average 18.61 and 18.88 full-time employees, respectively. Smaller

organizations with annual revenue less than \$1 billion have on average 6.76 FTEs on their treasury teams, while respondents from privately held organizations report an average of 9.52 FTEs in their treasury departments. Within three years, organizations estimate the average number of FTEs in Treasury will be 15.59.

Over time, treasury professionals have built strong relationships with their banking partners and other entrenched vendors. Building new relationships requires keen effort and hard work from all parties involved—and that can be time consuming.

As such, is it not surprising that one-third of survey respondents indicate that the need to develop relationships with non-traditional vendors is the greatest drawback in using one. Furthermore, non-traditional vendors may have limited experience. Financial leaders are primarily concerned about whether these vendors have the necessary and relevant experience when partnering with organizations of their size—a concern cited by 29 percent of survey participants.

Among the drawbacks to using non-traditional vendors is establishing relationships that cannot be leveraged across other products (much like a traditional bank vendor could), which leads to higher costs. In addition, organizations may also face the challenge of being “a big fish in a small pond;” this is because some non-traditional vendors do not have customers with similar characteristics due to their limited size and capabilities. As a result, an organization could become a very important client for a non-traditional vendor, while the vendor’s credibility remains a concern.



Download the full results of the AFP 2019 Risk Survey at [www.AFPonline.org/Risksurvey](http://www.AFPonline.org/Risksurvey).

AFP RESEARCH: 2019 RISK SURVEY **KEY HIGHLIGHTS**



**STRATEGIC**  
(cited by **60%** of respondents)  
**CYBERSECURITY (51%)** and  
**FINANCIAL RISKS (39%)**  
are seen as key challenges  
over the next three years.



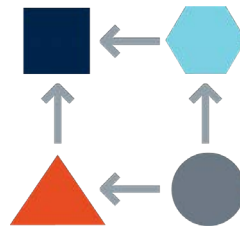
**TREASURY SERVICES  
TECHNOLOGIES**  
(**46%** of respondents) and  
**MERCHANT-SERVICE  
TECHNOLOGIES (33%)**  
are using non-traditional  
vendors more than other  
operational areas.



**MITIGATING RISK** with  
non-traditional vendors  
is done by conducting  
**DUE DILIGENCE (76%)**  
and obtaining  
**CUSTOMER REFERENCES**  
(**62%**).



A smaller percentage of  
treasury professionals report  
their organizations are  
**EXPOSED TO GREATER  
UNCERTAINTY**  
compared to three years ago  
(**37%** vs. **49%**).



Treasury functions appreciate  
the **FLEXIBILITY AND  
ADAPTABILITY (58%)**  
of non-traditional vendors.



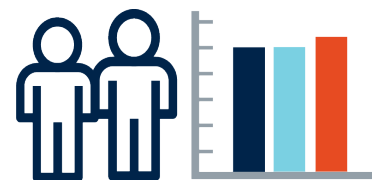
A large share  
of organizations (**81%**)  
are **NOT** fully confident  
that they are  
**PREPARED TO USE  
NON-TRADITIONAL  
VENDORS.**



Treasury departments have  
**YET TO EMBRACE  
NON-TRADITIONAL VENDORS;**  
only (**34%**) of organizations  
plan to increase their use of  
non-traditional vendors.



**LACK OF  
RELATIONSHIPS (32%)**  
and **INSUFFICIENT  
EXPERIENCE (29%)**  
with an organization are primary  
**DRAWBACKS OF  
NON-TRADITIONAL VENDORS.**



Despite increased  
concerns of risks  
**TREASURY DEPARTMENTS  
ARE EXPECTED TO MAINTAIN  
THE SAME LEVEL OF FTEs**  
or see a modest increase in  
the next three years.

Source: AFP 2019 Risk Survey.

AFP AWARE



# AFP Aware

## Giving back to Chicago

ANDREW DEICHLER

**AFP 2018** attendees gathered in Chicago for the tenth annual AFP Aware Community Service Project. AFP Aware gives back to the region where the conference is taking place by partnering with a local nonprofit organization.

For the ninth straight year, AFP Aware was sponsored by BBVA Compass. “For BBVA, one of our goals is to be an integral part of the communities in which we service, and to give back,” said Ernest Smith, CTP, FP&A, Senior Vice President, Regional Sales Manager, Texas TM Sales for BBVA Compass. “We’ve sponsored [AFP Aware] for nine years and each time, it allows us to partner with AFP and make a tangible difference in the communities where the conference is being held.”

Smith himself has been to eight of the past nine AFP Aware events, and each one has made an impact on him personally. “Every time I go, I learn something different, I learn about the needs of the community, and I have a great time,” he said. “It’s one of the most well-attended events because as people come, they have fun and they realize that it’s something different; it’s not your typical conference activity.”

### Safe Haven Foundation

AFP Aware partnered with A Safe Haven Foundation (ASHF), which provides shelter and services to Chicago-area residents who are struggling with homelessness, addiction, abuse and other issues. The nearly 25-year-old nonprofit operates a network of over 36 multifamily locations for permanent and senior affordable housing, as well as a temporary housing program that includes meals, case management, drug and alcohol treatment, healthcare, and job training and placement.

ASHF offers classes for GED test preparation, resume building, relapse prevention, financial and computer literacy, health, and nutrition. The organization also has apprenticeships in welding, landscaping and culinary arts, as well as vocational training in housekeeping, security and customer service.

The offsite AFP Aware project took place at ASHF’s main building, which houses 400 of its clients. Volunteers assisted in painting hallways throughout the facility, as well as minor kitchen services. For the onsite project, volunteers assembled hygiene kits for homeless individuals throughout the greater Chicago area. Fully 92





conference attendees participated in both events. For the onsite event, more than 800 kits were assembled.

“This is 10 years of AFP Aware, and I have been to nine,” said Jeff Johnson, CTP, CPA, Chief Financial Officer for Amesbury Truth and former AFP Chairman. “I have to say that it is an opportunity to do something good—to give back to the community. So you’re able to do something that benefits the world, and makes it a better place.”

Johnson added that AFP Aware is also an incredible networking opportunity. “You are meeting people, and in a very informal manner—you’re shoulder-to-shoulder and elbow-to-elbow as you’re packing soap into bags for the homeless or you’re planting trees on the side of the San Diego River—it’s a tremendous event,” he said.

Patricia Hui, CTP, Director, Tax and Treasury PMO for Oracle, has also been coming to AFP Aware for the past nine years and echoed Johnson’s sentiments. “I think it is very important for the members to give back to the community—especially the host city where AFP is hosting the event,” she said. “You also meet a lot of your peers, so it is a great networking opportunity.”

Tom Wolfe, CTP, Director of Treasury Services for Avmed Health Plan, has been volunteering for the AFP Aware event for the past four years and he wishes he had been part of it from the very beginning. “The primary reason people come to AFP Aware is to give back,” he said. “We get so much out of AFP every year with the conference; we go to a city, and we’re there for several days. It’s great to have that opportunity on Sunday morning to come in and be able to give back to the community and really make an impact.”



AFP 2018

# PINNACLE AWARDS

Recognizing Excellence in Treasury and Finance

Sponsored by  MUFG



# In the Fast Lane

Speeding up payments for its drivers won Uber Technologies the AFP Pinnacle Award

ANDREW DEICHLER

**Uber Technologies** was announced as the AFP 2018 Pinnacle Grand Prize at the Opening General Session of AFP 2018 in Chicago. The Pinnacle Grand Prize, sponsored by Mitsubishi UFJ Financial Group, recognizes excellence in treasury and finance.

“AFP is proud to honor Uber Technologies with the 2018 Pinnacle Award Grand Prize,” said AFP President and CEO Jim Kaitz. “Uber’s initiative is the kind of smart, innovative solution that exemplifies what the Pinnacle Award is all about.”

MUFG donated \$10,000 to the charity of Uber Technologies’ choice, Meals on Wheels San Francisco, whose mission is to provide a network of services that allows seniors to live in their homes with dignity and independence as long as possible.

Ranjana Clark, Chief Transformation Officer, Head of Transaction Banking Americas, and Bay Area President for MUFG, hosted the ceremony. “MUFG is honored to partner with the AFP in recognizing companies for their achievements in treasury and finance,” said Ranjana Clark. “Uber Technologies’ submission demonstrates how an innovative approach can transform payments and business. We congratulate Uber Technologies on receiving this year’s Pinnacle Award and we are proud to support their Bay Area charity Meals on Wheels of San Francisco.”

## Uber Instant Pay

Uber Technologies' submission focused on enhancing payments for its drivers. Uber, which previously paid drivers once a week via ACH, introduced Instant Pay, a daily, on-demand payments process that utilizes debit cards. The new system actually pays drivers before riders' funds are deposited—a decision by the company to place drivers above the bottom line.

"The Any Debit product allows any driver who has a debit card to give us their card details, and we would, upon request, pay them instantly," said David Tao, treasury manager for Uber.

The real-time aspect of the Instant Pay product allows for immense flexibility around when and how Uber drivers want to get paid, Tao added. "All they do is provide us a debit card number, and we can provide real-time payments to them with the push of a button. They receive the payment to their card within seconds—if not milliseconds," he said. "If they want to get paid in the morning or the evening, depending on when they drive, we're not subject to any clearing system cutoff time, and this lets them use funds as they earn them."

By giving the driver the option of when to cash out, it allows them to receive payments in the way that best suits their lifestyle, explained David Watt, CTP, former treasury director for Uber. "We didn't want to be constrained by the business hours and the delays in the ACH system," he said. "So that's why we looked for something that could really, truly give them the funds instantly, after they cash out. We think this is something that really suits their needs and makes them want to work with Uber more than our competitors."

Looking the future, Uber's treasury believes it can improve upon its system even further. "We want to make it cheaper and even faster," Watt said. "We also want to roll it out beyond just the U.S. There are a number of major countries in the works right now, and we're also looking beyond cards, to all of the faster payments systems that the banks are rolling out around the world—Faster Payments in the UK, [the New Payments Platform (NPP)] in Australia, etc. We want to do this for everybody, everywhere."

Uber Technologies beat out two other Pinnacle finalists—BMC Software and OpenText. These three organizations were selected as the Pinnacle finalists because their innovative solutions helped their treasury and finance operations run more effectively.

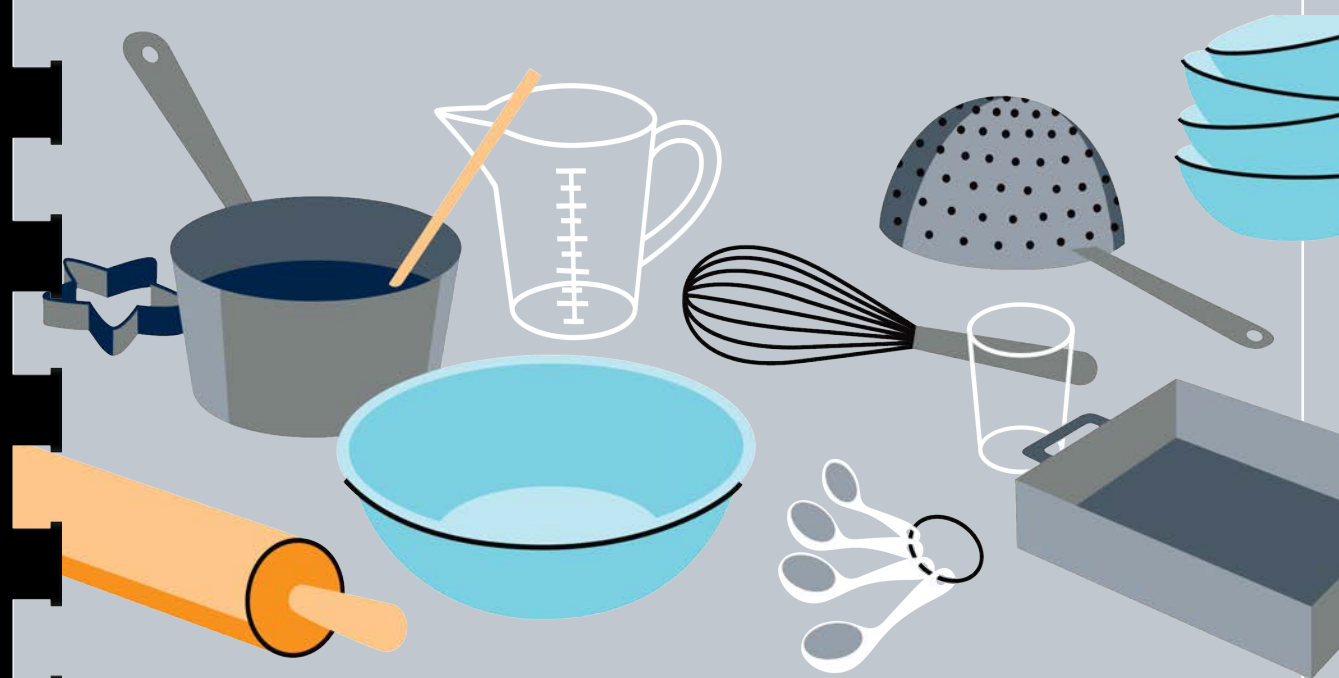
"Uber's initiative is the kind of smart, innovative solution that exemplifies what the Pinnacle Award is all about."



# The Right Ingredients

How BMC Software  
baked up sales  
forecasting success

BRYAN LAPIDUS, FP&A





Accurate sales forecasting is hard. Here are four steps BMC Software took to improve its sales force accuracy.

This fall, for the first time, an FP&A project was among the three finalists for AFP's prestigious Pinnacle Award, sponsored by Mitsubishi UFJ Financial Group. Pankaj Tamrakar, treasury manager, submitted on behalf of BMC Software in Houston, Texas.

