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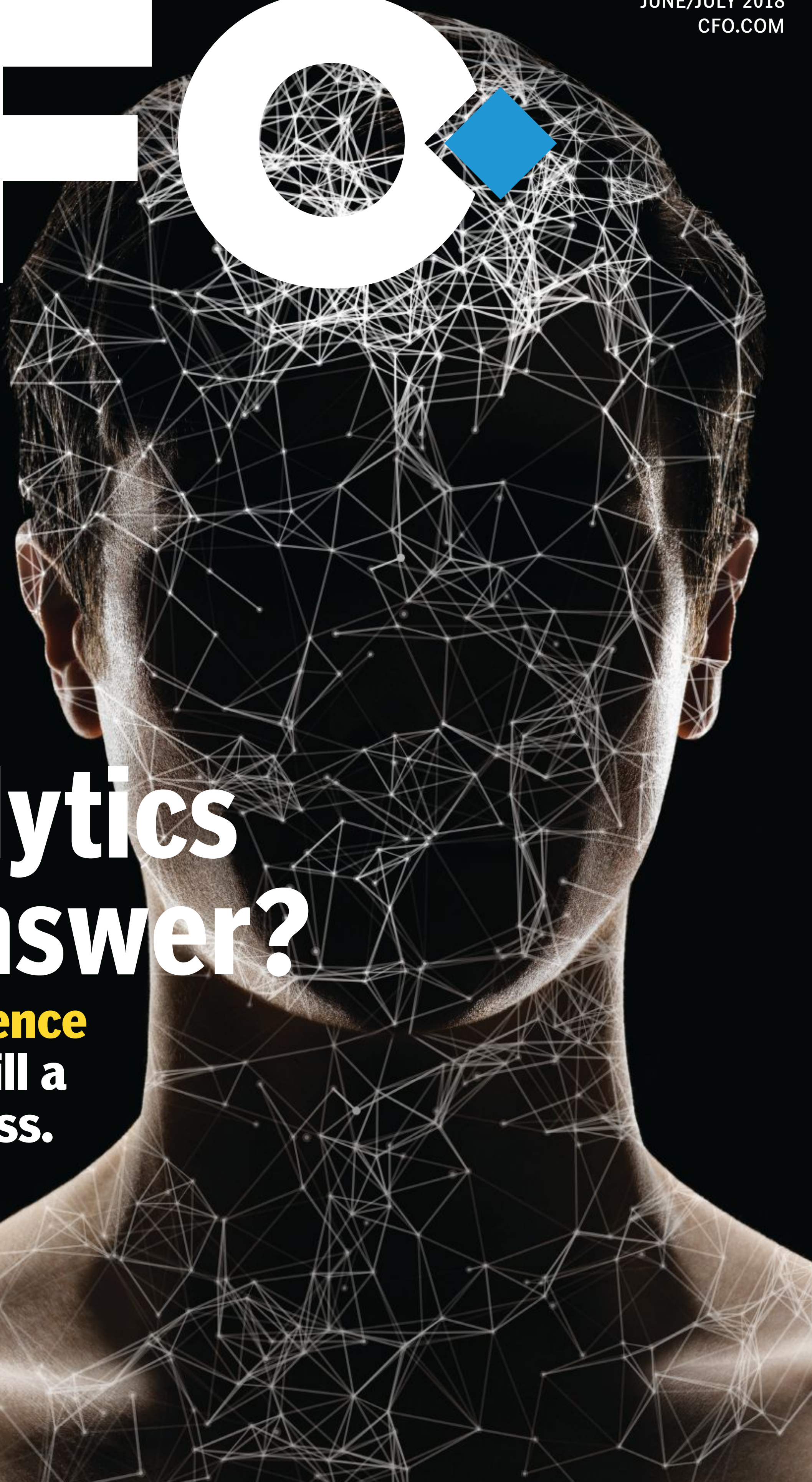

DAWN OF A NEW PAYMENTS ERA

2018 STATE TAX SURVEY

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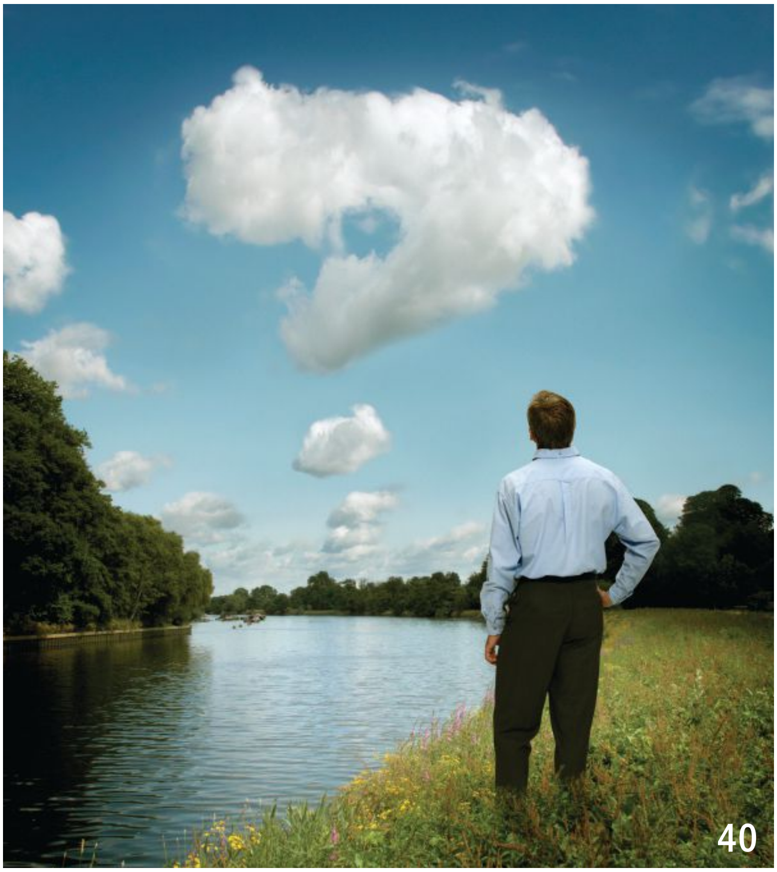
June/July 2018
Volume 34, No. 3



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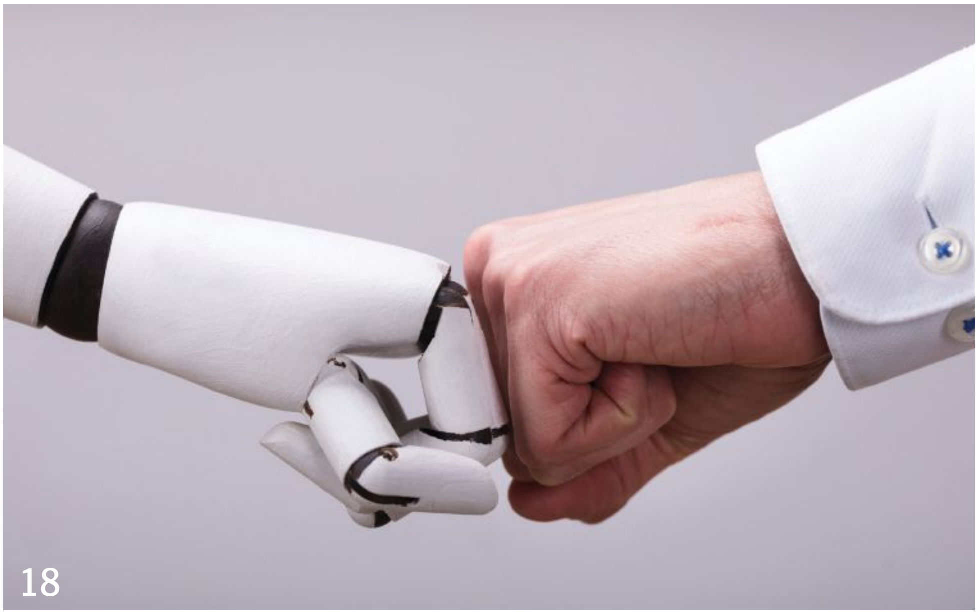

Up Front

By the Numbers

Thinkstock (4)


canyon ranch
Heidi Wallman, Canyon Ranch
Corporate People Systems Director
Peace of mind
isn't reserved
just for guests.
With an integrated HR solution from ADP, wellness spa Canyon Ranch streamlined data to understand the trends that informed a new, enlightened talent acquisition strategy. In addition to a 20% improvement of new hire retention, the wellness spa resort discovered that nothing helps a company achieve peace of mind more than being in complete control of its talent needs.
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FROM THE EDITOR

The Ethical Future

It may be funny or it may be sad, but I can't help chuckling when I see headlines like "How to Teach Autonomous Vehicles to Make Ethical Decisions on the Road" or "The Role of Artificial Intelligence in Ethical Decision Making." ¶ Why? I don't see us (modern enterprises) being up to the task, at least yet. We hardly seem to have mastered the field of ethics in the human realm, and now we're going to try to teach it to an AI system?

The questions raised by these headlines, however, are worth examining. The development and use of machine learning raises important ethical questions. Google employees almost revolted when they discovered that their company had partnered with the U.S. Department of Defense to help it use AI to analyze drone footage. As an Oracle executive in our cover story, "Is Analytics the Answer?" (page 26) warns, "Algorithms are going to be making operational decisions for us, and perhaps there will be unintended consequences."

In short, developing "intelligent" tools that have no moral compass will force C-suite executives to question their own guideposts for right and wrong. As a Dun & Bradstreet executive writes in "Future Finance: Humans and Machines Unite" (page 19), "Modern developments in technology will help finance leaders bring more of their humanity to work, not less."

How often as a finance executive do you think about whether or not what you sell customers is what you "ought" to be selling them? How often do you discuss whether company accomplishments would fall under the category of "conduct benefiting humanity?" CFOs, as ethical leaders of the corporation, are going to encounter the question of "right" conduct more often. How are they going to handle it?

And if you think ethical questions don't belong in the board meetings of a profit-making enterprise, my response is that companies have only themselves to blame. The current marketing messages from many organizations, especially tech startups, is that they don't exist to earn bundles of profits or to benefit shareholders or to give employees a decent living. Their real mission, they claim, is to make our world a better one.

That's a noble goal, and one that many organizations will, perhaps for the first time, be pressed to show that they are actually pursuing.

Vincent Ryan
Editor-in-Chief

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EDITOR'S PICKS

NETWORKING
CFOs in the Midwest, and others, won't want to miss the **CFO Rising Midwest Summit** in Chicago on September 6 and 7. The speaker lineup includes the CFOs of Omnicell, OSI, Medcor, National Oil & Gas, and HARIBO America. See the Innovation Enterprise website for more details.

COMPLIANCE
In **"Why We Need to Update Financial Reporting for the Digital Era,"** a trio of business professors explain why the financial reporting model needs to be rethought "from scratch." Among the disclosures they want standard setters to consider: value per customer. Read more on the Harvard Business Review website.

FINANCE
Over the last year, **Aswath Damodaran, the dean of valuation,** has been digging into the valuation of subscriber businesses like Amazon Prime and Spotify. In his latest blog, he talks about distinguishing between user bases that create substantial value and user bases that are not only incapable of creating value but also can actively destroy it. Read the latest on Damodaran's Blogspot website.

Mark Bennington

On CFO.com, **"Do Big Four Auditors Unfairly Raise Fees?"** detailed academic research concluding that the big auditing firms charge a sizable premium based on the length of their tenure with a client. They do this, researchers contended, even though average work requirements decline over time as an auditor becomes more familiar with the business.

One reader sought to shoot holes in the study conclusions: "Interesting, but there are some other factors. For example, **the first year of an audit may include some very intense price competition.** Second, accounting and auditing standards and requirements keep increasing over time, requiring more audit time and effort.

"Third, there is a cost to the auditee of a new auditor, both in the selection process and in the staff time to 'instruct' the new audit personnel, which makes companies somewhat reluctant to change auditors without a good reason."

Finally, changing auditors may be coupled, fairly or not, with some questions about the quality of the financial reports, the reader added — "another reason to avoid changes."

In **"Bank Earnings & Financial Repression,"** contributor Christopher Whalen outlined a case that Federal Reserve policy is squeezing banks' margins, putting their stocks in selloff mode at the cusp of earnings season. Harrumphed an audience member, "If it weren't for the Feds, the big banks would not have survived the Great Recession."

"Atlanta Hack Highlights Ransomware Dangers" put the spotlight on government organizations as frequent ransomware targets. The notion outraged some. "Absolutely shameful they didn't have the proper backups," offered one reader.

Another took governments behind the woodshed: **"Funny how governments are quick to attack a business that gets hacked but don't seem to have the same reaction when it's them.** Double standard!"

CORRECTIONS

In "Tech Companies to Watch 2018 (April/May 2018), CFO misstated the number of payees that use the Tipalti accounts payable platform. It is 2 million. UiPath's headquarters are in New York, not Romania. In addition, Emagia is not a subsidiary of Solix Technologies; it is an independent company.

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STATS OF THE MONTH

$63 billion
Quarterly increase in U.S. household debt

6%
Percentage of credit card debt in delinquency

761
Median credit score for new mortgages

3%
Mortgages to borrowers with credit scores below 620

19%
Auto loans to borrowers with credit scores below 620

Source: Federal Reserve Bank of New York's Household Debt and Credit Report for the first quarter of 2018

TOPLINE

HUMAN CAPITAL

Think There's a Talent Shortage? Just Wait

The widening gap between employer needs and worker skills could drive massive lost economic opportunities. By David McCann

Businesses generally spend little time worrying about what might happen in 10 or more years. But if "what might happen" is a talent shortage so massive as to cause a wholesale, global reinvention of work norms and redistribution of labor, perhaps companies could muster a smidgen of concern.

By 2030—no more than a couple of economic cycles away, in all likelihood—businesses worldwide will be short by about 85 million skilled workers, according to a new report. The estimated financial impact: as much as $8.5 trillion of unrealized annual revenue.

That lost economic opportunity would be equivalent to the combined gross domestic products of Germany and Japan.

The study that informs the report is based on economic modeling designed by talent-management firm Korn Ferry, business-to-business marketing firm Man Bites Dog, and Oxford Analytica (no relation to Cambridge Analytica).

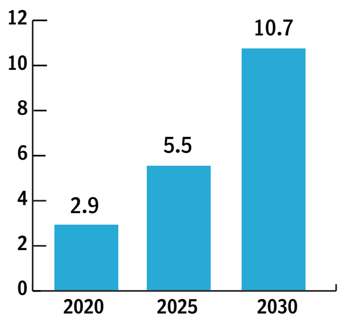
"The impact of the talent crunch is so significant that the continued predominance of sector powerhouses is in question, from London as a global financial services center to the United States as a technology leader to China as a key manufacturing base," the study says.

"As a result," it continues, "organizations may be prompted to relocate their headquarters and operational centers to places where talent is more plentiful. Governments will be forced to invest in improving their people's skills to avert corporate flight and to defend their nations' income and status."

Dealing With a Deficit

The financial and business services labor deficit will increase fivefold by 2030.

Labor shortage, by number of skilled workers in millions



Source: Korn Ferry

If it's true that companies will be seeking locales with more plentiful talent, and the study data proves relatively accurate, then India may become the world's most powerful business center. Among 20 countries included in the study, it's the only one expected to have a talent surplus—numbering 245 million workers—in 2030.

The United States would by far take the biggest economic hit, losing out on $1.7 trillion in unrealized revenue as a result of the talent deficit 12 years from now.

There's already a global talent shortage, but nothing like what will emerge over the next decades-plus, according to the report. In 2020, it forecasts, the labor deficit will be 3% of the workforce. By 2030, the gap will rise to 11%.

Such numbers suggest that advancing technology might not be the scourge causing massive job losses that some have projected.

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"Global growth, demographic trends, underskilled workforces, and tightening immigration mean that even significant productivity leaps enabled by technological advances will be insufficient to prevent the talent crunch," the report says.

In countries with low unemployment and booming manufacturing production—the Czech Republic, Poland, Hungary, and Slovakia, for example—labor shortages are accelerating automation and increased use of robotics "not to replace people, but because there aren't enough of them to fill the factories," the report says.

In the United States, the graying population is a major contributor to the talent shortage, with some 10,000 baby boomers reaching retirement age every day for the next 19 years.

Making matters worse, the country's labor force participation rate, currently 62%, is expected to dip to 60% by 2030.

All of the forecast numbers in the report are what would happen without sufficient mitigating steps by organizations and governments.

Lessening the talent shortage "requires a fundamental redefinition of the social contract between individuals, organizations, and governments," the report states. "The future of work doesn't just require different skill sets, but entirely new ways of working."

In the report's view of the future, successful organizations will move from a paternalistic approach to a more mature, flexible relationship with workers, "based on mutual respect."

"Organizations may be prompted to relocate their headquarters and operational centers to places where talent is more plentiful."

- Korn Ferry study, "Global Talent Crunch"

Also, the labor market will continue on its path of increasing fluidity, with more staff brought in on a per-project basis. Companies "will rely on an extended ecosystem of workers rather than a large, permanent work force," the report says. CFO

ACCOUNTING

What Is Free Cash Flow, Really?

Researchers seek a solid definition for the much-used metric.

Free cash flow has been replacing earnings as the gold standard of financial performance metrics. It has become a go-to measurement of a company's health. And CFOs and other corporate managers are increasingly choosing to mention free cash flow in financial reports.

But because free cash flow is a metric outside the realm of generally accepted accounting principles, there's no standard definition.

"You get a hundred analysts in a room, and they're going to disagree on how to define free cash flow, and if you get 100 CFOs, they'll [differ] in their companies' definitions," says Charles Mulford, co-author of a new report by the Georgia Tech Financial Analysis Lab.

By far the most common meaning used by major corporations today is operating cash flow (a GAAP-defined term) minus capital expenditures. But some companies meld dividends, debt, capital leases, and divestitures of property, plant, and equipment into their calculations as well.

To Mulford, a Georgia Tech accounting professor, including dividends on common stock in the definition flies in the face of the conception of the metric he's held for decades.

Free cash flow, by his lights, is the cash left over to *pay for* such things as dividends on common stock and share buybacks.

"If either buybacks or dividends on common [shares] were subtracted in determining free cash flow, the metric would understate a firm's capacity to generate that cash," according to Mulford.

However, Mulford does include the dividends paid on preferred stock in free cash flow. He argues that preferred dividends represent "a claim that is superior to the claims of common shareholders" and one that takes a predictable bite out of a company's free cash.

The authors stress that their calculation of free cash flow is also based on growth-oriented capex as well as the maintenance capital expense some companies use exclusively.

"We define free cash flow as GAAP-defined operating cash flow, [minus] growth-related, net capital expenditures," Mulford writes, "and [minus] preferred dividends." | DAVID M. KATZ

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COMPENSATION

Pay Parity, On a Small Scale

When it comes to men and women holding the same-level job, at the same company, and in the same function, on average their pay is almost equal.

Last April 10 was "Equal Pay Day," the date purportedly representing how far into the new year women have to work to catch up with the amount of money men earned the prior calendar year.

Across the country and around the world, women (and some men) wore red clothing to symbolize that women are "in the red" with their compensation, compared with men.

But according to a new analysis from talent strategy firm Korn Ferry, in one sense the genders are paid nearly equitably.

Korn Ferry researchers analyzed gender and pay for more than 1.3 million employees at 777 U.S. companies.

Overall, the study found that in 2017, on average, men were indeed paid 17.6% more than women, in line with other research. (According to that figure, Equal Pay Day actually should have occurred about a month earlier.)

However, when Korn Ferry evaluated employees at the same job level—"director," for example—the gap fell to 7%. Further, for women at the same job level at the same company, the gap tightened to 2.6%.

And for men and women with the same-level job at the same company and also working within the same function, the gap amounted to just 0.9%.

That women's overall average pay is so much lower than men's "is a real, significant issue," says Maryam Morse, a senior client partner at Korn Ferry. But a more complete picture would show that fewer women hold highly remunerative positions, widening the gap.

Morse called on employers to "strive to increase the percentage of women in the best-paying parts of the labor market, including the most senior roles, as well as functions such as engineering and technical fields." | **D.M.**

LEGAL

Restructuring Spat

The founder of corporate restructuring firm AlixPartners accuses rival McKinsey & Co. of making at least $101 million in bankruptcy consulting fees by concealing potentially disqualifying conflicts of interest from the courts.

In a complaint filed in May, Jay Alix says McKinsey conducted a "criminal enterprise" to secure lucrative consulting appointments, making it liable for violations of the federal Racketeering Influenced and Corrupt Organizations Act.

If McKinsey had truthfully disclosed its conflicts, "it would not have been able to effectively compete against [AlixPartners] in the bankruptcy restructuring market," the suit says, citing the "serious conflicts of interests in the high-profile proceedings in which McKinsey has sought employment."

The dominant firms in restructuring are AlixPartners, FTI Consulting, and Alvarez & Marsal. McKinsey entered the market in 2010. Restructuring specialists seeking a court appointment to work for a bankrupt company have to disclose links to other parties in the case, such as investors, professionals, and creditors.

According to Alix, McKinsey routinely flouted that requirement by submitting "false and materially misleading declarations under oath ... in order to unlawfully conceal its many significant connections to 'interested parties." In one case, McKinsey allegedly concealed that, while it was advising mining company Alpha Natural Resources on maximizing the value of its business, it was also helping U.S. Steel reduce what it paid Alpha for its coal.

"Had McKinsey complied with the law and truthfully disclosed its connections to interested parties, it would have been precluded from being hired as a bankruptcy professional," the Alix lawsuit alleges.

In a statement, McKinsey described the accusations as "the latest attempt by Jay Alix and Alix Partners to harass and disparage McKinsey, using baseless and anticompetitive litigation, which courts have consistently rejected." | **MATT HELLER**

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TECHNOLOGY

Procurement: Digital Straggler

Digital technologies may be taking over a broad swath of corporate processes, but the procurement function is lagging in adoption, according to Deloitte.

A meager 3% of chief procurement officers (CPOs) say they believe their staffs possess all the skills required to maximize the use of digital capabilities, according to a Deloitte global survey of 504 CPOs.

Other findings are similarly dismal.

"Few organizations appear to be progressing at the rate that their C-suite executives consider necessary for achieving overall goals," Deloitte laments.

Most distressing of all, procurement organizations actually seem to be regressing, in terms of the perceived business impact of various aspects of technology.

For example, in Deloitte's CPO survey a year ago, 64% of participants said analytics will have a strong impact on procurement over the following two years. In the new survey, only 54% say so.

In only one technology area, robotic process automation (RPA), do CPOs foresee an increasing impact on the procurement function. Even there, however, just 25% of survey participants say they're using RPA, even for just a pilot program, and only 21% say the technology is under consideration.

In fact, across 12 specific technologies, including collaboration networks, advanced analytics, visualization, and artificial intelligence, in no case do more than 34% of CPOs report current usage.

What's causing the slow pace of leveraging digital tools?

Almost half (46%) of CPOs cite insufficient data integration, while 45% cite poor data quality. Between 20% and 30% of CPOs say the reason is limited endorsement among senior stakeholders or limited knowledge of data technology. | D.M.