The description of his project is below, but it is important to note the underlying factors that made it possible. The story of the effort reads like a well-stocked kitchen, where the ingredients are available and waiting to be put to use. You can look for these ingredients in your own cupboard to see if you too can bake up success in your organization:

- **CROSS-TEAM COMMUNICATION:** every week, the business unit president met with sales, marketing, product and finance.
- **SKILLS AT THE POINT OF ACTION:** Tamrakar has a background in IT and programming, and by nature is looking for ways to improve efficiency. He also had a ready set of data in the form of quarterly results.
- **ITERATIONS OF SUCCESS:** Big ideas were built on smaller ones. Tamrakar had previously upgraded existing databases from Access to SQL, gaining familiarity with data and tools, and expanding his concept of what could be accomplished. Sales created a new metric, "New Bookings vs. Renewal Bookings."
- **CULTURE OF INQUIRY:** "It starts with a question, and everyone at the table has always been willing to answer," Tamrakar said. "We have a culture of challenging the status quo and fostering innovation. No one ever shuts me down. My VP of FP&A is a very encouraging and supportive of new ways of analyzing data and getting business insight from it."

### The challenge

BMC Software (BMC) sells software licenses and post-contract maintenance and support for the software it sells. The maintenance is renewable on a periodic basis and is a recurring revenue stream that makes up a large portion of overall revenue. The company wanted to put increased focus on growing the business through sales of new license and maintenance contracts.

The company added a metric to measure this differentiation called "New Bookings (sales) vs. Renewal Bookings." To make the best use of this data, the sales team needed to understand the relationship between new and renewal bookings and how they could leverage this information to increase the sales pipeline and revenue while improving forecast accuracy. Additionally, in a sales workshop, BMC noticed that sales was struggling with the identification of cross-sell opportunities, and BMC thought there should be a better way to do this. "That's when we started building the bSMART tool," Tamrakar said. "The biggest 'Aha!' moment for us was coverage ratio insight that we got from the historical close-rate analysis: Closing a deal with a net new customer needed a much larger sales pipeline than we ever thought. That was consistent across all the product lines. That's where it made sense to implement the solution at the BMC level."

The sales teams had to manually review the customers in their space to see which products customers did and did not own; bSMART achieved that in an automated fashion. Also, bSMART uses level of detail (LoD) functionality in Tableau to analyze which customers own a BMC product but not a complementary BMC product in a quick and visual way to highlight and quantify new sales opportunities. One of the most valuable and synergistic additions was the leveraging and inclusion of the Propensity to Buy model, an algorithm that uses historical sales data to identify which customers were most likely to buy. The result was a multifunction tool in a single screen. This tool helps to facilitate pipeline generation by using business intelligence, analytics, and automation to identify cross sell opportunities within existing BMC customers with a high likelihood of converting. “Existing customers are already aware of our brand, and we can leverage existing relationships with champions and executive buyers,” Tamrakar said.

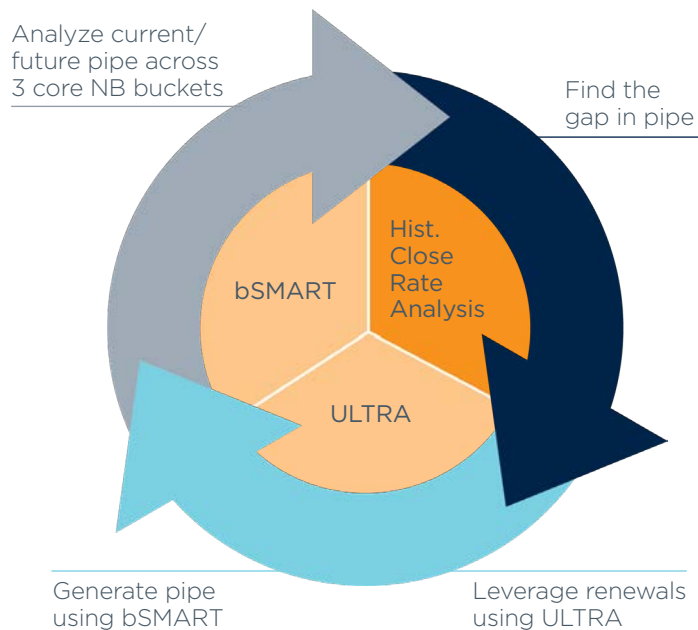
Finance was partnering with the business and realized that by using analytics, it could help the business draw insights into the new metric of new versus renew, and that’s where the ULTRA solution was born. ULTRA identifies the correlation between new and renewals sales pipeline and predicts how much of new business should come from existing customers versus net new customers in current or future quarters. Sales management can visually see how much of new pipeline is coming from existing customers versus net new customers and design strategy around sales execution and sales force allocation.

**The results**

The first insight was that acquiring new business from new customers required generating much a larger sales pipeline than new business from renewing customers. Sales could leverage this insight to allocate resources more efficiently by optimizing the sales coverage ratio for current and future quarters.

The second insight was that due to the high correlation between new bookings and renewal bookings, there was a large opportunity to leverage existing renewals to increase new sales in terms of additional capacity or cross sell. Sales and FP&A leveraged ULTRA for

**Four steps for sales forecasting success**



annual bookings plan creation and predicted how much of that plan should come from renewals attach vs. standalone new bookings. This insight in the plan helped sales manage sales productivity and sales headcount allocations very effectively and efficiently.

Success was not automatic, however. “The biggest setback/roadblock was adapting to this new way of looking at the business and change management as a result,” Tamrakar said. “The other product lines initially ignored or didn’t believe our analysis, but later when our forecast accuracy improved and leaders saw our financial performance improved and we won an operational innovation award from our CEO, it really highlighted the solution and other business leaders also came on board.”

What makes it unique is that the tools were developed by finance employees who identified the opportunity for improvement and created an automated, home-grown solution using Tableau. “ULTRA and bSMART are excellent examples of how finance planning and analysis at BMC is applying predictive business analytics to support decision-making and improve business partnering resulting in increased revenue, operational efficiency, and cost savings,” Tamrakar said.

# ANALYZE THIS

Improve your  
data analysis  
skills with  
three steps

DR. BILL HU, FP&A, CTP, CFA

**W**hile data is everywhere and statistical tools are proliferating in software, there is a rising premium placed on critical thinking related to data analysis projects. Knowing what could go wrong, and the questions you should ask to help it go right, will make you a better producer and consumer of statistical and data analyses.

During the AFP webinar on this topic, Professor Bill Hu touched on several questions he considers. By popular demand, he has elaborated on his points during that webinar. He has arranged his questions according to three general phases of an analytical project: preparation, analysis and conclusion.

**“Do you trust your data? If you have doubts about the data, what do you do? You have to prepare and clean the data, taking into consideration the limitations of the source.”**

### Preparation

A data analysis project starts with a business question to be answered. It involves three steps. First, are we solving the right problem? The second is about data and methodology. The third is about results and actions.

#### Q: Are we solving the right problem?

If we are not on the same page with the stakeholders, everything could go wrong. Therefore, we need to understand the business question, define goals explicitly, and make sure these goals are agreed to by relevant parties. Write them down as a shared agreement!

In a simple example, let's say we are trying to assess the earnings management of selected companies. Sounds simple, but in practice we need to discuss and define “earnings management.” Is that an earnings surprise relative to management guidance, an analyst forecast, or a benchmarked group? What are “earnings”—net income, EBITDA, EBIT, operating earnings? Do we normalize for unusual events or accruals?

In a second example, let's consider the case of Blackberry, a smartphone company whose products are out of favor, trying to reduce their inventory. Their search for efficiency would come through partnerships and alliances, which requires out-of-the-box thinking and has little to do with statistical analysis. Retailers, however, will benefit from just-in-time inventory management, which relies on accurate, timely forecasts to match supply and demand. This led to an investment in “smart shelf” technology in order to underpin the larger goal of forecast accuracy, a few steps away from simply focusing on reducing inventory!

#### Q: How to deal with low quality and/or unstructured data?

Do you trust your data? If you have doubts about the data, what do you do? You have to prepare and clean the data, taking into consideration the limitations of the source.

In the early years when transaction data was recorded manually, there were lots of errors. Using it required cleanup via various filters based on business knowledge, such as transaction value cannot be negative or larger than the U.S. GDP (that would be some trade!). This was intensive but necessary before getting to the analysis stage.

In a different example looking at unstructured data, I studied the impact of stock spam emails on stock prices and volumes. These seemingly nonsensical spam messages do increase trading volume and have significant price impacts, however, it's no easy task to analyze the spam messages. There are lots of misspelled words, intentionally or unintentionally. For example, the number four would be spelled as f0ur. To process this data, we first select a random sample and read through these to get a rough idea of what might go wrong. Then we developed a plan to address these challenges, applied machine learning to analyze a pilot dataset at a scale beyond what people could do, and then extended the analysis to the full dataset.

#### Q: What's the right sample size?

It depends on the planned significance you have set with your stakeholders. Pro tip: for customer surveys or polls, if we are looking for margin of error of 5 percent, simply inverse the 5 percent to get 20. Then square it to get the sample size of 400.

### Analysis

#### Q: Why and how do we transform data?

We need to be mindful about the underlying data characteristics and perform transformation as needed. I'll discuss two types of transformations.

First, pro tip: in forecasting, we can calculate the forecast error as the actual value less forecast. However, if we simply sum up the forecast errors, the positive ones cancel out the negative ones to lead to a false conclusion. Here we can transform the error to either absolute values or square the errors and then take a square root.

Second, pro tip: when the ratio of max/min is greater than 10, we may look into log transformations. The log transformation is particularly useful for skewed data as small numbers get spread out more and large



numbers are squeezed closer together. The result of the transformation is close to a normal distribution: symmetrical and with equal spread. The normal distribution is typically necessary for t-tests that are used to evaluate whether the results are significant or not.

In summary, for data transformations, it's important to look at two factors: the shape of the distribution and the ease of interpretation.

**Q: How do we deal with outliers?**

We generally use visual plots to locate outliers. We then compute statistics with and without outliers. If conclusions are not affected by outliers, we report results with the full dataset. Otherwise, we need to examine outliers carefully to see what else can be learned. Are there recording errors? – then correct it. Do outliers come from different populations? If yes, report results excluding the outliers and the reason for exclusion. If not, report results of both analyses and call for further investigations, such as performing a residual analysis. Sometimes, much can be learned from studying true outliers!

**Q: How do we decide which variables to include in or exclude from the analysis?**

There are two good reasons for reducing a large number of explanatory variables to a smaller set. First: simplicity is preferable to complexity. Second: unnecessary terms in the model yield less precise inferences.

We can use statistical tools to see whether a variable adds value to the equation or not. Statistical models are almost never exact, so most software estimates the information lost by applying different models.; the smaller the information loss, the better is the model. A general three-step strategy for dealing with many explanatory variables would look like this:

1. Identify the key objectives.
2. Screen the available variables using exploratory analysis to decide on a list that is sensitive to the objectives.
3. Use information criteria to find a suitable subset of explanatory variables. The two most common approaches are called Akaike and Bayesian information criterion (AIC or BIC).

**Conclusion**

**Q: Is the analysis robust?**

Here we shall do lots of partitions of the data, by slicing the data from different angles to test whether the results still hold. Is the analysis sensitive to

time periods? How about business cycles? How about countries or locations? How about across departments?

Obviously, the objective of the analysis will drive these partitions.

**Q: How do we interpret and communicate results?**

In the AFP Guide, we present a case to predict customer churns by running a logit regression. One of the predictors is whether the account involves any customer disputes or not. The regression coefficient for variable Disputed is 1.885. How do we interpret this coefficient 1.885? We undo the log transformation and calculate an odds ratio by raising  $e$  to the power of 1.885. The result is  $e^{1.885} = 6.6$ , i.e., a customer is 6.6 times more probable to churn if the account is Disputed, while keeping all other factors constant.

We may anticipate a question such as “Why do we take all the trouble doing the transformation from probability to log odds?” It is usually difficult to model a binary variable. Transforming a binary variable into real numbers (from negative infinity to positive infinity) is desirable in statistical analysis and involves three steps. The first step is to transform it into a probability, which is a continuous variable with a restricted range between 0 and 1. To extend the range from 1 to positive infinity, the probability is further transformed to an odds ratio. Finally, a log transformation maps positive numbers into real numbers. Although the log transformation is not the only choice for this purpose, it is the easiest to understand and interpret. This transformation is called logit transformation. The other common choice is the probit transformation.

The lesson here is that if you were to use some statistical tools, it's essential to understand it well so that you can interpret the results correctly. Moreover, it is equally important to communicate the results in an easy-to-understand manner to the audience. In summary, as finance professionals, we wear many hats: knowledge of finance, statistical skills and art of communications. That's why finance is a highly valued and respected profession. Let's keep it up!

*Dr. Bill Hu, FP&A, CTP, CFA is president of Techfin and a professor of finance at Arkansas State University. Email him at [bill.hu@techfinpro.com](mailto:bill.hu@techfinpro.com).*

# Becoming a DIGITAL Business Partner

New skills  
needed in the  
workplace  
for today's  
digital world

VIVEK SAXENA



New skills needed in the workplace for today's digital world may seem obvious to many. However, some financial planning and analysis teams still have some catching up to do. FP&A needs to improve its digital skills to make finance greater than the sum of its parts.

Every second that you spend reading this, Google is answering more than 40,000 search queries, harnessing the power of two billion people. The search engine connects what users want with what they choose, producing a body of information that is infinitely greater than the sum of its parts.

The analogy holds true for finance, specifically functions like FP&A and enterprise performance management (EPM). To make finance greater than the sum of its parts, we need to make similar connections. For example, to become a true business partner we must link:

- An organization's vision with finance's role in that vision
- Execution speed with capacity and quality
- How insight is consumed and acted upon.

For many organizations, gaps still exist on all three fronts. But new skills and technologies can change finance and EPM capabilities for the better. As this article outlines, they can provide better, faster insights that result in solid strategic decisions.

### What causes the disconnect?

Before finance can fully connect with the business, it faces four common challenges:

- **The data deluge:** Is your data a strategic asset? Data is no longer a competitive differentiator for most companies, given how much of it they create and bring in. About 80 percent of it is unstructured in the form of emails, social media 'likes', call scripts, news, audio, etc. As a consequence, finance teams are drowning in data instead of using it to drive action.
- **Lack of insight:** "I've noticed that when the anecdotes and the data disagree, the anecdotes are usually right," Amazon CEO Jeff Bezos recently said at in a recent discussion at the Forum on Leadership at the Bush Center. Trend analyses and other descriptive analyses don't help in today's dynamic environment where scenarios

change at light speed. Organizations need more predictive and prescriptive capabilities.

- **Inability to forecast risk:** The world is becoming harder to predict. As political, economic, and technology developments create realities nobody could expect, companies are struggling to prepare for new risks and the potential impact on growth, revenues, and overall performance.
- **Failing to provide the right tools:** While most of us readily connect digitally in our private lives, workplaces have been slow to take advantage of the opportunities from voice, mobility, or advanced technology. Few have the infrastructure or applications that provide the real-time, prescriptive insights needed to act quickly.

### Filling the information gaps

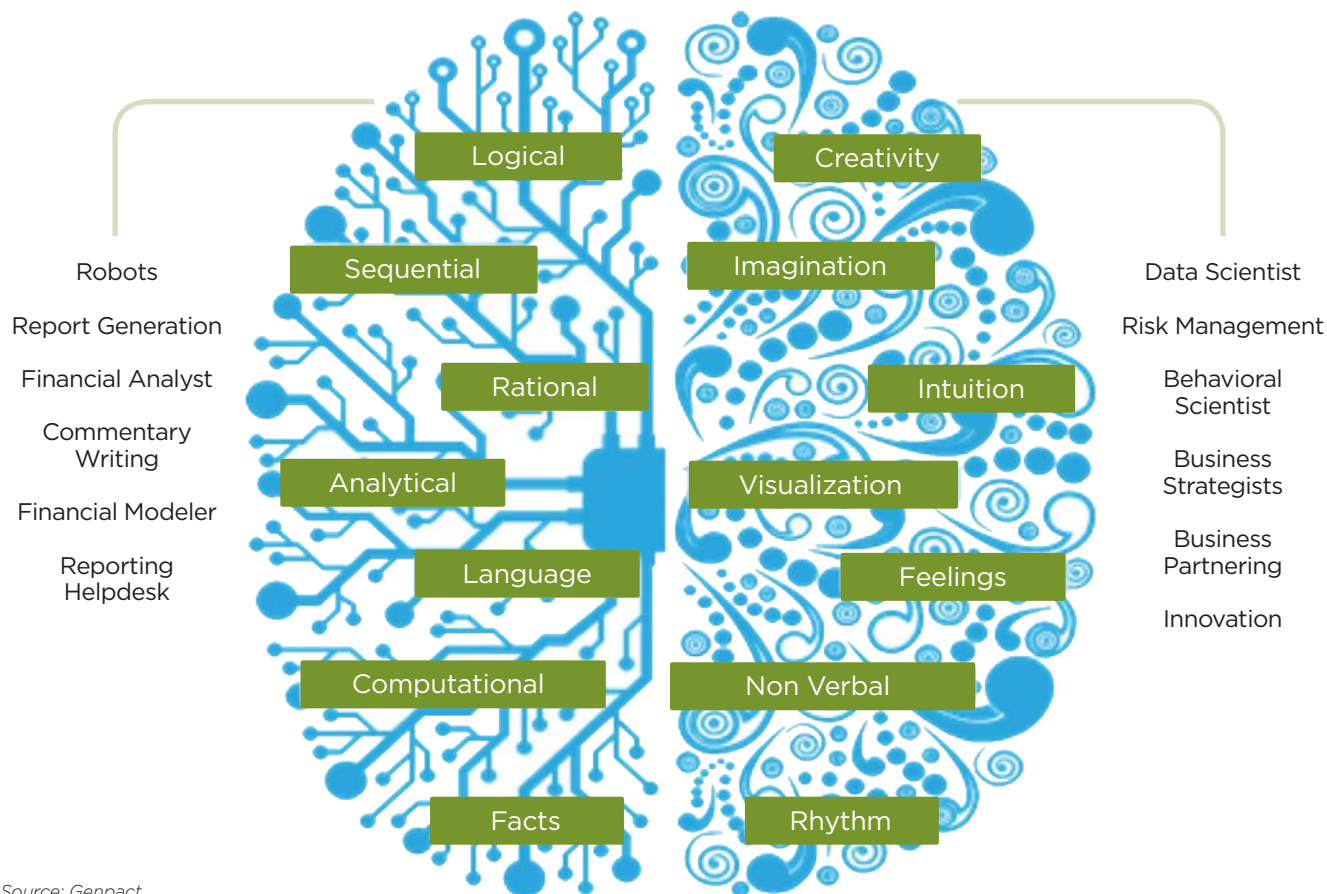
The best finance teams use digital advancements to fill the gaps between the information business teams want, what finance delivers, and what actions are achievable. There are four key ways to achieve this.

**Focus only on those things that are important to the enterprise.** As such, it's essential for organizations to constantly refresh the leading and lagging indicators they rely on. An unwillingness to change and a lack of scale contributes to the huge volumes of information that can paralyze decision makers. Focusing on what is truly important drives action.

**Harness large amounts of structured and unstructured data on customers, finance, and operations.** Digital tools handle it all with much less time and effort, empowering organizations to make predictive decisions. One aircraft manufacturer, for example, uses the internet of things and sensors on aircraft to capture data in real time. The result: fewer grounded aircraft and operational costs cut by up to 40 percent.

**Use artificial intelligence (AI) to turn analytics into insights.** Progress in computing and AI has significantly improved the accuracy of analytics-driven predictions. Our third-party risk management solution, for example, analyzes vendors' past behavior and patterns to predict how they will act and recommend whether companies should use them again. That has resulted in fewer compliance issues and more robust supply chains for global firms.

**Figure 1: As technology takes on left-brain activities, EPM becomes a better business partner**



Source: Genpact.

**Using apps to drive user experience and action:** A consumer packaged goods company has improved user experiences with an app that quickly connects the right cost-center analytics to the right cost owners in time to drive the right action.

**New skills needed**

While technology is one part of the solution, finance teams need broader business acumen to become true business partners. There are a number of trends we expect to see over the next four to five years that could influence whether they get there:

- The digital workforce will take on left-brain activities (see figure 1).
- Talent will become more adaptable and mobile, and the gig economy will change the shape of finance.
- Finance teams will develop new capabilities:
  - New skills to supervise robots and improve AI, for example
  - Specialists will emerge in EPM: cash or risk czars,

data scientists, chief economists, statisticians, and even anthropologists.

- EPM centers of excellence will become more specialized focusing on tax, risk, compliance, analytics, technology, and more.

**The differentiator: Maximizing human and digital skills**

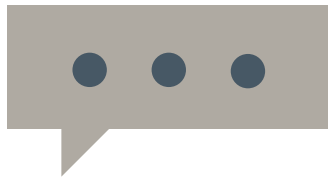
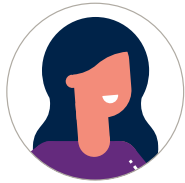
The widespread adoption of digital technologies will free up people to do what they do best—activities such as reasoning, planning, creativity, and problem-solving. That’s where we have a clear advantage over machines.

With the right blend of skills—across both humans and machinea—EPM will enable better business partnering by eliminating the gaps between the information desired, delivered and actioned. The result is a hybrid workforce that helps businesses make faster, more informed and accurate strategic decisions—a new source of competitive advantage.

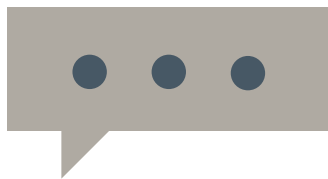
*Vivek Saxena is Global Record to Report Leader, Genpact. He is based in New Delhi, India.*

## Got questions...?

What is the most efficient and cost effective way to import bank data? We have to manage over 140 bank accounts.



Who can help me to identify the best way to create a model for forecasting different currencies in Emerging markets?

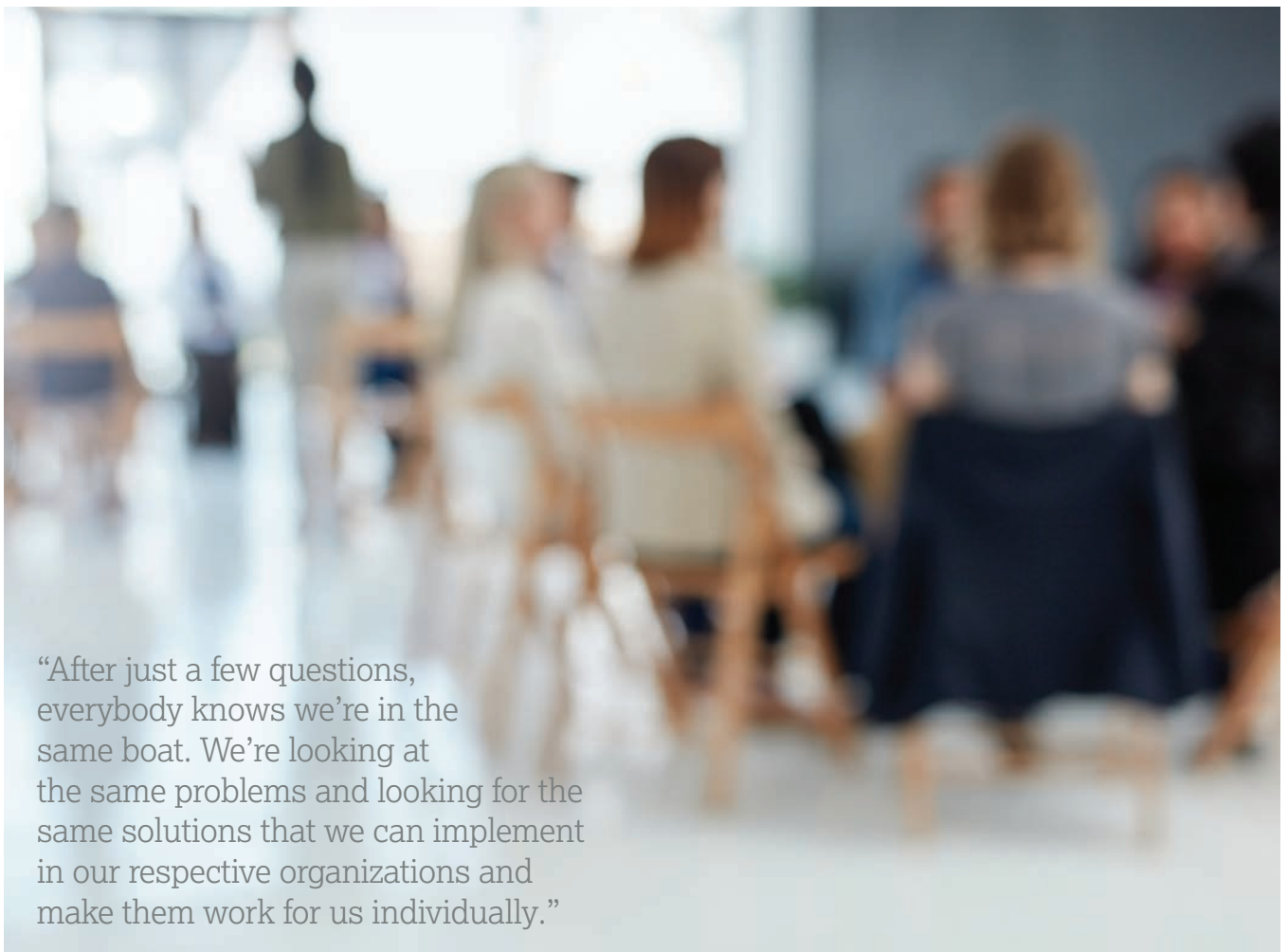


**Your peers have answers.**

Visit [collaborate.afponline.org](https://collaborate.afponline.org) to get your questions answered.

# FINDING COMMON SOLUTIONS

Treasury and finance professionals gathered for the Industry Roundtables at AFP 2018



“After just a few questions, everybody knows we’re in the same boat. We’re looking at the same problems and looking for the same solutions that we can implement in our respective organizations and make them work for us individually.”

For nearly a decade, treasury and finance professionals have gathered for the Industry Roundtables at AFP's annual conference. The roundtables, sponsored by Fifth Third Bank, provide practitioners with a forum to discuss key challenges they face in their respective industries, including retail, banking, energy and utilities, government, healthcare, education and non-governmental organizations, insurance and manufacturing. Fully 471 practitioners attended this year's event.

### Education and Non-Governmental Organizations

Over 40 practitioners attended the Education and Non-Governmental Organizations (NGOs) roundtable. Denise Laussade, CTP, director of the office of treasury operations for Purdue University, facilitated the roundtable, noting that while attendees hailed from institutions and organizations of many different sizes, their challenges are relatively similar.

"After just a few questions, everybody knows we're in the same boat," she said. "We're looking at the same problems and looking for the same solutions that we can implement in our respective organizations and make them work for us individually."

One key issue that many attendees are struggling with is how to do business abroad. Many academic institutions and NGOs operate in countries with very unique payment issues that need resolved, Laussade explained. "How do you do payments in Africa? Where do you go? There aren't a lot of established banks," she said. "Some of our schools mentioned that they were having difficulties making those payments. So people offered the solutions that have worked for their institutions or NGOs—whether it's mobile or cash payments."

Another hot topic of discussion was what institutions and NGOs are doing with their intermediate investment portfolios in the current rising-rate environment. "So many of us have taken a beating in fixed income instruments," Laussade said. "And what do you do? Do you liquidate and take the loss? Do you hold on? Do you change your strategy? That discussion was something very relevant to schools; many of us have operating cash pools or endowments that need active management."

### Manufacturing

Elizabeth Straw, treasury manager for electric motor manufacturer Regal-Beloit, led the manufacturing roundtable, which saw a turnout of nearly 90 practitioners. She noted that the roundtable was able to connect different types of manufacturing groups that were working on the same types of projects.

Treasury management system (TMS) selection and cash forecasting were two major topics of discussion. "A lot of people have not [purchased] TMS, so they were really interested in finding out about the systems," Straw said. "And a lot of people are frustrated in their ability to forecast cash—not just cash flow, but FX as well."