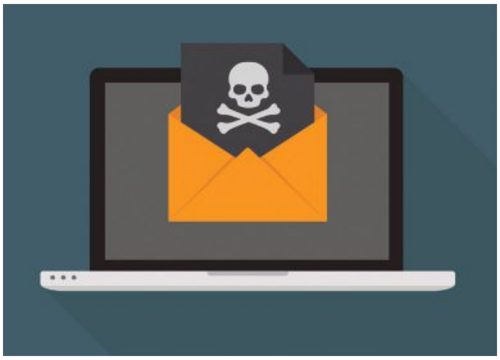
Feeling Left Out

Chief procurement officers are doubtful of their ability to leverage digital tools.

4% judge that procurement has a big influence in achieving their organization's overall digital strategy

6% perceive that procurement's digital strategy will help it to fully deliver on objectives and boost enterprise value

18% say they have a digital procurement strategy supported by a complete business case



CYBERSECURITY

Email Scams Evolving

Forged checks or stolen corporate cards are still the most popular means of attack by payment scammers, but another method—email compromise—is gathering steam.

In an Association for Financial Professionals survey of 700 treasury and finance executives, 77% said they experienced attempted or actual business email compromise (BEC) scams in 2017.

A BEC is "carried out by compromising legitimate business mail accounts through social engineering or computer intrusion techniques to conduct unauthorized transfers of funds," according to the FBI.

More colloquially, a BEC occurs when an employee receives what appears to be a genuine email from a senior executive. The email asks them to wire funds to a fake business account or provide personally identifiable information.

The Internet Crime Complaint Center actually identifies five kinds of BEC swindles: bogus invoice, CEO fraud, account compromise, attorney impersonation, and data theft.

To stem the tide, companies are setting up education and training programs to help staff recognize potential email fraud. Some are taking the extra step of "calling requestors of funds using telephone numbers on file to validate requests," the AFP said.

Less than half of the companies in the AFP survey suffered a financial loss from a BEC. However, 23% of those with more than $1 billion in revenue say they lost more than $1 million from a BEC last year. | VINCENT RYAN

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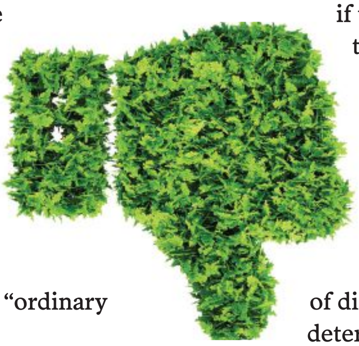
REGULATION

SEC Sides with Issuers

Under new regulatory guidance, SEC staff have approved 10 of 11 issuer requests to block shareholder votes on environmental issues.

The U.S. Securities and Exchange Commission released the guidance in November 2017 after being lobbied by business groups to limit shareholder resolutions.

Since then, companies appear to be reaping benefits from it. An S&P analysis found SEC staff more frequently allowing issuers to use the "ordinary business" exception to block votes.



Proposals that won't be coming up for a vote this proxy season include one that would have required the Dunkin' Brands board of directors to assess the environmental impact of the company's use of K-Cup Pods packaging.

SEC staff also sided with American Airlines over a resolution on the impact of smaller cabin sizes on plus-size people. Only electric power company Entergy's request to block a vote on a climate change-related proposal failed to get the SEC's nod. Shareholder rights advocates say the SEC is eroding the viability of the proxy process.

"I think the options are being significantly limited," Christine Jantz, president of Jantz Management, which submitted resolutions, told S&P Global Market Intelligence.

Companies can scuttle a shareholder vote on a resolution if the proposal "deals with a matter relating to the company's ordinary business operations." The only exception is if the proposal focuses on "sufficiently significant" policy issues, according to SEC rules.

"These determinations often raise difficult judgment calls that the division [of corporate finance] believes are in the first instance matters that the board of directors is generally in a better position to determine," states the agency's new guidance, "Bulletin 14I."

Tom Quaadman of the U.S. Chamber of Commerce's Center for Capital Markets Competitiveness says that the Obama administration let through too many shareholder resolutions."A properly calibrated shareholder system is going to make sure that those proposals that are actually important to companies will be considered," he says. | M.H.

CREDIT

Corporate Bond Futures Launch

U.S. derivatives exchange Cboe Global Markets is teaming up with asset manager BlackRock to offer new futures contracts to mitigate corporate credit risk.

Credit default swaps were once seen as the primary vehicle to hedge corporate bond exposures. But swaps trading has lagged since the 2008 financial crisis, with some institutional investors switching to exchange-traded funds.

Many investors prefer derivatives such as a futures contract, however, because it requires posting only a small amount of "margin" when entering into the trade.

Cboe said its new U.S. corporate bond index futures are "designed to reflect the performance of the broad U.S. high-yield and investment-grade bond markets" and are expected to "provide liquid hedging vehicles for institutional investors with exposure to U.S. corporate debt."

The exchange is working with BlackRock and data provider IHS Markit to list two contracts this summer, pending approval by the Commodity Futures Trading Commission. One contract will be for high-yield bonds and one for higher-rated, investment-grade debt.

"These index futures are a quantum leap forward toward better bond markets," Martin Small, head of U.S. iShares at BlackRock, says. "A growing ecosystem of market access vehicles, chiefly bond ETFs and bond index futures, are a critical step towards improving the price transparency and liquidity of corporate bond markets."

U.S. treasury futures and stock market futures are frequently traded, but there is no such product for credit. Intercontinental Exchange launched credit futures in 2013, but the contracts failed to gain traction.

The Cboe futures contracts will track the performance of the IHS Markit iBoxx indices that underpin BlackRock's high-yield and investment-grade bond ETFs. | M.H.

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Square Root Costing: A Better Method

Square root costing is based on an accurate understanding of the rising costs of complexity. By Andrei Perumal and Stephen A. Wilson

In today's complex businesses, massive cross-subsidizations mask the true cost and profit of products, customers, market segments, and activities. As a result, it's not surprising that many executives don't truly believe the standard cost and profit figures that accounting or finance provides. ¶ The issue, until recently, was that even if CFOs saw the problems with standard costing, there was no practical alternative. With the advent of square root costing, now there is.

Without a clearer and more granular view of real cost and profit than traditional costing methodologies can provide, companies do things like undertake product rationalization efforts without knowing how much profit each product generates or set prices without knowing the real costs of products and services.

Activity-based costing (ABC) was to be the panacea for those costing ills. In application, ABC is a "bottom-up" methodology. It involves identifying all indirect activities and assigning the cost of each activity to all products (or customers) based on the actual consumption by each.

That worked well when the level of complexity—the variety of activities and products—was still fairly low. But as complexity grew, the effort required to apply ABC grew exponentially, and ABC initiatives became cumbersome and unsustainable.

The figure on page 20, "Which Product Segments to Pursue?," shows complexity-adjusted operating margins by product segment for one of our clients, a major beverage company.

Product segment C included the company's major legacy brands. While it still comprised the majority of the company's sales volume, overall sales in the market segment were flat. In addition, price points had been slowly declining, which had created pressure to find new and growing markets.

Segment D represented a new market opportunity. It consisted of specialty products with much higher price points—it was where the excitement, and investment, was.

The company's standard cost figures showed operating margins in segment D, at 26%, to be much higher than those of segment C, at just 14%. With segment D's specialty products and much higher price points, it seemed that it should be more profitable than the staid legacy segment C.

But those standard cost figures did not account for the complexity and associated costs that were incurred to aggressively compete in new markets and develop and deliver specialty products.

Adjusting for the real costs of that complexity showed not just that the legacy segment (segment C) was subsidizing the specialty segment, but that the legacy segment was the most profitable of the four.

The cost of all of the unrestrained product proliferation incurred in going after the specialty segment (segment D) more than consumed the potential value afforded by the high price points.

Three Kinds of Costs

How does square root costing (SRC) work? SRC is a top-down allocation methodology based on a fuller understanding of cost.

When allocating costs, businesses typically treat them as either fixed or variable. Traditional variable costs are simply proportional to some measure of volume (whether tons, gallons, dollars, hours). Fixed costs are independent of

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Andrei Perumal

Stephen Wilson

volume. For example, most design, engineering, product development, and registration costs are independent of sales volume. When in doubt, CFOs usually allocate costs as variable costs.

However, a significant and growing portion of costs—the large majority of non-value-added and complexity costs—fit neither the variable nor the fixed-cost category.

These uncategorized costs tend to increase with volume, but not proportionally with it. Also, the cost per unit tends to drop with volume, but not as steeply as that of truly fixed costs. In our research, we have discovered and categorized this third category of cost as *complexity costs.*

These are the costs that are driven by variety, such as SG&A, working capital, and manufacturing overhead. Fifty years ago, this cost category was a relatively small proportion of overall costs. What has changed is that the world has become fantastically more complex—more products, more segments, more channels, more regulations, more sophisticated technology, and more complicated processes.

Recognizing this third cost category, and stepping away from the narrow fixed-variable cost mindset, is a critical first step. By underestimating complexity's cost, an organization leaves itself more tolerable and accepting of taking on more complexity; of overestimating potential fixed-cost leverage; of adding hidden costs; and of eroding the very economies of scale it may be expecting to realize.

Breakthrough Insight

What unlocks this puzzle is knowing how complexity costs behave: all else being equal, complexity costs tend to follow a square root of volume relationship, meaning that the cost is proportional to the square root of the volume. Since unit cost is simply cost divided by volume, the cost per unit is proportional to the inverse square root of the volume.

It's important to note that we did not invent the square-root-of-volume relationship; rather, we discovered it.

Years ago we had built several "virtual plants" in support of our work for a pharmaceutical company. The virtual plants were mathematical models representing real physical plants to optimize things like production scheduling, plant loading, and capacity planning.

We experimented with the plant models, flexing different variables one at a time (such as product setup times, product demands, inventory holding costs) to see their impact. What we discovered was an ever-growing list of costs that were not proportional with volume (i.e., demand), or independent of volume, but varying exactly with the square root of volume.

For example, we found that in a make-to-stock production environment, with an array of products (each with different customer demand but the same setup time, run speed, yield) and an optimal production schedule, average cycle stock inventory levels by product were proportional to the square root of each product's volume.

For example, if product A had four times the demand of product B, then product A had two times the average cycle stock inventory.

As we began to look further, we discovered other relationships: how the total time spent on setup per product also varied with the square root of volume and how safety stock varied with the square root of volume. We have since discovered this relationship in areas across a company, from cost of goods sold to SG&A.

A New Foundation

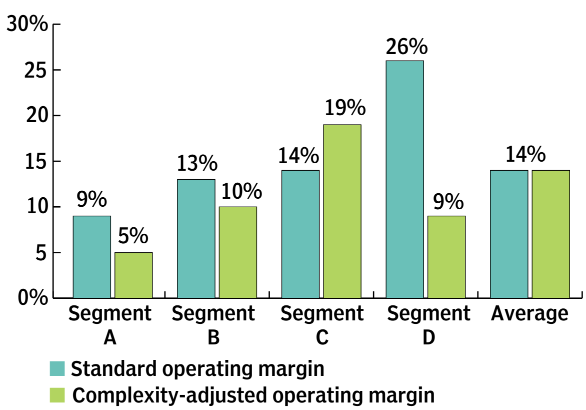
Standard cost and profit figures typically only reach down to the gross profit level. The rationale is usually that it is too difficult to assign SG&A and corporate overheads to specific products. We are emphatic that product profitability should be assessed all the way down to the operating profit level.

Complexity is often the largest driver of overinflated SG&A and corporate overheads, and disconnecting these costs from the complexity in a business gives them a pass. It also obscures islands of profit and a sea of costs. CFO

Andrei Perumal and Stephen A. Wilson are co-authors of "Growth in the Age of Complexity: Steering Your Company to Innovation, Productivity, and Profits in the New Era of Competition."

Which Product Segment to Pursue?

Square root costing revealed that a major beverage company's legacy brands (segment C) had better margins than a set of specialty products with higher price points (segment D).



Source: Wilson Perumal & Co.

TECHNOLOGY

Future Finance: Humans and Machines Unite

Human minds alone are no longer a match for addressing business risk. But neither are machines alone. By Eric Dowdell

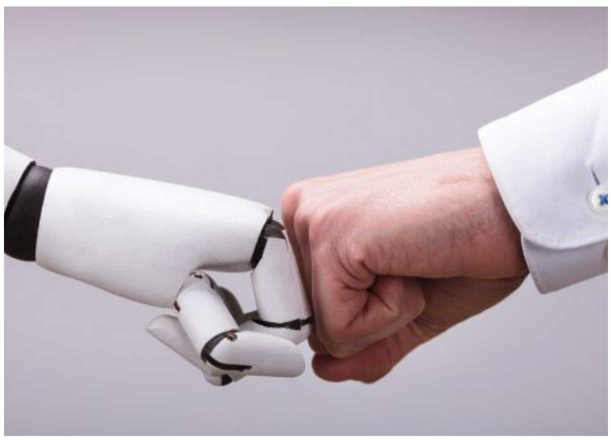
You can't go even a few days without hearing about the exciting—and also disruptive—implications of emerging technologies. For finance leaders in particular, the promises of new developments in machine learning, predictive analytics, and automation seem endless. ¶ A white paper from Accenture highlights some of the possibilities: "In the Finance 2020 organization, humans and machines will join forces to rapidly multiply finance's clout with the business."

It seems at once incredibly exciting and a tall order for finance professionals to become cool (or frightening?) cyborgs—modern bot-humans simultaneously reporting on the past and predicting the future, leading their organizations with a robotic strength that's the stuff of science fiction.

When we hear human ingenuity and decision-making will be overruled by data-digesting machines, perhaps it's not quite Kurt Vonnegut, but it can be uncomfortable. For finance teams, driving companies' analytical decisions often involves blood, sweat, and tears. I imagine it is at least somewhat disconcerting to some to relinquish decisions to bots and big data.

Yet, we now have the ability to combine human ingenuity with the benefits that machines bring—artificial and natural intelligences uniting. At the same time, the nature of business risk is shifting and expanding on an almost daily basis. Human minds alone are no longer a match for risk.

But neither are machines alone. The two must work together.



Much current research points to resource constraints. Finance is asked to do more with less, even though the nature and types of risks seen in the business climate are unprecedented.

The modern CFO seems poised to take on the strategic promises of new technologies, but is such enthusiasm trickling down into the organization? In a 2017 Forrester Research study of CFOs, roughly a third of participants identified disparate data, organizational silos, and lack of data integration as barriers to creating a data-driven operating model.

Alarmingly, the same study also found that 49% of companies are still using spreadsheets as a primary or "extensive" mode of insight. Trailing behind were more advanced methods such as performance analytics (42% of companies used primarily or extensively), machine learning (28%), predictive analytics (28%), and artificial intelligence (19%).

Making the transformation to a data-and-insights-driven organization isn't easy. And don't get me wrong, I love a good spreadsheet as much as the next leader. But we can't escape from the fact that most companies have an overabundance of data yet do a poor job of leveraging it for insights. So, although there is clearly a will to adopt modern best practices, there is a gap in realizing their promises.

My hope is that modern developments in analytics and technology for finance will help finance leaders bring more of their humanity to work, not less. But this requires an evolution in thinking, and arguably in skills as well.

Here are three emerging roles for finance leaders that are foundational to human-machine transformation:

The Intrapreneur. This seems like a skill that finance professionals have built-in. Highly analytical and detail-oriented, they bring a natural facility

Thinkstock

for data to their roles. Yet, because of the rapidly changing and expanding sources and types of data, as well as the nuances of managing them, becoming familiar with and communicating data-driven insights is getting both much harder and more essential.

A modern finance leader's ability to not only understand and interpret this data, but also to bring forward opportunities for the greater organization to use the data in value-oriented ways, is a skill sure to increase in value.

The Change Agent. Finance leaders pride themselves on their logical and numerically driven decisions, but that quality can quickly become a handicap in the midst of evolving risk.

"While finance must always maintain rigor and discipline around costs, cash, and compliance, in the digital world, finance and business experimentation are not an odd couple," the Accenture study says.

Finance professionals often know more about the inner workings of an organization than any other team. Bringing innovative solutions to the table with the knowledge that finance leaders possess is often invaluable in setting strategic direction.

From influencing investment opportunities in technology, to improving customer experiences, to laying the path for how data is used within a company, finance leaders have multiple opportunities to lead positive and needed change.

The Sage. From economic volatility to reputational risk, the future of risk management is highly dependent on rapidly analyzing and making sense of

"Modern developments in analytics and technology will help finance leaders bring more of their humanity to work, not less."

—Eric Dowdell, head of trade credit, Dun & Bradstreet

the data at our disposal.

Increasingly, this must occur in real time. Risk management is becoming less about programmatically addressing the past and more about dynamically interpreting the future, so finance leaders must embrace knowledge they don't have, data they haven't analyzed yet, and possibilities that may impact their businesses. CFO

Eric Dowdell is global head of trade credit business at Dun & Bradstreet.

Will Treasurers Dump Excel?

Treasury management systems offer a compelling alternative.

More corporate treasurers in small- and-midsize enterprises are replacing their "basic personal accounting system" (read: "spreadsheet") with a more robust treasury management system (TMS), according to Aite Group.

What's pushing them along?

Generally, the "need to run software applications that ensure agility and adaptability to continuously changing conditions," writes the report's author, Enrico Camerinelli.

On the regulatory side, the General Data Protection Regulation (GDPR) could motivate treasurers to abandon Excel, because it "triggers a review of a company's client management segmentation strategy" that will directly affect payables and receivables management policies.

"Treasurers will be forced to determine whether they should only comply with this regulation or use it as an opportunity to overhaul their systems," Camerinelli adds.

The needs of a modern treasury department, however, are likely to have greater influence: streamlining bank reconciliations, for example, and automating cash forecasting. "Only a holistic view of all bank account positions enables a corporate treasurer to assess availabilities of or needs for cash," Camerinelli says.

Once treasury starts managing internal cash and liquidity in a more sophisticated manner, of course, that "must be reflected in [automated] reporting summaries required by both external auditors and—more strategically relevant—by company decision-makers."

About half of the treasurers of small and midsize businesses that Aite interviewed still use spreadsheets. The analyst firm estimates that group will shrink to 45% by 2020. About 22% will be using a TMS by then, up from 18% now.

While there are convincing arguments for treasury to opt for a TMS, "a number of equally important factors make [treasurers] prefer the status quo," writes Camerinelli.

A big fear is moving to an overly complicated TMS, one harder to use than Excel. Treasurers also like that Excel allows for ad-hoc analyses.

Finally, one-fifth of small and midsize company treasurers have been burned before: when they adopted a previous TMS, they were dissatisfied with the results. | **VINCENT RYAN**

courtesy the author, Thinkstock

CAPITAL MARKETS

How to Spot a Fraudulent M&A Target

Here are some of the red flags of fraud to watch out for when conducting due diligence. By Melanie Chen

Following the financial crisis that began a decade ago, many private companies—and notably many China-based companies—pursued reverse mergers to gain access to U.S. capital markets more quickly and cheaply than via a traditional initial public offering. ¶ Unfortunately, these companies weren't subject to the same degree of scrutiny as typical IPOs were, because of the far lighter financial-reporting regulations in China.

Some of the reverse-merger companies may have looked like ideal acquisition targets or business partners, but it was generally impossible to determine a correct valuation based on the available information.

Several of the companies have since been outed as frauds, including Ag-Feed and Rino International.

While these reverse-merger frauds have been discovered in the decade since the financial crisis, their deceptive practices and fraudulent activities bear striking resemblance to prominent domestic examples from the early 2000s, such as Enron and Worldcom.

To be sure, the risks inherent in dealing with such companies are still present, and they particularly apply to any company looking at acquiring, merging with, or investing in another company. For finance executives playing critical roles in such potential deals, it is imperative to closely scrutinize information about a target's assets, liabilities, revenues, and profits to ensure they do not rely upon false valuations.

There are several items that finance executives should consider red flags when conducting due diligence. These warning signs are particularly relevant when dealing with companies governed under foreign jurisdictions with less stringent reporting requirements, but they should also be heeded in potential domestic acquisitions.

Unusual high volume of or complex related-party transactions. In 2012, the Securities and Exchange Commission charged the CEO of China Natural Gas with concealing a $9.9 million loan issued through a sham borrower to a real estate firm, which was owned by his son and nephew. The CEO was also charged with hiding a $4.4 million loan to a company that was controlled by his friend.

Unexplained large increase in inventory. A large unexplained increase in inventory may be caused by insufficient inventory obsolescence reserve or fictitious inventory-in-transit. Another cause is product returns, with revenue not properly reduced or product-return reserve not properly estimated. That scenario gives financial-statement readers a false impression of revenue.

Unusual variance in gross margin. Observing the gross margin in a company's industry is an effective way to spot an unusually high gross margin. In 2014 the SEC charged that Agfeed, an animal feed company, inflated the weights of hogs it sold because fatter hogs bring higher market prices. The company was charged by the SEC for falsely reporting $239 million in revenue by creating fake invoices.

Significant sales volume near the ends of quarters or year-end. Large revenue may be recognized near period ends in order to meet a certain revenue target; then that revenue may be reversed and product returned in the next few months.

Management bonuses related to year-end profit. Management over-

"The good news is that in many cases fraudulent practices are not the result of complex strategies."

—Melanie Chen, managing director, UHY Advisors

ride of controls is always a fraud risk when executives can raise their bonus by artificially boosting profitability.

Large volume of transactions not supported by signed contracts. Verbal contracts could be evidence of transactions' existence but are not as durable. Well-managed companies with effective internal control always have comprehensive documentation of vendor/customer lists, budgets, purchase/sale orders, contracts, and receiving/shipping documents.

Old uncollected receivables. Aged accounts receivables may be an indicator of improper revenue recognition. During the IPO or fundraising stage, fictitious customers can be created and higher revenues recognized. Accounts receivable thus may be left uncollected and end up being written off in the following years.

Recent high turnover of senior executives. Pay attention to changes within the management team. Consecutive resignations of executive officers and audit committee members are often a red flag. If a company frequently changes its auditor, it could signal fraud.

Unusual amount of professional fees. Professional fees normally include audit, accounting, legal, and advisory fees. If such fees increased significantly in a short time span, especially legal fees, it may be an indicator that the company was involved in litigations and potentially has to pay large settlements.

Unusually high customer concentration. Customers representing more than 10% of total revenue or accounts receivable should be disclosed. A limited number of fraudulent customers may be created and maintained to manipulate revenue and conceal fraudulent activities.

The good news is that in many cases fraudulent practices are not the result of complex strategies. Instead, they share common and seemingly noticeable elements of basic accounting irregularities and false documentation. Executives therefore should usually be able to identify a fraudulent company before formalizing any sort of business transaction or relationship. CFO

Melanie Chen leads the China Group at UHY Advisors.