It likely comes as no surprise that repatriated earnings were also discussed at length in the manufacturing roundtable. "Cash repatriation is a big deal because everybody is taking money out of these stranded countries, and now we're looking at liquidity needs in all of those different countries," Straw said.

As for solutions to these issues, Straw admitted that unfortunately, manufacturers across the board had trouble coming up with a panacea. "Cash forecasting was the biggest frustration and no one had a really good answer for it," she said.

### Common problems and solutions

Straw has attended multiple manufacturing roundtables and she noted that many of the same issues are discussed year after year. Even if no perfect solution emerges, practitioners in the manufacturing sector return each year to explore potential new ways to solve their common problems.

Likewise, Laussade has been coming to the roundtables for a number of years and has seen many of the same issues come up regularly, though some have grown in importance over time. "Fraud is different level of interest to us these days; it wasn't as big in the past," she said. "We're also looking for new payments mechanisms; that's something that keeps coming back, and that's because the technology continues to change. So how do we stay up with technology as we try to solve the issues for our students, our human subjects or our faculty? How do we get payments made to our suppliers? How do we receive payments from our international students? All of those problems kind of ebb and flow. Today, they're important. They might subside for a year or two, and then they'll be important again in the future."



# Pardon the Interruption



“You could just hear people complaining about meetings or talking about their inbox being overloaded. And starting to connect the dots that hey, these are all different flavors of collaborative activities, right? It’s like people are in meetings or responding to emails. But it’s all part of the ground level work that goes into collaboration and what it means to work together.”

Reb Rebele explains why treasury and finance can’t get its work done

IRA APFEL

**W**hy is it so hard to collaborate in today’s workplace? Reb Rebele explains why FP&A workers can’t get their work done.

It’s easier than ever to connect with your co-workers and theoretically get things done. You’ve got email, text, private messaging, conference calling, and more.

So why, in reality, is it so challenging to collaborate at work? Robert “Reb” Rebele calls it the paradox of the connected workforce. We are so connected yet at the same time so disconnected, he argues and adds that employees are suffering from collaborative overload.

What can finance executives do about all this? Rebele will offer his advice when he speaks at FinNext 2019, March 17-19, in Las Vegas.

A researcher for Wharton People Analytics who teaches in the Master of Applied Positive Psychology program at the University of Pennsylvania, Rebele recently was a guest on AFP Conversations podcast. Here is an excerpt of Rebele’s conversation with host Ira Apfel:



**Ira Apfel: How might a CFO or a FP&A executive check to see if his or her workplace has a strong collaborative culture?**

**Reb Rebele:** I think if you're at that level of the organization, one of the key things to think about is what are your sources of data on the people and collaboration side. A lot of CEOs or CFOs could tell you a lot about their financial metrics and the suite of financial metrics that they could look to could tell them whether things are going well or not. Do you have the same range and quality of metrics on the people side and the collaboration side? do you actually know at an individual employee level who's performing well and who's not? It's actually a less common thing than you would expect. Organizations have all sorts of productivity metrics in a lot of cases. But they're not always actually that useful in identifying which individuals or in the context of collaboration, maybe even more importantly, which teams and groups are working most effectively.

So part of it is performance and productivity. But then part of it is engagement, motivation, attention, and energy. Some of the low hanging fruit in terms of where to collect some of this data, we talked before about communications meta data, that's one place where you got some existing data that you could actually start to analyze. Things like 360 or network surveys within organizations are really helpful. So getting employees to talk about who they actually interact with to tell you here are the people I'm actually interacting with day to day. And you'll be surprised at how often that doesn't map onto any kind of organizational chart. And you'll be surprised at how often some of the people who you think are your star employees are far more isolated than you would necessarily want them to be in an ideal world once you start to ask them who are you actually connecting with and how helpful are you all being to one another.

**Ira Apfel: When you started to do research on this topic, did you hypothesize that there was a problem, or were you surprised at the level of dysfunctionality?**

**Reb Rebele:** I'd say yes! I think we heard a lot about this from talking to lots of people as they went about their day to day work lives. You could just hear people complaining about meetings or talking about their inbox being overloaded. And starting to connect the dots that hey, these are all different flavors of collaborative activities, right? It just sounds like communication, right? It's like people are in meetings or responding to

emails. But it's all part of the like just ground level work that goes into collaboration and what it means to work together. I heard some people including ourselves talking about, "Hey, this is a challenge." that led us to think, "Yeah, there is an issue here."

Highly collaborative employees then feel burnt out by all of these collaborative demands, by all of these help requests and end up leaving the organization or staying and being less effective and potentially grumpier and therefore spreading ill will among colleagues. That's actually a much more substantial cost I think than we necessarily would've hypothesized going in.

**Ira Apfel: What's the first step a finance executive should take to address this problem?**

**Reb Rebele:** If you're in a leadership role, I would start by looking at your data infrastructure on the people side of things. If you invest in a robust data infrastructure on people management and culture and collaboration issues, you'll set yourself up to be able to ask lots more questions going forward. As it stands, if you don't have reliable, easy to access data in terms of how engaged people are, where their time and attention is going, what the sort of productivity and output benefits are from that, then even if you come up with an answer, it's going to be an educated guess at best. And sometimes that's all you have to work with. But the more you can invest in data infrastructure, the better off you'll be in the long run.

At sort of lower levels and even at the individual employee level, I think the one piece of advice is to just start paying attention to where your time, attention, and energy is going. There's an exercise that turns into a sort of structure activity that you can do in like an hour and a half called the job crafting exercise where you just sort of map out using effectively post it notes to say, "Here's where my time, attention, and energy's going right now. Here's what I'm good at, what I value, what sustains my energy and productivity," and then you sort of recraft your existing job to better align with those things and look for what are the small changes that I can make that will make a big difference. Even something like doing that for an hour/hour and a half, or just like paying attention as you go about your day and saying, "Could I be a little bit more efficient here? Can I do this in a way that's actually less efficient but more productive and more enjoyable?" That reflective attitude will help you identify places where you can make some changes.

*Hear the entire conversation at [www.AFPonline.org/Conversations](http://www.AFPonline.org/Conversations).*



# EYE on TOMORROW

## Blockchain technology's impact on the future of treasury and finance

ANDY FATELY

**B**anking and finance face intriguing challenges in the near future. As the world adopts more technological innovation, navigating the minefield of new ideas will require increased agility. Blockchain will almost certainly play a significant role in these changes.

How will blockchain-based financial tools fit into the traditional understanding of finance? By itself, finance is an elusive concept to describe. From company to company, finance can mean anything from liquid resources to a scientific study of funds and global trends. Yet one definition captures several elements worth exploring. Finance includes the circulation of money, the granting of credit, the making of investments and the provision of banking facilities. To a corporate treasury department, these are their collective charge, their *raison d'être*. These qualifying factors appear to be fruitful ground for study and form a hypothesis of how blockchain may impact the financial sphere.



### **Circulation of money**

Of the four features, money is the one that has changed most due to advances in technology. It is easy to point to the advent of cryptocurrencies and describe them as the ‘new’ money. But it would also be premature to do so. Money has a very specific definition; it must serve as a unit of account, a medium of exchange and finally, a store of value.

Using Bitcoin as an example, and working in reverse, a cryptocurrency might be considered a store of value, albeit an imperfect one. Based on Bitcoin’s demonstrated volatility, no one would consider the coins a safe store of value. As to a medium of exchange, Bitcoin does serve that purpose in very limited circumstances. In nations where the economy has collapsed, e.g., Venezuela, and the local fiat currency has essentially become worthless, citizens who are able have been willing to use Bitcoin as money. Yet that is the exception, not the rule, and there is no indication that mainstream economic activity is moving toward Bitcoin acceptance.

Finally, Bitcoin’s greatest failure is in the primary function of money—its ability to act as a unit of account. Regardless of how much crypto enthusiasts discuss their holdings, they are always converted into fiat currency amounts. Those assets are described as X dollars worth of Bitcoin, not X Bitcoins. By this qualifying factor, it would be incorrect to define cryptocurrencies as money.

Traditional money, however, has changed a great deal over time. Moving from paper currency to digital representations has enabled payments to be made quickly and more efficiently with less risk of theft. As well, allocation and segregation of funds is far more timely and secure.

There is every reason to believe that blockchain technology is going to continue that trend, reducing the time lags from hours and days common today, to seconds or minutes in the future. It’s even viable that there will be an eventual tokenization of fiat currencies by national central banks, which will require blockchain, though admittedly that is still a hazy prospect.

Looking ahead, blockchain is ripe to enhance the speed of transaction settlement, reducing errors and saving significant costs in the operational aspects of investment. It is the perfect vehicle to change settlement timelines, which are currently more appropriate for paper documents than for the digitized world in which we live.

### Granting of credit and the provision of banking facilities

It is hard to separate these two features of finance as, historically, banks have been the primary grantors of credit to borrowers. In fact, lending money is half their mission statement, which is generally defined as ‘taking deposits and making loans’. There has been greater caution in the utilization of new technologies in the credit granting business, with arguably credit scores and agency ratings the most recent changes.

A fair question is, which technology will have the greatest impact going forward? Of the three natural candidates, artificial intelligence (AI), machine learning (ML) and blockchain, right now blockchain is the only one getting serious consideration in this area. A survey of bank announcements<sup>1</sup> demonstrates that AI and ML are seen as having the most potential to impact customer service or risk management. Credit allocation is not even a consideration.

On the other hand, because of its inherent characteristics, blockchain is likely to have a much different, and more disruptive, role in the granting of credit in the future. It has the ability to lead to the democratization of lending by expanding the nascent peer-to-peer (P2P) lending networks that already exist, as well as enhancing banks’ ability to improve their lending process.

P2P lending is already gaining traction with numerous companies competing in the space. However, at this time, it remains focused on personal and small business loans. It is also an extremely small slice of the overall lending market. The latest estimates indicate that as of 2015, the total global P2P loan books were ~\$64 billion<sup>2</sup> and an analysis by Statista forecast that to grow to \$1 trillion by 2025.<sup>3</sup> In contrast, according to the Bank for International Settlements (BIS), as of the end of Q1 2018, total bank credit to nonfinancial counterparties totaled \$69.9 trillion across all currencies!<sup>4</sup> So at this stage, P2P lending is still a tiny fraction of the loan market.

### Blockchain in corporate treasury

Looking ahead, there are three significant ways blockchain technology can impact corporate treasury:

- **Cash management:** Blockchain has the power to disrupt many aspects of this process; in investments, by reducing the time and resources necessary to insure investments are made when and where desired with limited human intervention; and in payments, by enabling a more efficient payment systems for corporates, whether to enable vendor payments or move cash internally.
- **Credit:** One of the trends in the wake of the financial crisis in 2008 was the significant buildup of cash on corporate balance sheets. Corporate treasurers are tasked with the offsetting goals of highest returns with least risk. The development of blockchain-based systems that enable P2P lending may be exactly what is necessary to achieve that dual mandate.
- **Money:** Banks are developing highly specific products on a private blockchain designed to represent specific values of fiat currencies and not to have their own underlying market. For treasurers, this means it is critical that better cash management information is available internally, as well as proper investment and payment guidelines are put in place for the future. The benefit will be reduced risk of non-market loss.

### An evolving process

We have already witnessed significant changes in the investment process due to technological change. Whether discussing the remarkable reduction in equity brokerage fees, the advent of ETFs and algorithmic trading, or the use of AI in the investment decision process (think robo-advisors), this is the part of finance that has already changed the most. That doesn’t mean we have reached an end state, however.

Looking ahead, blockchain is ripe to enhance the speed of transaction settlement, reducing errors and saving significant costs in the operational aspects of investment. It is the perfect vehicle to change settlement timelines, which are currently more appropriate for paper documents than for the digitized world in which we live.

Finance as we know it today will continue to evolve as technology improves. Blockchain, in particular, is certain to be a major element that will shape and direct the finance industry for many years to come.

*Andy Fately is Chief Strategist, 9th Gear Technologies.*



# NEW on the BLOCK

What's new in blockchain applications for treasury and finance

DR. SEAN STEIN SMITH AND ROBERTO CRUZ JR., CTP

If 2017 was the year blockchain burst into the mainstream, 2018 could best be categorized as the trough of disillusionment as many once promising projects were either shelved or relegated to pilot phases. The truth about blockchain and finance applications lies somewhere in between, with institutional fund flows and enterprise-ready applications steadily entering the marketplace.

While it is true that the majority of investment and interest in the cryptocurrency and blockchain space in the early stages was concentrated among individual investors, institutional interest continues to increase.

## Cryptocurrencies without the price volatility (up or down) represent a potential new asset class for both investment and utilization as collateral or other underpinning for financing arrangements.

In no order, then, here are several developments treasury and finance professionals should watch:

### Stablecoins

Whether it is the launch of an institutional trading and investing platform at Fidelity, the granting of custodial banking licenses to organizations like Coinbase, or the proposed 2019 revision of BitLicense requirements in New York, it is clear that the blockchain ecosystem is evolving toward an enterprise-driven space. In addition to the work currently underway on the blockchain side, the introduction and refinement of stablecoins represents a trend that finance and treasury professionals should be aware of for enterprise adoption.

Cryptocurrencies without the price volatility (up or down) represent a potential new asset class for both investment and utilization as collateral or other underpinning for financing arrangements. While the cryptocurrency market, both from a product as well as a regulatory perspective, remains an emerging space the development of products that fills a need of institutional players is encouraging for organizations seeking enterprise ready solutions.

### Lightning Network

Two other blockchain-based applications also bear watching. The Lightning Network, although based on bitcoin, has broader implications. This network utilizes concepts such as sidechains and payment channels to use blockchain to anchor the opening and ending balances related to transactions. Such an approach allows counterparties to sidestep the costly and time-consuming proof-of-work transaction validation

process that renders traditional bitcoin processing unwieldy for enterprise scaling while still maintaining the security and peer-to-peer nature of blockchain itself. Issues remain with securing and attesting to the data contained on these different chains, but the development of faster and more efficient blockchain-based payment systems is a promising development.