Fed Proposes Volcker Rule Rewrite

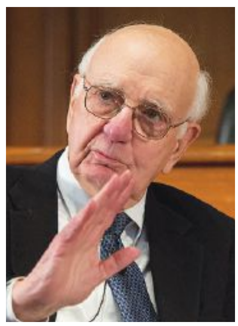
Changes to the crisis-era regulation would ease strict limits on proprietary trading.

The Federal Reserve in late May proposed a rewrite of the Volcker Rule, one of the central pieces of the Dodd-Frank financial reform legislation implemented after the financial crisis. The rule banned most proprietary trading by banks.

The Fed's rewrite would relax regulations that permit only trades related to market-making and underwriting, by making it easier for banks to show that trades meet near-term demand from clients.

The proposal also called for repealing a standard that assumes that when a bank is short-term trading, it is profit-seeking unless it can prove otherwise. That standard would be replaced with an accounting test.

Additionally, the Fed would create a tiered framework, putting the strictest oversight on the institutions that do the most active trading. The Fed would give more latitude to smaller, less-complex banks. Banks with less than $1 billion in trading assets would be presumed compliant.



Paul Volcker

Eighteen banks with more than $10 billion in trading assets face the most rigorous rules. Those banks account for 95% of all trading activity.

"I view this proposal as an important milestone in comprehensive Volcker Rule reform, but not the completion of our work," stated Randal Quarles, the Fed's vice chair for supervision. He added that the objective was to simplify and tailor the rule but noted that further reforms are possible.

Former Fed chairman Paul Volcker, for whom the rule is named, said that he welcomed proposals to simplify it.

"What is critical is that simplification not undermine the core principle at stake—that taxpayer-supported banking groups, of any size, not participate in proprietary trading at odds with the basic public and customers' interests," Volcker said.

Democratic Senator Elizabeth Warren of Massachusetts said, "Even as banks make record profits, their former banker buddies turned regulators are doing them favors by rolling back a rule that protects taxpayers from another bailout." | **WILLIAM SPROUSE**

courtesy the author, Creative Commons

FINANCIAL PLANNING & ANALYSIS

Usage of Variance Analysis Is, Well, Variable

While it's not debatable that variance analysis is an important FP&A tool, companies differ in how they apply it. By Thomas E. Conine, Jr., and Michael B. McDonald IV

Variance analysis, well-recognized as a valuable tool for business review and planning, examines deviations in operating margin and other financial metrics relative to a budget or prior time period. ¶ Such analysis breaks down the deviations into various decision-based drivers of profitability (e.g., price, volume, cost, productivity) and serves as a gauge of forecasting accuracy and components of growth.

We surveyed 154 senior finance executives at Fortune 500 companies, and on average they rated the importance of variance analysis at 8.7 on a 10-point scale.

What's really interesting, though, is that the survey revealed significant disparity in how companies apply variance analysis.

Most companies are simultaneously concerned with business planning, meeting financial commitments, and growth. Accordingly, they should do what we call a "3-Up Variance Walk," analyzing the variances between:

1. Prior-year actual results and this year's budget (for planning). This is part of the budgeting process.

2. Current-year budget and current-year actual results (for meeting commitments). This is done at year-end.

3. Prior-year actual and current-year actual (for growth). This is also done at year-end.

The happy news is that a full 100% of our survey respondents who use variance analysis use it for number 2. Almost as good, more than 80% of them use it for number 3.

However, only about 50% of the participants use it for number 1. That represents a potentially large missed opportunity on the risk-management front. Prior-year-to-budget variances can help reveal what risks a plan may entail, something that can't be done in backward-looking GAAP income statements.

Here's another missed opportunity: only 42% of the survey respondents break down volume variances into "share" and "true growth." However, doing so can be crucial for revealing a complete picture of performance, because a business can show a positive sales volume variance while still losing all-important market share.

Further, we found that only 60% of the companies perform cash-flow variance analysis. That's surprising, given today's strong emphasis on free-cash conversion (i.e., the percentage of net income that converts to cash; most companies aim for 90-95%).

With respect to the various drivers of profitability, a solid majority of the surveyed companies use variance analysis for all of the major ones except productivity. We didn't expect that either, given companies' unending initiatives to improve processes and procedures. The full breakdown of use of variance analysis for the drivers of profitability is as follows: volume, 94%; price, 87%; product mix, 81%; cost, 81%; foreign exchange, 68%; and productivity, 48%.

Operating Margin Variance

The most common way for companies to address and understand variances is through graphical representation using a classic "waterfall" chart, where the numbers cumulate from left to right as in the example on page 23.

The hypothetical example shows that the sum of the variances (price inflation, net volume, cost inflation, and productivity) equals the difference between the two end points, or $7.

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The graphic illustrates which factors are contributing and which detracting from the company's ability to meet and exceed commitments.

It's clear that productivity (or true improvements in processes and procedures) is essential for the business to exceed plan. This business has experienced cost inflation (e.g., material cost increases) that it's unable to pass along to customers. In fact, selling prices drop from plan, possibly due to the competitive nature of the industry.

The combination of decreasing selling prices and increasing material cost or wage inflation, so common in business today, makes the case for focusing on productivity and attention to internal measures that are under a company's control. Note that the hypothetical business shows incremental volume growth relative to plan—a positive, to be sure.

Best Practices

Using variance analysis to inform decision-making has the following positive impacts:

Competitive advantage: It promotes consistency in meeting or exceeding plan, demonstrates the strength of organizational capabilities, and establishes trust in the leadership team to perform.

Risk management: It gives finance leaders the insights they need to mitigate controllable and even uncontrollable variances.

Shareholder value: When a company combines good internal controls, an effective internal audit process, a cross-functional environment, and a culture of meeting commitments, it increases the probability that variances will be positive—that commitments will in fact be met or exceeded.

So how can FP&A leaders maximize the benefits of this critical tool? Here are our recommendations:

- Know the organization's leading generic and custom indicators, with the understanding that their correlations may vary over time. For example, the relationship between price and volume can change, as happens when prices become less elastic.
- Assemble a diverse cross-functional planning team that understands the company's value stream. Consider a wide range of outcomes, and encourage contrarian opinion while having a process in place for reaching consensus. Ensure agility in the finance team to meet commitments regardless of the environment.
- Embrace the "3-Up Walk": analyze planning, meeting commitments, and growth variances, both at gross and operating margin levels.
- Back-test to catch any systematic biases in the variance buckets.
- Take a risk management perspective to break down variances by controllable and uncontrollable.
- Segment volume variance into share and growth to see the organization's true incremental growth vs. growth spurred by an overall market rise.

Thomas Conine, Jr.

- Use cash-flow variance more ("If the cash doesn't flow, the answer is no").
- Determine accountability for failure to perform (who has ownership of a negative variance to plan).
- Work to eliminate behavioral biases built into forecasts.
- Integrate data analytics, to identify patterns, into all aspects of variance analysis.
- Create continuing education opportunities for teams around variance analysis best and worst practices.
- Link all business decisions to strategy (a goal of enterprise risk management) while balancing the short and long terms.
- Uncertainty is acceptable, surprise is not. Early misses might be recoverable, so keep the lines of communication continuously open, and develop a system's profitability mindset with all.

Putting some of those recommendations into practice can get messy in a matrix organization of multiple authorities and unlimited solid and dotted-line relationships with accountability to many.

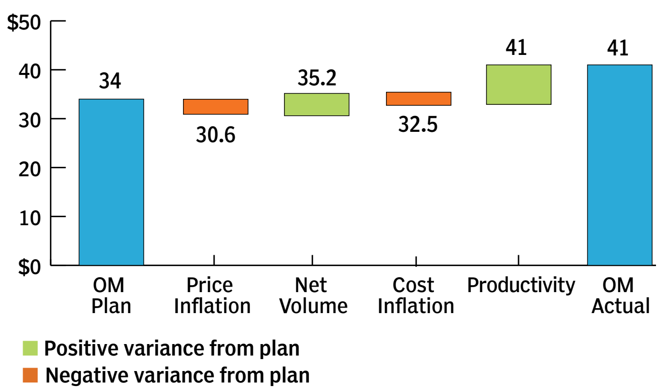
In such an environment, organizational clarity around structure and process is essential. Everyone must properly understand their roles and responsibilities and to whom they are responsible.

FP&A's responsibility is to help others in their sphere of influence make sound business decisions with the goal of creating shareholder value. Variance analysis is at the heart of business performance. CFO

Thomas E. Conine, Jr., is a professor of finance at Fairfield University and president of TRI, which provides financial education for executives. Michael B. McDonald IV is an assistant professor of finance at Fairfield.

Deviations from the Target

A classic waterfall chart shows which factors are contributing (green bars) and which detracting (orange bars) from the operating margin plan.



Source: TRI Corp.

courtesy of the author

DID TAX REFORM IMPROVE LEASING'S BENEFITS?

By Russ Banham

The Tax Cuts and Jobs Act (TCJA) is motivating businesses to accelerate plans to acquire capital equipment to boost organic growth. The law's cut in the U.S. corporate tax rate to 21% from 35% is prompting companies to revive investment in tangible assets. Among the businesses benefiting from that trend are 3PL's in fleet leasing and management.

"When governments reduce taxes across the board, companies keep more of their earnings," says Art A. Garcia, CFO of Ryder System, Inc., a leading provider of fleet leasing and supply chain management solutions. "Confidence in the economy is boosted, encouraging companies to invest in replacing aging equipment, like their current fleets."

Indeed, a recent American Trucking Associations survey of its members indicates that nearly half (47%) of carriers plan to invest their tax savings in new trucks, trailers, and safety technology.

"Customers are coming to market to buy equipment across the board, from traditional light-duty trucks and heavy-duty tractors and trailers, to medium-duty electric vehicles used for last mile delivery," Garcia tells *CFO*.

Before fleet operators give procurement the green light, however, they face a critical question: Is financing to buy a vehicle more advantageous now, or has tax reform made leasing a vehicle the more cost-effective option for businesses?

Depreciation Boost

A major change in the TCJA enables a business to depreciate 100% of the cost of a long-term asset (like a truck) within the first year of purchase, instead of having to deduct the expense over several years based on depreciation schedules. This expansion of "bonus depreciation" could indeed lead some operators to finance or buy trucks outright instead of leasing.

However, what the Trump tax law giveth to business it also taketh away. The bonus write-off declines to 80% in five years, and reduces further thereafter.

In addition, the new tax law limits tax-deductible interest expenses. Previously, most businesses could deduct all of their interest expenses in the year they were paid or accrued. Now, the TCJA caps the deduction at 30% of earnings before interest, taxes, depreciation, and amortization. Highly leveraged companies will be particularly hard hit.

Leasing allows companies to save capital for investing in workers, acquisitions, or business expansion.

"This [interest expense deduction cap] will likely have an impact on companies looking to buy or lease a truck, but it is more impactful on businesses that decide to own rather than lease vehicles," Garcia says.

A Better Deal

Thankfully for fleet operators, the Trump tax reform did not negate any of leasing's key, longstanding benefits.

The latest trucks have become high-tech wonders, embedded with multiple autonomous driving and remote-access features as well as advanced safety equipment. Due to the rapid advancement of truck technologies, these trucks reach economic obsolescence sooner. In addition, they are more expensive, requiring a larger upfront capital commitment, and are costlier to maintain.

Leasing allows companies to manage shorter asset lifecycles effectively and save capital for investing in workers, acquisitions, or business expansion. And it does so with a minimum of transaction costs for the lessee.

At the same time, companies can continue to deduct the cost of leased assets, and the tax benefits inherent in leasing get passed along to the lessee through lower pricing, according to Brian Holland, president and CFO of Fleet Advantage, a provider of truck fleet analytics.

Garcia says tax reform enhances the value of leasing, and Ryder's high-volume business with multiple original equipment manufacturers (OEMs) makes it a particularly attractive partner.