### Tokenization

Demonstrated most notably by the debut of Currency.com, a European trading platform using tokenized securities, the concept of tokenization represents an interesting development. Underpinning tokenization is the desire to connect blockchain with physical assets or other real-world items or pieces of information. Tokenization allows the transfer and representation of ownership of physical assets using a blockchain to secure and underpin the history and evidence of ownership.

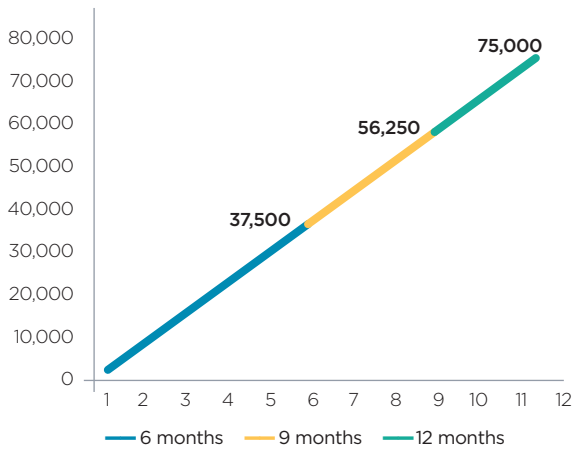
Tokenization offers several benefits for treasury and finance. First, the decentralized and distributed nature of blockchain itself allows investment funds to be transferred and handled by individuals and institutions on a global basis, bypassing the need for dealing with different legal and geographic issues. Second, the ability to invest in partial ownership of assets on a global basis allows the funds under management to be more diversified since the assets open for investment are more numerous. This increased ability to invest in a truly global and diversified portfolio also allows organization to unlock liquidity of physical assets that may have otherwise remain underutilized. Third, the reduced costs and organizational friction associated with blockchain are clearly associated with the tokenization of physical assets.

### More treasury applications

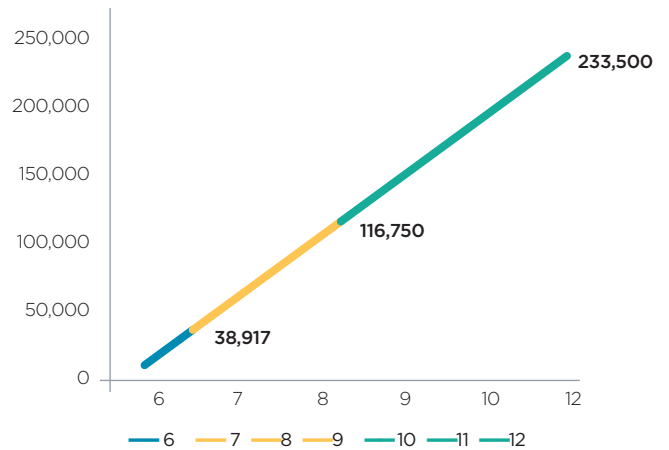
There has been an increase in the buzz surrounding blockchain technology and its potential applications for the financial world in general and the treasury function specifically. Various blockchain options have resulted in proof-of-concept consensus methodologies being used in applications such as private placement note issuances, letters of credit, know your customer, and transactional payment processing.

**Figure 1 illustrates the benefits and savings possible via future blockchain integration with treasury processes:**

**Standby and Trade Letters of Credit**



If an LOC is issued for six month but the paperwork is not received back for an additional three or six months, you can see how the cost increases 50% -100% vs immediate release from Blockchain.



The impact of receiving payments from a Blockchain issued Trade LOC could potentially reduce the time of paperwork confirmation and acceptance by weeks if not months. Illustrated above is the impact on a 6 month trade LOC being paid immediately vs 3 and 6 months later to a company with CoC of 4.67%.

Source: Stein Smith and Cruz.

KYC. Blockchain offers this opportunity for further streamlining and resource optimization by managing the information sharing between all blockchain network members simultaneously in real time. The benefits increase when the information is utilized in repetitive processes such as initial account set-up, account updates including signatories, and annual reviews.

Letter of credit (LOC) processing. Negotiations that occur during the initial set-up may last longer than one month. A blockchain-based process can handle these transactions and updates on a real-time basis and automate the downstream action items. The backend completion provides further benefits and opportunities for treasury. Another challenge is liability associated with outstanding LOCs. For example, a \$10-million LOC at 75 bps fee closing immediately versus a four-week delay will result in hard cost savings of more than \$6,000. This also works on the payment side for the beneficiary/recipient organization. The payment will be released immediately once the requirements are satisfied resulting in improved cashflow.

Trade Finance: Last year saw the first trade finance transaction using blockchain technology. This is the next step in replacing this paper-dominated trade business.

Other blockchain introductions include:

- World Bank issuing bonds exclusively through blockchain in conjunction with the Commonwealth Bank of Australia (CBA) dubbed “Bondi”
- Contract creation and payment by Aeternity
- Replacing current processing for Australia equity Transactions of the Australian Securities Exchange (ASE) by 2020
- The first structured product to be registered, cleared, and settled using distributed ledger technology was created and implemented by Marex Solutions.

Treasury, as the department closest to the financial institutions building many of these blockchain systems, needs to take the lead and identify the KPIs that are impacted and how they align with the overall business plan.

*Dr. Sean Stein Smith, CPA, is an assistant professor at the City University of New York, and a member of the advisory board of the Wall Street Blockchain Alliance. Roberto Cruz Jr., CTP, is the Treasury Director for the North American Parent Subsidiary of an international company.*

# The RACE





JEFF ELLIS AND RYAN DRIMALLA

# is On

## Implementing strategic AI to comply with the new lease accounting standard

The long-anticipated effective date for updates to lease accounting standards (January 1, 2019 for companies applying IFRS 16 and public companies applying ASC 842) has come and gone. Still, many companies with large volumes of leases are scrambling for solutions to help them identify and analyze lease data quickly and accurately. To address the lease analysis requirements under the new standards, organizations with sizeable lease volumes will likely need to rely on a combination of expertise and software.

Automated contract extraction software (powered by machine learning or artificial intelligence) can provide a substantial lift to an organization's lease analysis efforts. However, those tools have limitations when it comes to addressing the complexities of accounting standards and cannot fully replace the need for human accounting expertise and contract analysis. Teams responsible for adopting the new standards should not overlook the time required to complete these activities and implement appropriate technology to support them in advance of the deadline.

Lease analysis as part of implementation of the new standards is comprised of several processes including:

- Initial identification of all lease agreements and contracts potentially containing leases (to the extent these documents are not already identified by internal lease or contract management systems);
- Abstraction or codification of basic leasing information necessary to understand obligations and input the data to lease accounting systems;
- Determination of how to implement at the lease portfolio level (electing the practical expedient instead of accounting for individual leases);
- Separation of lease and non-lease components for separate accounting; and
- Identification of embedded leases in goods and services contracts.

These processes can be time-consuming and complex. While some can be streamlined through targeted application of contract extraction software, others require more significant expert (i.e., human) attention.

### In or Out

Most contract extraction software tools provide several “out of the box” clauses that identify and extract some relevant lease information (e.g. contract title, agreement type, parties, effective and commencement dates, term, termination, general pricing terms). These core clause extractions can be effective for identifying leasing contracts across a company’s contract or document population and providing basic data required to record leases as part of adopting the new standards. For companies starting the lease identification and analysis effort from scratch or working from relatively immature lease or contract management systems, this assist from automation can spare hundreds of manhours.

However, out of the box, these tools are mostly trained to extract terms relevant for lease administration and may not be adequate to capture all provisions needed to account for the lease properly. The types of information that may be overlooked without manual analysis include purchase options, fiscal funding clauses, residual guarantees, deposits, lease incentives, services that could give rise to non-lease components and supplier substitution rights.

Further, companies that did not previously assess whether their agreements for goods or services contained leases, should take a measured approach when using contract extraction software to facilitate the review of agreements entered into or modified for periods beginning after May 28, 2003 (the effective date of the guidance for determining whether an arrangement contained a lease under U.S. GAAP). Because the guidance in the existing lease standards requires extensive judgment to determine whether an arrangement involving the use of property, plant, or equipment not located on the customer’s premises or being operated by the customer contained a lease, out of the box tools require expert-directed training to locate content indicative of embedded leases; those tools should not be relied upon, without an additional layer of manual interpretation, to conclusively identify embedded leases.

Additionally, when dealing with relevant contract clauses and content, software can only identify and extract the verbatim text from the document—often entire and numerous paragraphs. While this eases the transition to the new standards, a company will still need to either input the extracted information into the lease accounting software or spreadsheet or convert the extractions to a structured data format for upload to the lease accounting software. Further, the software used to extract information from the lease agreement cannot automatically generate an abstract based on interpretations of, or make judgments about, that information, such as whether the exercise of a renewal or purchase option was reasonably assured at the inception of the lease.

To effectively locate embedded leases, extraction software could require close to 100 hours of training depending on the complexity of the contract set. The process of training the software requires accounting experts to provide guidance on what elements of a contract are important to the determination of whether the arrangement could contain a lease, technologists to manage the machine learning, and both to engage in the iterative refinement of the extraction logic. By deploying an implementation strategy that coordinates accounting expertise and technology, companies can ease the adoption of the new standard.

Examples of these coordinated efforts include the following:

- To train the software to capture more nuanced clauses and content, accounting experts can provide “seed” interpretations and guide the technology experts in developing a sophisticated machine-learning training program.
- In instances when the software is unable to adequately capture certain extractions, proficient accounting expertise ensures all key information is identified in the lease for appropriate analysis.
- To transform verbatim extractions into usable data or abstractions, accounting expertise can be applied to understand the adoption requirements and data models utilized by lease accounting systems. Technology expertise can provide data structuring and mapping support to bridge the lease analysis with adoption practices and downstream systems.
- When warranted by large lease volumes, experience in delivering tech-enabled managed contract review, guided by protocols developed by accounting experts, can be leveraged to efficiently and accurately harvest relevant data for implementation.

As companies face lease volumes that overburden their resources, the most efficient strategy for tackling lease analysis is to combine automated contract extraction tools with accounting and technology expertise. The right team of experts can facilitate and expedite implementation and give corporations the best chance of accomplishing and maintaining compliance.

*Jeff Ellis is a Senior Managing Director at FTI Consulting. He is a member of the Forensic & Litigation Consulting segment. Ryan Drimalla, Esq., leads operations and solution development for FTI Technology’s Contract Intelligence service. He focuses on enterprise contracting requirements related to regulatory, compliance, risk and corporate transactions.*



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

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Treasury Specialist  
EQUATE Petrochemical  
Company K.S.C.C.  
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KUWAIT

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Cash Management Sales Officer  
Popular Bank  
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Raquel Alvarez Mateos, CTP  
Cash Manager North America  
Hexion Inc.  
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UNITED STATES

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Sr. Treasury Manager  
PVH Corp.  
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Toronto, ON  
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Katie Armstrong, CTP  
Manager, Treasury Solutions  
Royal Bank of Canada  
Toronto, ON  
CANADA

Shehryar Arshad, CTP  
Head, Financial Market Sales  
Standard Chartered Bank  
Doha  
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Sebastien Auclair, CTP  
Director Corporate Sales & Structuring  
Banque de Montreal  
St-Hubert, QC  
CANADA

Tony Avila, CTP  
Treasury Analyst  
Aecom  
San Gabriel, CA  
UNITED STATES

Badawi Badawi Shahin, CTP  
Assistant Manager  
Arab Bank  
Amman  
JORDAN

Sean Baenziger, CTP  
Sr. Financial Business Analyst  
Amazon.com  
Renton, WA  
UNITED STATES

Coreen Bank, CTP  
Sr. Director of Tax & Treasury  
PKC Group  
Plymouth, MI  
UNITED STATES

Nabani Banks, CTP  
Senior Treasury Analyst  
Rollins, Inc.  
Atlanta, GA  
UNITED STATES

Arun Batra, CTP  
Sr Treasury Manager  
Agilent Technologies, Inc.  
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Manager, Treasury Risk Management  
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Michele Bogardus, CTP  
Financial Analyst  
City of Manchester NH  
Manchester, NH  
UNITED STATES

Briana Booker, CTP  
Treasury Specialist  
Academy Sports + Outdoors  
Katy, TX  
UNITED STATES

Caroline Bove, CTP  
First Financial Bank  
West Chester, OH  
UNITED STATES

William Boyle, CTP  
CIBC  
Halifax, NS  
CANADA

Megan Boyles, CTP  
VP  
SunTrust  
Atlanta, GA  
UNITED STATES

James Brand, CTP  
Analyst  
PNC Bank  
New York, NY  
UNITED STATES

Elizabeth Bravacos, CTP  
Treasury Management Officer  
PNC Bank  
Philadelphia, PA  
UNITED STATES

Marsha Brenton, CTP  
Cash Manager  
CIBC  
Amherst, NS  
CANADA

Jared Brewster, CTP  
Assistant Vice President  
Chatham, NJ  
UNITED STATES

Jarryd Briggs, CTP  
Assistant Treasurer  
Umpqua Bank  
Portland, OR  
UNITED STATES

David Blair Brown, CTP  
Senior Manager & Team Leader  
CIBC  
Halifax, NS  
CANADA

Jennifer Brown, CTP  
Assistant Director of Cash  
Management  
University of Illinois  
Urbana, IL  
UNITED STATES

Michael Brown, CTP  
Manager  
EY  
Chicago, IL  
UNITED STATES

Frank Buda, CTP  
Sales Manager, Global Liquidity  
and Cash Management  
HSBC  
Maple, ON  
CANADA

Mark Bumann, CTP  
Corporate Treasury Analyst  
Eaton Vance Corp.  
Revere, MA  
UNITED STATES