"At more than 241,000 vehicles, Ryder manages one of the largest fleets in the industry," Garcia explains. "Because of our size and procurement power, we can buy trucks at a better price than most private fleet owners in the market and maintain the vehicles more efficiently and cost-effectively. This allows us to pass the savings on to our customers, giving them an even bigger benefit when it comes to leasing a vehicle."

In addition, operators trying to buy new trucks face longer lead times than a year ago, in part due to the supply chain disruptions at some truck manufacturers. "The relationships we've built with OEMs helps us mitigate this disruption for customers, keeping them and their business moving forward," Garcia says.

Of course, CFOs must continue to closely examine lease structures and how they impact key financial performance metrics. On balance, though, while the TCJA offers a new depreciation boost for truck owners, all the other elements in the decision to invest in new vehicles favor the leasing option.

As Ryder's Garcia puts it, "It's tough to argue that buying is better."

Russ Banham, a longtime contributor to CFO, *is a veteran business journalist and author of two-dozen books.*

Is Analytics the Answer?

Enterprises are hoping data analytics tools can help them identify real-time business changes, understand customers, and vanquish competitors.

By Yasmin Ghahremani

When so many web pages, whitepapers, and webinars promise that finance-led data analytics programs will transform an organization, it's easy to buy into the hype. Cooler heads, though, understandably wonder: how effective are data analytics projects, really? Are finance chiefs (and other C-suite leaders) actually improving decision-making and boosting performance through the insights provided by mountains of data? And what kinds of barriers to success are organizations encountering once they embark on a project?

Though these questions remain largely unanswered, U.S. organizations are jumping into the pool — at least half have adopted some kind of analytics software, according to IDC. Similarly, a spring survey by The Hackett Group of of global companies with more than $1 billion in revenue found that 40% are using advanced analytics already, and 80% plan to adopt it in two to three years. Forrester estimates the global market for advanced analytics tools will grow from $10.3 billion in 2017 to $18.6 billion by 2021, a nearly 16% compound annual growth rate.

The numbers are no surprise, given that use cases now encompass a wide range of corporate goals, from boosting product quality to deploying workers efficiently to re-engaging customers who appear headed for the arms of a competitor. And the data science tools available are improving. In particular, self-service programs like IBM Watson Analytics, Microsoft Power BI, Salesforce's Einstein, and Tableau Desktop put easy-to-use dashboards in the hands of line-of-business workers and are driving new applications.

Getty Images

But, as *CFO* found in its 2017 IT survey, data analytics projects are "full of trouble spots, stumbling blocks, and blind alleys." Enterprises can't expect the insights to start rolling in just because a data analytics project has been greenlighted. Success may lie much farther down the path.

Can't Hardly Wait

Thirty years ago, finance used data analytics in budgeting, planning, and procurement decisions. There were no enterprise resource planning, customer relationship management, or e-commerce systems to draw data from. That's no longer the case, but finance is still in a position to implement analytics programs not just for itself, but across the company.

"Finance is one of the few departments that is required to work cross-departmentally all the time, to provide transparency and help find efficiencies and opportunities," says Matt Hibbard, CFO of cybersecurity firm Distil Networks.

Neetu Shaw, a partner at analytics consulting firm Clarity Insights, says she always recommends that the CFO of a company lead forward-looking data initiatives because of his or her strategic role. Yet, she acknowledges, often the CFO is nowhere to be found.

Other experts agree: many CFOs, especially those who lack foresight, are ceding power to other executives, especially chief marketing officers (CMOs) and sales executives, who need to react quickly to marketplace changes. Some CFOs can take a whole month to close the books, points out Boris Evelson, a principal analyst at Forrester Research, but when a marketing chief sees that a campaign isn't working, they can't wait to react.

That's why some CMOs need their own data and technologies. "[They] have to change that campaign today because tomorrow customers are going to be gone," Evelson says.

To elevate analytics' importance, some companies have created data- or analytics-specific C-level roles. "Finance departments are beginning to lead," says Rich Clayton, vice president of Oracle's business analytics group. "But the new dynamic is the chief data officer or chief analytics officer. Those folks don't report to IT or finance, but to some division president. That's an opportunity for CFOs to partner."

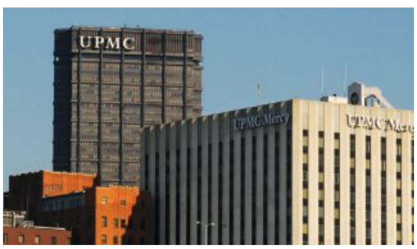
But finance still holds the reins at some companies. The finance team at Toyota Financial Services (TFS), for example has been at the forefront of the company's strategic use of data analytics across the organization. In one early win, it identified field offices whose year-over-year performance (measured in market share and profits) differed from peers regionally or nationwide. Management then worked with the underperformers to boost their results. Within one year individual field offices experienced 5% to 10% improvements, for an average 10% lift nationally.

Handle with Care

The widespread use of analytics within organizations, by those other than finance, can also present a challenge for CFOs who spearhead adoption projects: they may have to

Selling Point

Capital-strapped companies may be willing to pay for the analytics capabilities you build internally.



University of Pittsburgh Medical Center

According to one survey, about 55% of all organizations are outsourcing some or all of their data analytics needs. So, if the projected return on investment for a data analytics project would make it a tough sell internally, it pays to consider whether the resulting tools or insights would be valuable to other businesses. In doing so, some organizations are turning their data and analytical capabilities into revene-generating products.

A few years after University of Pittsburgh Medical Center launched its homegrown cost-accounting program, an analytics company called Health Catalyst bought the rights to the software and hired the team that had created it. In return, UPMC received a small stake in Health Catalyst and a commercial version of the system, which is much more user-friendly than the old version. The ownership stake means UPMC indirectly benefits from sales of the revamped software.

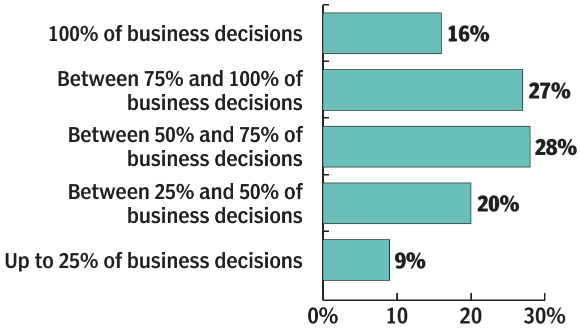
One financial institution is going a step further and creating a direct source of revenue from a data analytics platform that Clarity Insights is helping it build. The financial institution will sell the platform, slated to be released next year, to credit unions that are its clients. The tool is designed to help credit unions understand how their customers are performing and what the competition is doing.

"Data and analytics should be looked at as assets," Neetu Shaw, a partner at Clarity Insights, says. "Creating a revenue stream is one of the best ways to monetize and get value from your data." | **Y.G.**

Embracing the Concept

About 70% of organizations use analytics as a component in at least half of their business decisions.

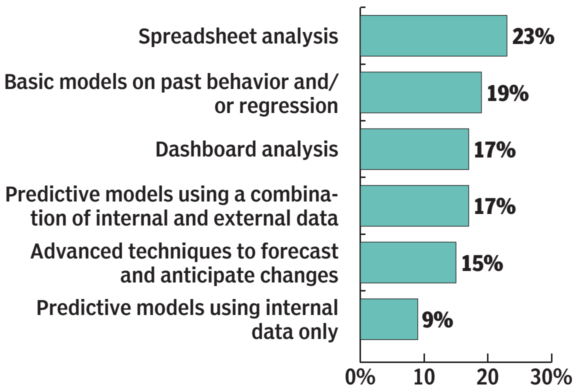
What percentage of your organization's business decisions are made based on analytics analysis?



Just Getting Started

A majority of organizations use analytical tools no more complicated than basic data models and regressions.

Which best describes your organization's approach to using analytics?

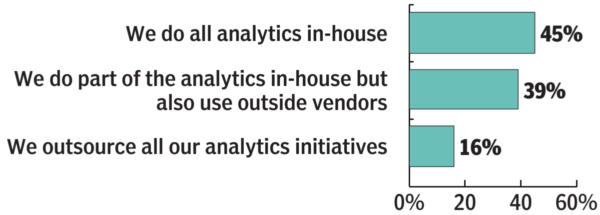


Source for all charts: Dun & Bradstreet/Forbes Insights 2017 Enterprise Analytics survey of 300 global executives

Inside and Out

Most organizations are tapping in-house and third-party expertise, as demand for analytics and the need for specific skills increase.

How do you handle your B2B analytics needs?



tread more carefully with other functions than perhaps they normally would. Payroll outsourcer Paychex has developed more than 50 analytical models in-house that do everything from evaluate the credit risk of potential customers to improve employee retention. One of the most valuable models anticipates which clients might be thinking of leaving.

The model was so successful early on that the company created a dedicated client retention team to work from the information the model provided. The team reaches out to clients who have been identified as likely to jump ship, and reels them back in by, for instance, answering pricing concerns or fixing previously unknown service issues. In one particular group of customers targeted by the retention specialists, client losses fell by 50%.

But the analytics group at Paychex, which reports to the CFO, initially experienced pushback from business users when its predictive models suggested certain courses of actions with customers.

"We have more than 100 offices across the United States, and many times these general managers or branch managers are very familiar with their clients and their businesses," says Frank Fiorille, vice president of risk, compliance, and data analytics at Paychex. "We [now] try to leave some tolerance so they can override our decision based on experience they have."

TFS learned to involve business users from the beginning. Finance or whichever department is leading has to be careful about how it communicates projects; otherwise users will just roll their eyes. "Even if internally you use words like 'finance-led,' a lot of people don't want to be led by other people," says Amit Shroff, vice president of finance and chief competitive officer at TFS. Labeling a program as an enterprise initiative produces a lot more buy-in, energy, and cross-functional acumen, he says.

For instance, in another project, the TFS finance team helped develop an analytics tool for sales, even though most of the team members had never been in dealership sales. Early on, the sales force complained that the tool only worked on laptops, but salespeople needed to use iPads. The tool was also too slow. "You need that other eye to tell you how [a tool] is going to work on the ground," says Shroff. "If you work with users and leverage their perspective, then [the tool] becomes stronger."

Dollar Benefits

All that is not to say that data analytics can't be directly aimed at financial initiatives. Applications in finance present some of the strongest use cases.

Consultancy Maine Pointe, for example, was able to free up cash for a large agricultural products distributor that had made 40 acquisitions in five years, according to Nathanael Powrie, vice president of data analytics. Sales were declining and inventory levels ballooning. Within eight weeks, the data analytics team helped release $18 million by identifying ways to reduce inventory, close offices, and shed assets.

Among those assets was a bloated fleet of light vehicles. The team looked at how many trucks the client had at each branch location, how many miles each vehicle was traveling, and how many runs each was completing. From there, the team was able to increase utilization of each truck and eliminate excess capacity.

Maine Pointe also uncovered ways to cut the company's roster of suppliers and the products it carried, leading to an ongoing 15% reduction in inventory. "The data analytics team is still working with the CFO on a strategy to go after another $50 million in inventory reductions" that Maine Pointed has identified, says Powrie.

SAP is another example. The software giant has been using its own real-time data analytics tool, HANA, to analyze headcount costs and capital investments. At the end of the first quarter of 2017, the finance team noticed that both were running high. "We were able to identify the trends in real time," says Todd McElhatton, CFO of SAP's cloud business group. "It wasn't something we kind of figured out a quarter or two later."

The company responded nimbly by modifying hiring and investment plans for the rest of the year to dial back costs and meet Wall Street expectations. By year-end, SAP had exceeded the earnings guidance set at the beginning of the year. "Without the analytics tools there's no question in my mind that we probably would not have achieved that same result," says McElhatton.

Speed Bumps

Analytics projects, unfortunately, aren't plug and play, for finance or any other function. Even self-service analytics programs come with a learning curve. Oracle's Clayton says companies need to upgrade the skills of people throughout the organization, especially the CFO. When Clayton meets a new client, he tells the CFO to take a data science class to better understand the risks of data-driven decision making.

'Show Me Some Value'

Tool manufacturer Stanley Black & Decker ramps up its data science efforts.


Donald Allan, CFO, Stanley Black & Decker

In May, Donald Allan, CFO of Fortune 500 *toolmaker Stanley Black & Decker, spoke with Deputy Editor David McCann about the company's increased usage of advanced analytics.*

Where does Stanley Black & Decker stand with respect to using today's most advanced analytical capabilities?
Most industrial companies, and we're no different, haven't dramatically evolved their business models to use advanced analytics. Today we still do traditional data analysis. For example, in our business intelligence warehouse we have a lot of information on the profit margins of particular products. Why has this one gone down one or two points, and how can we change that trajectory?

What's changing now is that making decisions about pricing and manufacturing cost requires a lot more input than just the traditional internal data. It requires looking at competitor pricing. It requires looking at competitors' costs, where you can get those. And it requires looking at manufacturing-cost alternatives from vendors and things like that.

With that data, using artificial intelligence and machine learning algorithms, a company [can develop] insights for evaluating the business model.

Are you using data scientists for such projects?
Yes, we've been bringing those folks on board. I really do think some of today's finance functions are going to become data-science functions in the future. Or, a handful of data scientists will do all the data crunching and provide insights, while the finance team figures out what to do with them.

We're looking at ramping up the data science team to about 75 people by the middle of next year. Right now, it's about 15 to 20 people. I'm not sure I want 75 people until they show me some value.

So, we're identifying use cases. [For each one, the data scientists] have to create value, whether it's reducing inventory, creating revenue, lowering our costs, or whatever it might be. But I'm convinced we can create probably $200 million of value across the company over the next two to three years with this approach.

Can you give an example of a use case?
Our tool business is very complex. There are too many SKUs. We've talked for years about how to reduce that complexity, focusing on SKUs that rotate very quickly. But it's one thing to get insights. Then you have to take action to drive value. If someone you bring in says the organization is going to save $50 million by doing this or generate $100 million of revenue by doing that, it becomes hard to ignore.

Courtesy Stanley Black & Decker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And he emphasizes that such learning shouldn't be delegated. "Algorithms are going to be making operational decisions for [the organization] and perhaps there will be unintended consequences," Clayton tells them.

Jeff Thomson, CEO of the Institute of Management Accountants, told *CFO* last year that "if finance and accounting teams don't step up to advanced analytical competencies, in data science and things of that sort, 10 or 20 years out they could easily lose their relevance in the modern enterprise."

Senior leadership contemplating a data analytics project also need to understand that no data or analytics model is perfect. Paychex's Fiorille acknowledges that finding good data and making sure it's cleaned is critical, but the organization also shouldn't wait for perfection. "If the organization demands that, [it will] probably never get anything off the ground," he says. "And, I'll be honest, the early models that we built are probably still not perfect, but they're good enough to build something that's very predictive and does what we need it to do."

A few years ago, finance leaders at the $16 billion University of Pittsburgh Medical Center recognized that, due to industry-wide trends, they needed to switch their focus to containing costs from maximizing revenues. They looked for a cost activity accounting system but couldn't find a health-care solution that worked for them. They ended up creating a system in-house that identified costs down to the patient and physician levels.

"Algorithms are going to be making operational decisions for [the organization] and perhaps there will be unintended consequences."

—Rich Clayton, VP, business analytics group, Oracle

"Now we have this very robust ecosystem of financial and clinical data that gives us significant insight into all of our activities," says UPMC CFO Robert DeMichiei. "But the most important thing is it allows us to see where we have clinical variation and, therefore, cost variation."

One of the hospital system's biggest successes came from comparing the costs and patient outcomes of three different kinds of hysterectomy surgeries that UPMC doctors perform: traditional, laparoscopic, and robotic. They realized that the minimally invasive laparoscopic surgery, when appropriate, had the best outcomes for patients and was also more cost effective than invasive surgeries. So, when possible, the hospital moved toward having more physicians who could perform laparoscopic surgery. "We were able to optimize the quality outcome and also the cost," says DeMichiei.

Of course, it wasn't as easy as it sounds. DeMichiei says his team worked with a user group during the project's development phase, and that group revealed gaps in the software's performance that the team went back and closed. "You want to make sure that you've actually created what you wanted to create," he says.

"Even once a project is implemented, it's really only implemented 75% or 80%," adds DeMichiei. "I think a lot of the value gets created in the last mile."

In addition, some projects just don't make it to the finish line, and CFOs have to recognize that it comes with the territory. Paychex is constantly reiterating its models to make them more accurate and responsive to changing business needs. But some models just don't provide much value. "Many times, you go down a road and you have to stop or you have to back up and go in a different direction," says Fiorille. "People aren't used to that, and obviously there's some cost involved."

Always Tweaking

An important ingredient to a successful analytics program is sustaining interest. All projects need continuous attention. Teams need to ensure the data is regularly cleaned and models refined. "Projects don't fail, they flail," says Bryan Mueller, director of IT financial management at the advisory firm ISG. "Someone will have high expectations of what an analytics project will do and [the organization] may get some early wins, but without a continued focus on governance and improving data, the program will kind of spin along."

Avocat Group, a commercial real estate consultancy, is beta testing a system that automates previously manual tasks. For instance, it combs through clients' current lease information and compares it to market data to find variances. If market rents are significantly lower than what the client is paying, the client might want to renegotiate its lease terms or take additional space at an attractive rate.

The system also sends alerts for upcoming events, such as the date when clients can take additional space or when they have to terminate a lease. It can even calculate real estate costs as a percentage of revenue and then compare real-estate-cost-per-revenue-dollar for each client location.

Once beta testing is done, Avocat's clients will have access to the system, either for free or for a fee. "We already know that it's going to greatly reduce staff time," says Walt Batansky, Avocat's CFO. "We know that it will pay for itself."

But he says his team also understands that the data project will require ongoing adjustments.

"I think, like most companies, we're going to need to modify the software, not necessarily daily, but pretty frequently, and we're expecting that it will always be a work in progress for us," Batansky emphasizes. CFO

Yasmin Ghahremani writes about business and technology.

Courtesy Oracle

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Payments Push

As a new era of real-time payments dawns, companies must weigh the benefits against arguments for early caution.

Today's gotta-have-it-now mindset often seems more ingrained in the United States than anywhere else. It's odd, then, that the country has lagged behind many others in building the infrastructure to make near-instantaneous electronic payments.

Finally, though, change is underway, in the form of a new inter-bank payments system dubbed RTP, for "real-time payments." Lightning-fast settlements—versus next-day automated clearinghouse (ACH) transactions, wire transfers (which can take days to clear), or, worst of all, checks—could provide a host of benefits for businesses.

The advantages range from freeing up working capital sooner for strategic investment to accelerating supply-chain operations.

It's not all about speed, though. In fact, other aspects of RTP, including the provision of standardized data relating to payments and transaction confirmations that payments are final and certain, may hold greater appeal.

At the same time, don't expect to see hordes of companies rushing to update their internal systems to accommodate the new payments technology. Reasons for caution abound, at least in these early days.

Unceasing Movement

The new payments era launched on Nov. 13, 2017, when BNY Mellon initiated the first-ever real-time payment in the United States. Faster than you can say "show me the money," $3.50 was successfully transferred from an account at BNY Mellon to one at U.S. Bank.

Those two banks and four others—Citibank, JPMorgan Chase, PNC Financial Services Group, and SunTrust—now have the capability to execute inter-bank payments within three seconds. Nineteen additional large commercial banks are working toward joining the party by 2020.

RTP is the first new core payments structure in the United States in more than 40 years. In developing it, the 25 banks are partnering with The Clearing House (TCH), a banking association and payments company. TCH wrote the code for RTP and is the system operator.

RTP exemplifies the unceasing movement toward real-time execution in business. Many activities are in that mode

By Russ Banham

Getty Images

now, from the gathering of customer transactional data for gauging buying preferences, to the second-by-second analyzing of social media imprints, to the continuous accounting (in some companies) that automatically reconciles millions of transactions each day.

PAYMENTS PUSH

Speeding up electronic payments is particularly ripe for this environment, given the "just-in-time" supply chain pressures that companies sometimes face. If a company buys a product from a supplier with which it doesn't have a credit relationship, but the buyer needs the product to ship right away, RTP can ease the concerns of a seller worried about the timeframe in which it will get paid.

Payment speed is especially attractive to midsize and small companies, which generally aren't very adept at cash-flow forecasting.

"The instant availability of funds and the fact that payments are final and irrevocable are great things," says Andrew Kirk, CFO of Trion Solutions, a provider of HR outsourcing services. "You're getting immediate liquidity, as opposed to waiting for funds with crossed fingers. It gives you the opportunity to invest the dollars sooner to grow the business."

The near-simultaneous transfers can occur 24 hours a day, every day of the year, as opposed to banks' current Monday-through-Friday systems.

Need for Speed?

A business technically can receive RTP payments without doing anything, as the money will be in its bank account. But as a practical matter, it must update its accounts receivable system to automatically apply the payments.

Speed usually ranks third among the factors that may drive a company to adopt RTP, says Steve Ledford, senior vice president of product and strategy for TCH. He polls groups of corporate officials on that question when he makes presentations on the new technology.

Better handling of data and certainty of payment typically come out on top, Leford says. Indeed, he notes, TCH named the new system RTP rather than Real-Time Payments because "we're trying to inch away from the focus on speed."

With RTP, a standard set of data is guaranteed to arrive simultaneously with the payment. That eliminates confusion and creates efficiency.

"Some wires lack the necessary details explaining what the payment is for, creating accounting delays for the recipient company as it researches days of transactions," says Patrick Villanova, controller and principal accounting officer at software provider BlackLine.

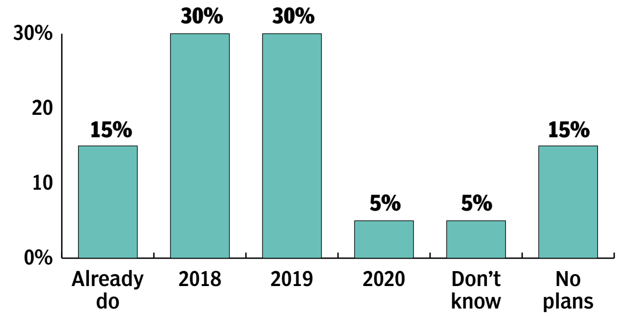
Notes Jennifer Lucas, executive director of financial services advisory for the payments practice at Ernst & Young, "The beauty of RTP is that the amount paid, what it was for, who paid it, and confirmation of payment are all transmitted without any manual processing."

The information associated with a payment can be as simple as an account number, but it can also be specialized and complex. For example, automotive manufacturers buy a variety of parts from multiple suppliers, and they often claim allowances for parts damaged in transit or for other reasons.

Minimal Latency

Most large banks intend to move to the new RTP system fairly quickly.