Carley Burns, CTP Sr. Product Manager BBVA Compass Birmingham, AL UNITED STATES	Mrudul Chillarige, CTP Solution Advisor Deloitte Hyderabad, Andhra Pradesh INDIA	Brad Dale, CTP Treasury Analyst Bayer Corporation Pittsburgh, PA UNITED STATES	James Edwards, CTP Senior Analyst First Tennessee Bank Memphis, TN UNITED STATES	Dorota Foley, CTP Cash Manager Lyondell Chemical Co Pearland, TX UNITED STATES
Patricia Bush, CTP Content Development Manager Fiserv Solutions, LLC Lawrenceville, GA UNITED STATES	Darrell Chinnery, CTP Treasury Management Specialist Happy State Bank Carrollton, TX UNITED STATES	John Davies, CTP Treasury Analyst Western Union Business Solutions Peterborough UNITED KINGDOM	Takayuki Eguchi, CTP Senior Treasury Analyst Freescale Semiconductor, Inc. Phoenix, AZ UNITED STATES	Matthew Fong, CTP Treasury Management Officer J.P. Morgan Chase Brooklyn, NY UNITED STATES
Emily Byrd, CTP Treasury Analyst Inspire Brands Atlanta, GA UNITED STATES	Daria Cho, CTP Mgr, Sales Enablement & Servicing Coordination RBC Royal Bank Toronto, ON CANADA	Tyler Davis, CTP Senior Treasury Analyst Micron Technology, Inc. Boise, ID UNITED STATES	Aly El Feky, CTP Manager, Group Treasury & Cor- porate Finance Management Abdul Latif Jameel Co. Ltd. Jeddah SAUDI ARABIA	Linda Foun, CTP Consulting Treasury Analyst Raytheon Company Waltham, MA UNITED STATES
Catherine Cantasano, CTP Senior Vice President, Treasurer W.P. Carey & Co., Inc. New York, NY UNITED STATES	Young Jae Cho, CTP Treasury Manager LG Electronics Englewood Cliffs, NJ UNITED STATES	Pritpal Dayalal, CTP Analyst Sumitomo Mitsui Banking Corp. Canada Br Brampton, ON CANADA	Yasmine Elgamil, CTP Senior Treasury Analyst Electrolux Egypt for Home Appliances Cairo EGYPT	Lisa Francesca, CTP Treasury Consultant MassMutual Financial Group Springfield, MA UNITED STATES
Hector Carrasquillo, CTP Corporate Treasurer Keystone Foods Ambler, PA UNITED STATES	Charles Chuman, CTP VP of Revenue CHD Expert Chicago, IL UNITED STATES	Jarrid Dekovitch, CTP Senior Treasury Analyst Element Fleet Management Corp Sparks, MD UNITED STATES	Jed Ellis, CTP Treasury Analyst Advanced Energy Industries Inc. Fort Collins, CO UNITED STATES	Katherine Freedman, CTP Sr. Treasury Analyst Lennar Corporation Miramar, FL UNITED STATES
Krista Carroll, CTP Regions Bank Birmingham, AL UNITED STATES	Joseph Clark, Jr., CTP Cash/Debt Analyst Huntsville Hospital System Huntsville, AL UNITED STATES	Ashley Desmond, CTP Cash Management Advisor Northwest Bancshares, Inc. Williamsville, NY UNITED STATES	Emir Erkan, CTP Treasury Analyst Adyen N.V. Amstelveen NETHERLANDS	Daniel Furman, CTP Senior Treasury Analyst Cummins Inc. Indianapolis, IN UNITED STATES
Coral Cass, CTP Staff - Global Treasury Services EY Charlotte, NC UNITED STATES	Nick Clasen, CTP Cash Management Assistant Ohnward Bancshares Inc Fulton, IL UNITED STATES	Stacy Donohoe, CTP Sr. Manager, Treasury bluebird bio, Inc. Waltham, MA UNITED STATES	Paul Espanol, CTP Vienna, VA UNITED STATES	Kyle Gaffaney, CTP Treasury Analyst The Mosaic Company Plymouth, MN UNITED STATES
Graham Casselman, CTP Toronto, ON CANADA	Damon Coakley, CTP Treasury Sales Consultant Citibank Oakland, CA UNITED STATES	Matthew Doughty, CTP Financial Operations Supervisor Social Finance Inc. Murray, UT UNITED STATES	Dionne Essie, CTP Senior Treasury Analyst Oracle Corporation Reno, NV UNITED STATES	Bharathi Gajendran, CTP Senior Executive, Corporate Treasury Aster DM Healthcare Dubai UNITED ARAB EMIRATES
Robyne Chambers, CTP Global Treasury Business Partner Rio Tinto Singapore SINGAPORE	Cormac Conahan, CTP Treasury Manager City of Boca Raton Boca Raton, FL UNITED STATES	Arvind Dube, CTP Treasury Finance Consultant Arvind Dube Gurgaon INDIA	Justin Fanning, CTP Director of Debt and Capital Financing FSU Tallahassee, FL UNITED STATES	Timothy Gallagher, CTP Assistant Director Treasury Operations The Hartford Hartford, CT UNITED STATES
Victor Chan, CTP Vice President Morgan Stanley New York, NY UNITED STATES	Deborah Connell, CTP Cash Manager Driscoll International Watsonville, CA UNITED STATES	Monte Dunlow, CTP Financial Analyst Maersk Line, Limited Norfolk, VA UNITED STATES	Matthew Ferguson, CTP Regions Bank Chattanooga, TN UNITED STATES	Sean Gannon, CTP Senior Analyst PFM Asset Management LLC Winter Park, FL UNITED STATES
Dipesh Chandarana, CTP Assistant Vice President Deutsche Bank Jersey, NJ UNITED STATES	Julie Cook, CTP Treasury Management Fifth Third Bank Cincinnati, OH UNITED STATES	Jennifer Earyes, CTP Director, Treasury Risk Navient Corporation Reston, VA UNITED STATES	Kristin Ferraro, CTP Director - Treasury Operations Blackstone Mamaroneck, NY UNITED STATES	Julian Garbaccio, CTP Director Jersey City, NJ UNITED STATES
Hee Chang, CTP Treasury Management Specialist 1st Century Bank Los Angeles, CA UNITED STATES	Aaron Cox, CTP Treasury Management Specialist Huntington Bank Columbus, OH UNITED STATES	Justin Ebert, CTP Treasury Analyst PNC Bank Grand Rapids, MI UNITED STATES	Kevin Finn, CTP Chicago, IL UNITED STATES	Lindsay Gentile, CTP Treasury Sales Associate J.P. Morgan Seattle, WA UNITED STATES
Joon Chang, CTP Treasury Relationship Manager- Community Association Banking Washington Federal Sammamish, WA UNITED STATES	Lori Mignon Crawford, CTP Group Vice President SunTrust Atlanta, GA UNITED STATES	Julie Eck, CTP Treasury Manager The North Highland Company Roswell, GA UNITED STATES	Peter Fisher, CTP Treasury Analyst Moody's Corporation New York, NY UNITED STATES	Alok Ghai, CTP Vice President RBC Capital Markets Brooklyn, NY UNITED STATES
Brenda Chapman, CTP Manager of Cash Management Carrols Corporation West Monroe, NY UNITED STATES	Joe Crifasi, Jr., CTP Fixed Income Strategist First Bankers' Banc Securities Saint Louis, MO UNITED STATES	Patrick Eckert, CTP Trader Money and Capital Markets Düsseldorfer Hypothekenbank AG Düsseldorf, NW GERMANY	Rich Florez, CTP Treasury Manager WinnCompanies Hudson, MA UNITED STATES	Nassim Gharib, CTP Argo Tea Chicago, IL UNITED STATES
Ju-Hsin Chen, CTP Senior Associate JPMorgan Chase Jersey City, NJ UNITED STATES		Erin Floyd, CTP Treasury Management Sales Consultant Wells Fargo Bank, N.A. Portland, OR UNITED STATES	Jacob Gibbons, CTP Treasury Analyst Univar Downers Grove, IL UNITED STATES	

# DECEMBER 2018B – JANUARY 2019 CTPs

Cheryl Gilge, CTP  
Treasury Analyst III  
CUNA Mutual Insurance Society  
Madison, WI  
UNITED STATES

Michael Gilles, CTP  
Treasury Analyst  
Coulter Companies  
Peoria, IL  
UNITED STATES

Tammie Glorioso, CTP  
Treasury Management Sales  
Analyst  
Bank of America  
Newark, CA  
UNITED STATES

Eric Gonzales, CTP  
Associate  
Redbridge Debt & Treasury  
Advisory  
Houston, TX  
UNITED STATES

Kevin Gravina, CTP  
Associate Treasurer  
Colorado School of Mines  
Golden, CO  
UNITED STATES

Christopher Graybeal, CTP  
Treasury Advisor  
FedEx Corporation  
Memphis, TN  
UNITED STATES

Matthew Greisler, CTP  
Director of Corporate Finance  
Graham Holdings  
Woodbine, MD  
UNITED STATES

Andrew Grove, CTP  
Investment Administrator  
Caterpillar  
Washington, IL  
UNITED STATES

Vivek Mahendra Gupta, CTP  
Head Of Treasury Sales  
Union National Bank  
Abu Dhabi  
UNITED ARAB EMIRATES

Jorge Gutierrez, CTP  
Treasury Management Consultant  
Capital One  
Long Island City, NY  
UNITED STATES

Matthew Harlan, CTP  
Sr. Treasury Analyst  
Haemonetics  
Dorchester, MA  
UNITED STATES

William Harris, CTP  
Regions Bank  
Indianapolis, IN  
UNITED STATES

Greg Haugen, CTP  
Treasury Analyst  
Argo Group  
San Antonio, TX  
UNITED STATES

Michael Haydin, CTP IV  
Senior Business Advisor  
DiLeo & Charles Tax and  
Consulting  
Rye, NY  
UNITED STATES

Kevin Heck, CTP  
Manager Treasury Operations  
Gategroup Holding AG  
Zurich  
SWITZERLAND

Santosh Hegde, CTP  
Senior Treasury Architect  
Santosh Hegde  
Marietta, GA  
UNITED STATES

Hatem Helal, CTP  
Group Treasury Analyst  
DMG - Mountain View  
Cairo  
EGYPT

Rhonda Henry, CTP  
Lead Treasury Specialist  
FBL Financial Group  
West Des Moines, IA  
UNITED STATES

Kyle Heutel, CTP  
Sr. Treasury Analyst  
Centene Corporation  
Saint Louis, MO  
UNITED STATES

Jon Paul Hickey, CTP  
Regions Bank  
Memphis, TN  
UNITED STATES

James Hildreth, CTP  
LifePoint Hospitals Inc  
Nashville, TN  
UNITED STATES

Dominic Ho, CTP  
Treasury Trader  
Western Union  
London  
UNITED KINGDOM

Teresa Holifield, CTP  
Administrator and Product  
Manager  
Proformance, Inc.  
Mckinney, TX  
UNITED STATES

Andrew Crane Holland, CTP  
Regions Bank  
Orlando, FL  
UNITED STATES

Karl Honegger, CTP  
Treasury Analyst  
Whiting Oil and Gas  
Broomfield, CO  
UNITED STATES

Garey House, CTP  
Business Development Banker  
Capital One  
Somerville, MA  
UNITED STATES

Vanessa Hubbard McMichael,  
CTP  
Associate  
Wells Fargo Bank  
Charlotte, NC  
UNITED STATES

Connor Hughes, CTP  
Vice President  
Citi  
San Francisco, CA  
UNITED STATES

Samson Ikenga, CTP  
Team Lead, Treasury  
Operations-Foreign Exchange  
Fidelity Bank PLC  
Calgary, AB  
CANADA

James Inabinet, CTP IV  
Treasury Analyst  
Regional Management Corp.  
Greer, SC  
UNITED STATES

Daniel Irawan, CTP  
Manager  
Astra International Tbk Pt  
Jakarta  
INDONESIA

Richard Irwin, CTP  
VP and Treasurer  
Marlin Business Services  
Corporation  
Mount Laurel, NJ  
UNITED STATES

John Iwanicki, CTP  
Tampa, FL  
UNITED STATES

Hema Iyer, CTP  
Treasury Analyst  
Imperial Parking Canada Corp  
Vancouver, BC  
CANADA

Evan Jackson, CTP  
Treasury Analyst  
Issaquah, WA  
UNITED STATES

Oksana Jacobowitz, CTP  
Head of Credit Risk  
New York, NY  
UNITED STATES

Maggie Jiang, CTP  
Sales Manager  
HSBC Bank USA, N.A.  
San Francisco, CA  
UNITED STATES

Isidora Jimenez LaCasse, CTP  
Oracle Corporation  
Washoe Valley, NV  
UNITED STATES

Dustin Johnson, CTP  
Senior Treasury Manager  
National Oilwell Varco  
Houston, TX  
UNITED STATES

Douglas Jones, CTP  
Treasury Manager  
Direct ChassisLink Inc.  
Charlotte, NC  
UNITED STATES

Julius Jones, CTP  
Treasury Accountant  
Houghton International Inc.  
Philadelphia, PA  
UNITED STATES

Sanil Juneja, CTP  
Detroit, MI  
UNITED STATES

Javier Jurado, CTP  
Finance Analyst  
Caterpillar  
Dunlap, IL  
UNITED STATES

Jane Kaddes, CTP  
Senior Specialist Treasury &  
Investment Operations  
Commercial Bank International Plc  
Dubai  
UNITED ARAB EMIRATES

Peter Kaihani, CTP  
Treasury Sales Analyst  
SunTrust  
Nashville, TN  
UNITED STATES

Kirubakaran Kaliyaperumal, CTP  
Operations Associate  
Comerica Bank  
Toronto, ON  
CANADA

Bala Kasa, CTP  
Senior Consultant  
PwC  
Visakhapatnem, Andhra  
Pradesh  
INDIA

Oliver Keady, CTP  
PNC Bank  
Annandale, VA  
UNITED STATES

KatyShay Kennedy, CTP  
Jacksonville, FL  
UNITED STATES

Gerald Kern, CTP  
Treasury Manager  
Flex  
San Jose, CA  
UNITED STATES

Mirna Khella, CTP  
Financial and Treasury  
Accountant  
Nextgen Clearing  
Cairo  
EGYPT

Denise Kirby, CTP  
Cash Management Team Lead  
Rolls-Royce Corporation  
Indianapolis, IN  
UNITED STATES

Nick Kirby, CTP  
Treasury Analyst  
KAR Auction Services  
Indianapolis, IN  
UNITED STATES

Amber Kirk, CTP  
Treasury Manager  
NCH Corporation  
Irving, TX  
UNITED STATES

Sarah Koenigs, CTP  
Treasurer  
Five Star Bank  
Rocklin, CA  
UNITED STATES

Jeremy Koepf, CTP  
Financial Analyst  
Tri-State Generation  
& Transmission  
Frederick, CO  
UNITED STATES

Sut Han Krehn, CTP  
Associate Accounting Manager  
Highlands Ranch, CO  
UNITED STATES

Ranganathan Krishnan, CTP  
Manager - Investment Operations  
IA Clarington Investments  
Ajax, ON  
CANADA

Debbie Kukta, CTP  
City Treasurer  
Burbank, City Of  
Burbank, CA  
UNITED STATES

ChunPong Lai, CTP  
Assistant Treasury Manager  
IP Global Limited  
Hong Kong  
HONG KONG

Joshua Laird, CTP  
VP, Corporate Treasury Services  
Trustmark National Bank  
Jackson, MS  
UNITED STATES

Helen Lam, CTP  
HSBC Bank USA, N.A.  
San Francisco, CA  
UNITED STATES

Karen Latham, CTP  
Senior Financial Officer  
Medinah, IL  
UNITED STATES

Brandon Lauer, CTP  
Regions Bank  
Knoxville, TN  
UNITED STATES

Inderjit Lavert, CTP  
Money Market Liquidity  
Portfolio Manager  
Federal Home Loan Bank of  
Seattle  
Seattle, WA  
UNITED STATES

Simon Law, CTP  
National Bank of Canada  
Calgary, AB  
CANADA

Emilie Lawson, CTP  
Client Solution Advisor  
PNC Bank  
PHILADELPHIA, PA  
UNITED STATES

Galya Laya, CTP  
Treasury  
GKN North America Services, Inc.  
Lombard, IL  
UNITED STATES

Jena Layne, CTP  
Senior Vice President  
SunTrust Bank  
Nashville, TN  
UNITED STATES

Grace Lee, CTP  
Investment Manager  
District of Columbia  
Washington, DC  
UNITED STATES

Christopher Leslie, CTP  
Treasury Manager  
Masco Corp.  
Detroit, MI  
UNITED STATES

Hai Ying Li, CTP  
Deputy General Manager  
Bank Of China (Hong Kong)  
Limited  
Hong Kong  
CHINA

Shu Jun Li, CTP  
Product Manager  
Bank Of China (Hong Kong)  
Limited  
Hong Kong  
CHINA

Yanting Li, CTP  
Sr. Treasury Analyst  
CIT Group Inc.  
Livingston, NJ  
UNITED STATES

Yong Liang, CTP Accounts Receivable Coordinator craigslis, Inc. Daly City, CA UNITED STATES	Stephanie Mallory, CTP Vice President Treasury Mgmt. Country Club Bank Kansas City, MO UNITED STATES	Matthew Mertens, CTP Treasury Analyst A.T. Kearney Chicago, IL UNITED STATES	Russell Nenon, CTP Corporate Relationship Manager First Tennessee Bank Memphis, TN UNITED STATES	Chase Nunneley, CTP Assistant Treasurer and Tax Collector County of Kern Bakersfield, CA UNITED STATES
Tricia Light, CTP Treasury Management Officer PNC Bank Philadelphia, PA UNITED STATES	Kristin Mann, CTP Regions Bank Jacksonville, FL UNITED STATES	Jared Meyer, CTP Treasury Manager City Of Largo Clearwater Beach, FL UNITED STATES	Nataraja Netaji, CTP Senior Treasury Analyst Nashville, TN UNITED STATES	Bethany Obermoller, CTP Treasury Management Sales Consultant PNC Bank Cornelius, NC UNITED STATES
Luke Lindsay, CTP Alliance Bernstein White Plains, NY UNITED STATES	Mohamed Marie, CTP Treasury Section Chief Suez EGYPT	Sean Might, CTP Treasury Analyst TravelCenters of America, LLC North Ridgeville, OH UNITED STATES	Jacob Newell, CTP Financial Instrument & Systems Analyst TIAA Bank Jacksonville, FL UNITED STATES	Hope Obijaku, CTP Consultant African Development Bank Abidjan CÔTE D'IVOIRE
Emelie Lindvall Carranza, CTP Director of Treasury Operations City National Bank of Florida Pembroke Pines, FL UNITED STATES	James Marotta, Jr., CTP Business Development Executive JPMorgan Chase Atlanta, GA UNITED STATES	Timothy Miller, CTP Cash Management Advisor Northwest Bancshares, Inc. Lancaster, PA UNITED STATES	Ka Weng Ng, CTP Associate Director, Ratings and Financial Business Development AIA Group Limited Hong Kong HONG KONG	Fola Okusami, CTP Senior Treasury Analyst University of Calgary Calgary, AB CANADA
Ching Ling, CTP Arlington, VA UNITED STATES	Ruben Martinez, CTP Treasury Management Sales Consultant Wells Fargo Treasury Management North Bergen, NJ UNITED STATES	Ross Milliken, CTP International Payments Manager Globality S.A. Munsbach LUXEMBOURG	Andrew Nguyen, CTP Accounting Manager Henry Company Fountain Valley, CA UNITED STATES	Flavia Oliveira, CTP Analyst Citi San Francisco, CA UNITED STATES
Zhengyi Liu, CTP Senior Ernst & Young Long Island City, NY UNITED STATES	Michal Maturkanic, CTP Treasury Representative Prague CZECH REPUBLIC	Nicholas Milton, CTP Director - Deposits and Liquidity CIBC North Vancouver, BC CANADA	Cuong Nguyen, CTP Senior Treasury Analyst Northwest FCS Spokane, WA UNITED STATES	Todd Olson, CTP Treasury Manager Medtronic Andover, MN UNITED STATES
Monique Lopez, CTP Vice President JP Morgan Chase Brooklyn, NY UNITED STATES	Melanie May, CTP Treasury Management Analyst Regions Bank Rockwall, TX UNITED STATES	Murat Misirci, CTP Senior Treasury Manager Kuwait Airways Corp. Farwaniya KUWAIT	Paul Nielsen, CTP Corporate Finance Advisor, Treasury Murphy Oil Corp. Katy, TX UNITED STATES	Georgette Orr, CTP Program Specialist III Caterpillar Inc. Peoria, IL UNITED STATES
Nathan Lorton, CTP Assistant Treasurer Feld Entertainment Lutz, FL UNITED STATES	James McCormick, CTP Senior Manager EY Crystal Lake, IL UNITED STATES	Sena Mitchell, CTP Florida Municipal Power Agency Orlando, FL UNITED STATES	Juan Nieto, CTP Manager, Corporate Finance & Treasury TriNet Sarasota, FL UNITED STATES	Orlando Ortiz, CTP Treasury Analyst CIBC-MELLON Mississauga, ON CANADA
Marjorie Lowery, CTP Treasury Analyst Spirit Realty Capital Forney, TX UNITED STATES	Kirk McCulley, CTP Vice President, Commercial Payables Consultant Regions Bank Vestavia Hills, AL UNITED STATES	Lisa Montrose, CTP Treasury Analyst Wells Fargo San Francisco, CA UNITED STATES	Alex Noh, CTP Business Analyst YMCA of Greater New York New York, NY UNITED STATES	Steven Paine, CTP Senior Financial Analyst University Corporation For Atmospheric Research Thornton, CO UNITED STATES
Chen Luo, CTP Financial Analyst CHICAGO, IL UNITED STATES	Carl McDonald, CTP Treasurer Health Care Service Corporation Chicago, IL UNITED STATES	Kevin Mooney, CTP Assistant Director of Cash Management Cornell University Ithaca, NY UNITED STATES	Keena Nolinke, CTP Cash Strategy Manager BlueCross BlueShield of LA Prairieville, LA UNITED STATES	Ronald Palmer, Jr., CTP Chief Financial Officer Alpine Mutual Funds White Plains, NY UNITED STATES
Konstantin Lykhytsky, CTP Head of Treasury AXA Kiev UKRAINE	Ryan McDonough, CTP Corporate Treasurer Global Convergence, Inc. Clearwater, FL UNITED STATES	Thomas Morse, CTP Regions Bank Birmingham, AL UNITED STATES	Janet Norman, CTP Director Treasury Americas Outokumpu Americas, Inc. Calvert, AL UNITED STATES	Anita Panjwani, CTP Senior Manager CIBC Edmonton, AB CANADA
Xiaoteng Ma, CTP Senior Financial Analyst Oracle Corporation Reno, NV UNITED STATES	Sean McIrvine, CTP Chicago, IL UNITED STATES	Brett Murphy, CTP SVP Capital One New York, NY UNITED STATES	Roberto Norton, CTP Senior Treasury Analyst MicroVest Bethesda, MD UNITED STATES	Farrah Panjwani, CTP ATB Financial Calgary, AB CANADA
Bryan Machado, CTP Treasury Analyst Hasbro, Inc. East Providence, RI UNITED STATES	Alexandria Mehmeti, CTP Global Treasury Analyst Gogo Chicago, IL UNITED STATES	Brian Murphy, CTP Analyst Peapack-Gladstone Bank Bedminster, NJ UNITED STATES	Abdulhameed Nouraldean, CTP Assitant Treasurer Insite Wireless Group LLC Alexandria, VA UNITED STATES	Andrew Park, CTP Portfolio Strategist Hybrid Block Hong Kong HONG KONG
Robert MacNeil, CTP Global Treasury Risk Manager Cooke Aquaculture Inc Saint John, NB CANADA	Tomer Meir, CTP CFO Sundberg Ferar, Inc. Commerce Township, MI UNITED STATES	John Naumann III, CTP Sr. Manager - Treasury & Payroll United Therapeutics Corporation Pasadena, MD UNITED STATES	Eric Novak, CTP IRR and Liquidity Risk Manager TCF Financial Corporation Maple Grove, MN UNITED STATES	Jackson Parrish, CTP Vice President Regions Bank Memphis, TN UNITED STATES
Emily Mahairas, CTP Treasury Analyst Weyerhaeuser Seattle, WA UNITED STATES	Graham Merrill, CTP Accounting Manager Zumiez Incorporated Seattle, WA UNITED STATES	Connor Nelson, CTP Analyst, Capital Markets, Treasury Bausch Health Incorporated Bridgewater, NJ UNITED STATES		

# DECEMBER 2018B – JANUARY 2019 CTPs

Barry Patriquin, CTP Director ATB Financial Calgary, AB CANADA	LaShonda Price, CTP SunTrust Atlanta, GA UNITED STATES	Ahmed Rizk, CTP Deputy Manager, Treasury Americana Cairo EGYPT	Jeffrey Sajdak, CTP Ludlow, MA UNITED STATES	Christopher Shannon, CTP Analyst Serrala Harrodsburg, KY UNITED STATES
Daniel Paul, CTP Manager-Financial Accounting and Advisory Services Ernst & Young Pasadena, CA UNITED STATES	Hana Puncoccharova, CTP Senior Treasury Representative Solar Turbines EAME Praha CZECH REPUBLIC	Zachary Roach, CTP Treasury Manager Asurion Corp. Mount Juliet, TN UNITED STATES	Raed Saleh, CTP Treasury Manager Pharma International Amman JORDAN	Tonghyun Shim, CTP Senior Associate JP Morgan New York, NY UNITED STATES
Karin Payton, CTP Regions Bank Hoover, AL UNITED STATES	Walter Quan, CTP Director, Treasury and Payments Solutions ATB Financial Calgary, ON CANADA	Sheldon Roddy, CTP Regions Bank Knoxville, TN UNITED STATES	Mohamed Salem, CTP Senior Treasury Accountant AL Masry Al Youm Newspaper Giza EGYPT	Kreshnik Shporta, CTP Treasury Analyst Troy, MI UNITED STATES
Alonso Pedroza, CTP Senior Treasury Analyst RR Donnelley Chicago, IL UNITED STATES	Patricia Quint, CTP SVP People's United Bank Boston, MA UNITED STATES	Veronica Rodriguez De Marco, CTP Treasury Analyst ARRIS International, PLC Suwanee, GA UNITED STATES	Aziz Samji, CTP Treasury Manager - Global Market Strategist Kimberly - Clark Limited Lewisville, TX UNITED STATES	Daniel Shuford, CTP Treasury Management Sales Officer SunTrust Marietta, GA UNITED STATES
Leow Pei Leng, CTP Finance Manager Taylor's Education Group Kuala Lumpur MALAYSIA	Sheela Radha, CTP Business Analyst SwapsTech Inc Concord, NC UNITED STATES	Carolina Rojo, CTP Front Office Treasury Philip Morris International Vicente Lopez ARGENTINA	Roy Samuel, CTP Associate Treasury Manager Alghanim Industries Safat KUWAIT	Roli Shukla, CTP Treasury Analyst Bridge Investment Group Sandy, UT UNITED STATES
Daniel Perez, CTP Manager, Treasury Horizon Blue Cross Blue Shield of New Jersey Newark, NJ UNITED STATES	Liju Raju, CTP Team Leader SoftwareOne New Delhi INDIA	Elizabeth Rollins, CTP Treasury Manager Houston, TX UNITED STATES	Valerie Sauvage, CTP Treasury Consultant New York, NY UNITED STATES	Reeva Singh, CTP Manager-Treasury & Taxation MCPL Bangalore, Karnataka INDIA
Kelli Perkins, CTP Willowbrook, IL UNITED STATES	Lugesan Reddy, CTP Foreign Exchange Dealer Milton, ON CANADA	Martin Ros, CTP Senior Corporate Treasury Analyst Philip Morris Latin America Services S.R.L. Olivos, Buenos Aires ARGENTINA	Darci Schaecher, CTP Lead Cash Management - Treasury Agent Omaha Public Power District Omaha, NE UNITED STATES	Nicole Slaughter, CTP Vice President, Treasury State Street Lilburn, GA UNITED STATES
Ryan Peterson, CTP Rolling Meadows, IL UNITED STATES	Gabriela Redondo, CTP Treasurer Linde Bridgewater, NJ UNITED STATES	Rachel Rossel, CTP Treasury Management Analyst Country Club Bank Kansas City, MO UNITED STATES	Jessica Schafer, CTP VP / Treasury Sales Officer Country Club Bank Kansas City, MO UNITED STATES	Adam Smith, CTP Senior Manager Consultant Ernst & Young Charlotte, NC UNITED STATES
Matthew Pflieger, CTP VP, Corporate Controller & Treasurer Mission Essential New Albany, OH UNITED STATES	Christina Reed, CTP Product Strategy Manager - Treasury Services First National Bank Glenwood, IA UNITED STATES	Richelle Roth, CTP Treasury Manager Sprint Centreville, VA UNITED STATES	Roman Scheller, CTP Senior Manager EY Bayville, NY UNITED STATES	Catlin Smith, CTP Regions Bank Birmingham, AL UNITED STATES
Tim Plett, CTP Treasury Consultant Wells Fargo Madison, WI UNITED STATES	Jiaying Ren, CTP Associate New York Life Insurance Company Riverhead, NY UNITED STATES	Evan Ruhling, CTP Account Manager PNC Bank Pittsburgh, PA UNITED STATES	Sarah Scherm, CTP Corporate Finance Manager Tri-State Generation and Trans- mission Association, Inc. Westminster, CO UNITED STATES	Jonathon Smith, CTP Treasury Management Sales Analyst Wells Fargo Tega Cay, SC UNITED STATES
Olivia Plunkett, CTP J.P. Morgan Chase Los Angeles, CA UNITED STATES	Liliana Restrepo Pardo, CTP Sr. Treasury Analyst Sears Hometown and Outlet Inc Streamwood, IL UNITED STATES	Jacob Rumery, CTP Sr. Director of Accounting Goodwill Industries Suwanee, GA UNITED STATES	James Schroeder, CTP Square 1 Durham, NC UNITED STATES	Ross Snell, CTP First VP SunTrust Atlanta, GA UNITED STATES
Monique Polas, Jr., CTP Assistant Treasurer Carnegie Mellon University Pittsburgh, PA UNITED STATES	Yasaman Riahi Zadeh, CTP Treasury Analyst Stemcell Technologies Vancouver, BC CANADA	Christopher Rung, CTP Safe Harbor Tax and Accounting LLC Oceanside, NY UNITED STATES	Donato Semeraro, CTP Treasury Advisory services Deloitte Epinois BELGIUM	Jarid Snyder, CTP Intermediate Investment Professional PSERS Halifax, PA UNITED STATES
Mary Pope, CTP Treasury Management Officer JP Morgan Chase Winnetka, IL UNITED STATES	Joli Richards, CTP Senior Account Manager- Cash Management HSBC Bank Ramsey, NJ UNITED STATES	Brendan Ryan, CTP Treasury Analyst The RMR Group Inc. Watertown, MA UNITED STATES	Cezar Serbanescu, CTP Treasury Consultant MTL Treasury Inc. Montreal, QC CANADA	Ram Sagar Somisetty, CTP Manager Kirby Building Systems India Pvt Ltd Hyderabad, Andhra Pradesh INDIA
Richard Popp, CTP Contract Audit and Risk Management Director FMPA Gotha, FL UNITED STATES	Marcia Richardson, CTP Senior Consultant Mercer Investments Mableton, GA UNITED STATES	Ekaterina Ryltsova, CTP Senior Treasury Manager Dubai UNITED ARAB EMIRATES	Cristobal Servera - Vaquer, CTP Manager Global Treasury Operations Columbia University NEW YORK, NY UNITED STATES	Daniel Song, CTP Fulfillment & Service Treasury Advisor Bank of America Merrill Lynch Buffalo Grove, IL UNITED STATES
Allison Porter, CTP Assistant Vice President, Treas- ury Management Officer Franklin Synergy Bank Franklin, TN UNITED STATES	Maksims Rizikovs, CTP Riga LATVIA	Deepak Sahay, CTP Principal Product Manager BNY Mellon Bridgewater, NJ UNITED STATES	Anjali Shah, CTP SAP Treasury Consultant Allen, TX UNITED STATES	



William Southern, CTP Treasury Analyst AlixPartners, LLP Warren, MI UNITED STATES	Matthew Tejada, CTP Treasury Sales Officer SunTrust Charlotte, NC UNITED STATES	Benjamin Walters, CTP Financial Analyst DePaul University Chicago, IL UNITED STATES	John Whitaker, CTP International Treasury Manager Autozone Cordova, TN UNITED STATES	Austin Yost, CTP Product Analyst BBVA Compass Birmingham, AL UNITED STATES
Kenneth Souza, CTP Director of Investments USF Foundation Inc Tampa, FL UNITED STATES	Mun Tham, CTP Director, Commercial FX Solutions RBC Royal Bank Toronto, ON CANADA	Cheri Walz, CTP SVP Treasury Mgmt Manager Providence Bank Jefferson City, MO UNITED STATES	James Wightman, CTP Senior Manager - Finance and Risk Federated Co-Operatives Limited Saskatoon, SK CANADA	Chen Ping Yu, CTP Bank Of China (Hong Kong) Limited Hong Kong CHINA
Douglas Spickler, CTP Treasury Sales Officer SunTrust Robinson Humphrey, Inc Atlanta, GA UNITED STATES	Jonathan Thorsell, CTP Treasury Solutions Officer Bank of America Rolling Meadows, IL UNITED STATES	Laura Wang, CTP Vice President Deutsche Bank New York, NY UNITED STATES	Mary William, CTP Branch Head Commercial International Bank Cairo EGYPT	James Yu, CTP Cash Management Analyst City of Vancouver Vancouver, BC CANADA
Joshua Sprague, CTP Treasury Management Officer PNC Bank Dayton, OH UNITED STATES	Jayne Tooley, CTP Treasury Analyst ascensus Dresher, PA UNITED STATES	Mengzhi Wang, CTP Treasury Analyst Willis Towers Watson Amstelveen NETHERLANDS	James Williams, CTP First Tennessee Bank Memphis, TN UNITED STATES	Steve Zagar, CTP Senior Vice President & Chief Financial Officer Farm Credit Services of Mid America Louisville, KY UNITED STATES
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Denver, CO  
UNITED STATES

John Adams, CTP, FP&A  
Regional Manager - Finance  
Oracle  
Minneapolis, MN  
UNITED STATES

Kevin Ahrens, FP&A  
Manager FP&A  
Verizon Wireless  
Bernardsville, NJ  
UNITED STATES

Adedoyin Akande, FP&A  
Manager  
Verizon Communications, Inc.  
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Michael Alexander, FP&A  
Manager, FP&A  
Evanston, IL  
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Mark Audigier, FP&A  
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Senior Financial Analyst  
Oracle  
San Antonio, TX  
UNITED STATES

Jessica Blackburn, FP&A  
Thermo Fisher Scientific Inc.  
St. Louis, MO  
UNITED STATES

Emily Boscheratto, FP&A  
Senior Financial Analyst  
Comcast Cable  
Communication  
Royal Oak, MI  
UNITED STATES

Kevin Buckley, FP&A  
Senior Finance Manager  
Marriott International, Inc.  
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Christopher Burton, FP&A  
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FTI Consulting, Inc.  
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Director - Finance  
NRG Energy, Inc.  
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UNITED STATES

Jiayun Chen, FP&A  
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Analysis  
Franklin, TN  
UNITED STATES

Dimitry Cherney, FP&A  
Marsh & McLennan  
Companies Inc.  
New York, NY  
UNITED STATES

Tracey Clenott, FP&A  
Verizon Communications, Inc.  
Lake Mary, FL  
UNITED STATES

Michael Cockburn, FP&A  
Finance Analyst Upstream CP  
Shell International B.V.  
Aberdeen  
UNITED KINGDOM

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Draper, UT  
UNITED STATES

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Senior Financial Analyst  
Asurion  
Nashville, TN  
UNITED STATES

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CFO  
Superior Auto  
Fort Wayne, IN  
UNITED STATES

Brandy Davis, FP&A  
Harsco  
Owasso, OK  
UNITED STATES

Ivo de Rooij, FP&A  
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SWITZERLAND

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Montclair, NJ  
UNITED STATES

Justin Diaz, FP&A  
Senior Financial Analyst  
Westgate Resorts  
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Adam Dudic, FP&A  
United States Steel  
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Lindsey Dvorak, FP&A  
Oracle Corporation  
Boulder, CO  
UNITED STATES

Dennis Easter, FP&A  
Business Application  
Consultant  
Algorithm Inc  
Dublin, OH  
UNITED STATES

Amr Elgawaly, FP&A  
Manager - Finance Systems &  
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Heng Fang, FP&A  
Financial Analyst  
UNITAS  
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Lu Qi Gan, FP&A  
Senior Analyst  
Johnson & Johnson  
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CFO  
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Fiona Eudora Gomez, FP&A  
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Global Broking - Finance  
Business Partner  
Brooklyn, NY  
UNITED STATES

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Verizon Communications, Inc.  
Alpharetta, GA  
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Matthew Gullick, FP&A  
Senior Financial Analyst  
Partners Surgical  
Houston, TX  
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Mircea Hepes, FP&A  
Senior Financial Analyst  
Thermo Fisher Scientific  
Madison, WI  
UNITED STATES

Jeremy Hollis, FP&A  
Senior Director, Corporate &  
Development Finance  
Marriott Vacations Worldwide  
Corporation  
Orlando, FL  
UNITED STATES

Qinxin Hong, FP&A  
Senior Financial Analyst  
Verizon Communications, Inc.  
Culver City, CA  
UNITED STATES

Keith Hoover, FP&A  
Senior Financial Analyst  
Thermo Fisher Scientific  
Pittsburgh, PA  
UNITED STATES

Xiankui Hu, CTP, FP&A  
Professor of Finance  
Arkansas State University  
Jonesboro, AR  
UNITED STATES

Mark Hutchinson, FP&A  
Director of Financial Planning  
& Analysis  
STAR Financial Bank  
Fort Wayne, IN  
UNITED STATES

Eric Irani, FP&A  
Team Lead, Treasury and FP&A  
Shore Financial Services, Inc.  
Troy, MI  
UNITED STATES

Thomas John, FP&A  
Senior Financial Analyst  
Genoa  
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UNITED STATES

Jane Kellerhals, FP&A  
Senior Manager-Risk  
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Jerald Kerlin, FP&A  
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Seattle, WA  
UNITED STATES

Tim Kiernan, FP&A  
Senior Financial Analyst  
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UNITED STATES

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UNITED STATES

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Senior Lead Analyst  
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Atlanta, GA  
UNITED STATES

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Finance Manager  
FedEx Corporation  
Cordova, TN  
UNITED STATES

Lisa Lamberth, FP&A  
Manager - FP&A, Finance  
Operations  
Verizon Communications, Inc.  
Laurel, MD  
UNITED STATES

Matt Leid, FP&A  
Senior Financial Analyst  
Nautilus Inc.  
Vancouver, WA  
UNITED STATES

Daniel Liliac, CTP, FP&A  
Corporate Finance Manager  
ProAssurance Corporation  
Hoover, AL  
UNITED STATES

Fang Lin, FP&A  
Financial Analyst  
Chassis, Inc.  
Sterling Heights, MI  
UNITED STATES

Trina Litwin, FP&A FP&A Analyst World Vision International Monrovia, CA UNITED STATES	Nikita Miller, FP&A Director of Financial Planning & Analysis The Kresge Foundation Redford, MI UNITED STATES	Khoa Phan, FP&A Financial Analyst, FP&A Thermo Fisher Scientific Inc. Ottawa, ON CANADA	Ahmer Sharif, FP&A Consultant Oak Lawn, IL UNITED STATES	Wesley Willetts, FP&A Senior Finance Manager Stars Group Douglas UNITED KINGDOM
Ruiying Liu, FP&A Financial Analyst Thermo Fisher Scientific Inc. Shanghai CHINA	Hesham Mokhiemer, CTP, FP&A Head of Finance Riyadh SAUDI ARABIA	Aaron Poole, FP&A Mary Kay Inc. Allen, TX UNITED STATES	Dustin Silvestri, FP&A Senior Treasury Analyst Sun Chemical Corporation Cincinnati, OH UNITED STATES	Jason Woon, FP&A Senior Manager KPMG LLP Seattle, WA UNITED STATES
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Mario Millan, CTP, FP&A Treasury VP Dolex Dollar Express, Inc. Mansfield, TX UNITED STATES	Peter Panos, FP&A Associate Director University of Utah Salt Lake City, UT UNITED STATES	Rashida Shakir, FP&A Analyst Mission Foods Irving, TX UNITED STATES	Jordan Von Almen, FP&A Senior Project Manager - Financial Analysis & Reporting Southern California Edison Rosemead, CA UNITED STATES	

I'm a rodent  
NOT a  
meteorologist!



# But Seriously

IRA APFEL

On the morning of February 2 Punxsutawney Phil left his burrow and accidentally predicted the rest of winter. P-Squared (as his friends call him) did not see his shadow, auguring for a swift end to winter.

Shortly thereafter I texted two AFP colleagues and we made the requisite forecasting jokes about the accuracy of Punxsutawney Phil's prediction and the Bill Murray movie. Laughter ensued.

All in good fun. But it did get me thinking seriously about budgeting, an annual process that produces a view of the future that may or may not be accurate, and people may or may not take seriously. After it is delivered, everyone goes back to what they were doing before.

Does that sound familiar? Do you take your organization's budget seriously? Do your colleagues? Does the process add value, alignment, or vision to corporate activities? Or, is it all in good fun like the burghers of Punxsutawney, Pennsylvania?

This stuff matters. If the budget is immediately out-of-date or compiled with outrageous aspirations or bags of sand, then it becomes a bit of theatre, like the celebration around Groundhog Day. The difference is that it takes time and energy to stage that play and a budget.

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