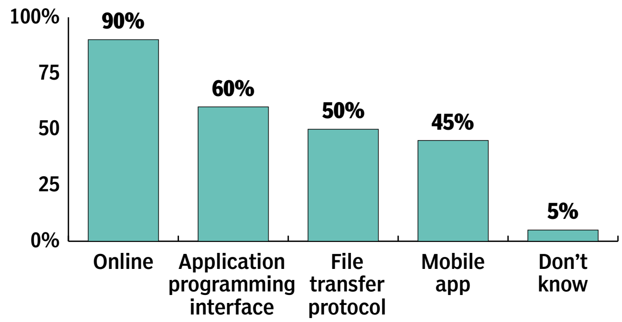
When banks will allow receipt of real-time payments*



Initiation Rights

Most banks will enable customers to make real-time payments through their online cash management systems.

Methods by which banks will allow initiation of real-time payments*



Multiple responses allowed.
*Aite Group survey of 20 of the top 60 U.S.-based financial institutions

"The instant availability of funds and the fact that payments are final and irrevocable are great things."

—Andrew Kirk, CFO, Trion Solutions

Courtesy Trion Solutions

RTP's standard message format, ISO 20022, is based on the way data is handled in web and mobile applications. Every piece of information is tagged to facilitate automating much of the back-office payment-processing work. That "saves labor costs, reduces errors, and accelerates the entire purchase-to-pay cycle," says Ledford.

A set of real-time messaging functions related to payments is also part of the value proposition for finance. In addition to "Payment Confirmation," these include "Request for Additional Information," "Request for Payment," and "Remittance Detail."

"The notifications create frictionless customer-facing interactions, replacing today's frustrating and costly back-and-forth interactions between payers and recipients," says Villanova.

For example, a payment confirmation can free the accounts payable department from the familiar exercise of paying a bill and then contacting the recipient to make sure it received the payment.

"Such operational hassles eat up money and time and adversely affect customer and trading-partner engagement," says Ledford. "The bane of cash management is inherent uncertainty. Neither side knows exactly when the cash will be there."

Taking It Easy

Here's what the new payments model is not: a wholesale replacement for ACH transactions, wire transfers, checks, credit cards, and good old cash.

Rather, RTP is an option.

"CFOs now have more tools at their disposal insofar as how they want money to settle," explains Carl Slabicki, director of immediate payments at BNY Mellon. "If they want a payment to clear within seconds or on a weekend or at night, they now have the opportunity."

But while it's likely that RTP will be used increasingly, there are good reasons why business adoption will occur at a gradual pace.

First, there's currently a $25,000 limit for RTP payments. That might make the technology a big yawn for CFOs of large companies, notes Art Brieske, head of faster payments at JPMorgan.

The ceiling eventually will be lifted, however. "That makes now a good time to do what's needed internally to get ready for opportunities, like improved cash forecasting, that RTP provides," Brieske says.

Second, while RTP has features that make it well suited for a variety of applications, businesses may prefer other, existing payment methods for certains kinds of transactions, similar to how consumers particularly like using credit cards for travel and dining.

Third, RTP is new. A company may want to try it on a small scale before committing to it as a primary payment method.

But the biggest limiting factor of all is resource constraints. "If an existing process is working well with established payment options, it may not make sense to divert budget and IT staff to convert the accounts receivable function to accommodate RTP," says Ledford. "ACH is cheap and effective, especially for recurring, low-risk payments."

Frank D'Amadeo, director of treasury operations at electric utility Consolidated Edison Company of New York, acknowledges that RTP could improve the utility's cash flow. "But," he says, "and this is a big 'but,' it would require us to customize our ERP system."

An alternative solution would be for the major ERP vendors like SAP and Oracle to modify their systems. But D'Amadeo isn't high on that either.

"Unless they could provide a cookie-cutter, out-of-the-box customization, we'd have to pay them to modify our internal systems, which would be costly and chaotic," D'Amadeo says. "We need standardization in the ERP industry without the vendors looking to nickel and dime us for customization. Until that happens, we're going to do nothing [to move to RTP]."

"Some wires lack the necessary details explaining what the payment is for, creating accounting delays."

—Patrick Villanova, controller and principal accounting officer, BlackLine

Aware of the issue, TCH is addressing ERP integration in several ways.

For one, it's reaching out to ERP vendors through its member banks to reinforce the importance of RTP to the payments industry, notes Jim Colassano, the organization's vice president of product development and strategy.

TCH is also educating some vendors about the opportunities RTP offers them and their corporate clients.

Further, it's teaming with several partnering banks to test the concept of an industry utility for B2B payments. The utility would support integration of RTP across vendors' platforms, obviating the need for customization.

SAP and Oracle are huge, influential organizations, but the sheer clout of TCH's member banks may well force the vendors' hands. "It will come. It's just a matter of time," says EY's Lucas.

Risk Avoidance

Another stumbling block to widespread adoption of RTP is the need to link it to a directory of databases for purposes of verifying user identities. Without that capability, banks may run afoul of strict Know Your Customer (KYC) regulations.

Courtesy Blackline

PAYMENTS PUSH

"Without a business directory maintained by an independent third party that verifies the authenticity of customers, RTP is just a dream," says D'Amadeo.

TCH is tackling the issue on two fronts. At the retail end of the banking spectrum, it's working to integrate its platforms with an existing directory operated by Zelle, a digital payments network owned by seven large banks.

On the wholesale banking side, TCH is looking to develop a secure model that would allow banks to reliably access one another's business credentials.

Yet another perceived hurdle to RTP relates to cybersecurity. For RTP, security must be embedded in a company's operational processes at the item-based level rather than at merely the batch-based level.

A related issue is fraud. "One benefit of today's somewhat antiquated system is that we have traditional checks and balances to detect fraud in funds withdrawals and transfers," says Villanova. "Banks have at least a full day to make that assessment."

If those hurdles are overcome, RTP may have a lasting effect, moving organizations closer to real-time accounting.

"If everyone migrates to RTP and uses a cloud-based finance and accounting solution that provides real-time transaction matching—identifying cash in and out and then linking it to the corresponding invoices and payables—a business could theoretically do a virtual close of the books at the end of each day," says Villanova. "A company would know every single day exactly where it stood from a financial standpoint."

Armed with this data, organizations could make better, more strategic expense-control and resource-allocation decisions and adjustments. In fact, if enough U.S. businesses combine RTP and continuous accounting, they could arguably have a positive influence on the entire economy.

"A country's economy is heavily dependent on the velocity of money—the speed at which the same dollar bill turns over," Villanova points out.

Similarly, notes Ledford, "Every company deals with the problem of stranded cash that can't be used. Making working capital more accessible instead of idle will have a big impact."

And it's not just the U.S. economy that may benefit. Many nations are looking to support platforms that enable real-time payments across all accounts globally.

That vision may come to pass—eventually. In the meantime, cautious though CFOs may be, RTP offers plenty of potential for achieving a less-glamorous but just-as-important goal: saving finance departments time, money, and endless headaches. CFO

Russ Banham is a Los Angeles-based freelance business journalist and author.

"The bane of cash management is inherent uncertainty. Neither side knows exactly when the cash will be there."

—Steve Ledford, senior VP of product and strategy, TCH

Better Now than Never

U.S. banks were in no rush to develop and adopt the RTP system.

U.S. companies have long awaited real-time payments. Early RTP-like systems were in place in Japan in the 1970s and Switzerland in the 1980s.

The United Kingdom has been out in front technologically since 2008, when it introduced its Faster Payments Scheme Limited, or FPSL. Today, 400-plus U.K. financial institutions offer the service to more than 52 million accountholders.

Within the past few years, India, Sweden, Singapore, and Thailand are among at least a couple of dozen countries that have adopted real-time payments, according to Steve Ledford of The Clearing House, operator of the new U.S. RTP system.

The U.S. system, launched last November, is part of a new wave that includes the European Union's SEPA Instant, introduced a week later, and NPP, initiated in Australia and New Zealand early this year.

It wasn't until 2015 that the U.S. Federal Reserve Bank created its Faster Payments Task Force, to identify and evaluate different approaches to speeding up payments.

Why so late to the party? The need in other countries was more urgent. They lacked ACH-type capabilities and were coping with three-day settlements. In the United States, in addition, the vast number of financial institutions—more than 100,000 entities in all—was an impediment .

"We wanted to learn what we could from other countries' experiences with real-time payments to create a model that suited all U.S. financial institutions," says Ledford." | R.B.

Left, courtesy THC, Thinkstock

THE
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STATE
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Land of Confusion

States' adjustments to the federal tax cuts present new obstacles to compliance.

By David M. Katz

The preparation of state income tax returns has in recent years evolved into a more complex endeavor. Now, uncertainty over how states will respond to the federal Tax Cuts and Jobs Act (TCJA), as well as possible fallout from a U.S. Supreme Court decision, could further muddy the state-tax picture.

While many companies stand to benefit from the TCJA, which slashes corporate income tax rates to 21% from 35%, most organizations will likely will end up paying some of that found money to state governments. How much will depend on the degree to which states—which generally conform much of their tax law to the Internal Revenue Code—decide to "decouple" from the TCJA in efforts to grab new tax revenue for their depleted coffers.

Adding to that uncertainty is the looming possibility that the 50-year-old system governing how states collect taxes on revenues of out-of-state vendors—how they determine the "nexus" of such businesses—could change radically. The Supreme Court decision in *South Dakota v. Wayfair*, which was expected to be handed down in late June, could have either changed the system or let it stand. Either way, long-underlying uncertainties involving the tax-collection responsibilities of internet retailers are likely to linger.

Getty Images

Red Tape and Headaches

To many corporate finance and tax executives, however, federal tax changes and the nexus issue are just the newest sources of proliferating complexity in the state tax arena.

Ongoing changes in the tax laws of many states make compliance much tougher, these executives say.

Marc Porter, CFO of The Law Company, has been preparing the tax returns of the $100 million construction-and-engineering company, which operates in 38 states, for 15 years. He sees it as a way of gaining a firmer understanding of the company's finances.

But over the last five or so years, a proliferation of state income tax rules has made the task "a major headache," he tells *CFO*. "It takes a lot longer to deal with state income taxes than the federal taxes."

The red tape is in part due to political pressure on state legislatures to refrain from hiking income tax rates, even though many states are starved for cash. Instead, to pick up incremental revenue, states are forcing corporate taxpayers to make adjustments to the income reported on their federal tax returns.

For example, many states have already decoupled from the bonus depreciation element of federal corporate income taxes, according to a report on the new tax law by KPMG.

THE 2018 *CFO* STATE TAX SURVEY

Under bonus depreciation rules, corporations can deduct from their taxes a portion of the purchase price of certain equipment and off-the-shelf software. The TJCA increased the previously existing 50% bonus depreciation to 100% for qualified assets placed in service after Sept. 27, 2017, and before Dec. 31, 2022.

It's not unusual for states to pick and choose the federal tax provisions to which they conform, often choosing to reject those that entail revenue-loss consequences, according to KPMG.

Still, Porter isn't thrilled that such maneuvers by states threaten to erode the benefits of the federal tax cuts. And he senses the potential for more financial hits at the hands of states.

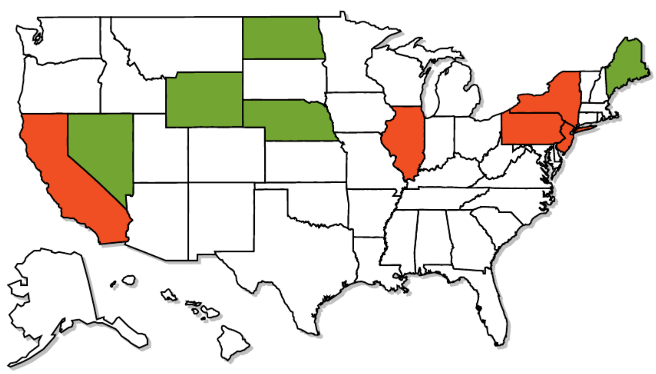
For example, as owners of an S corporation, shareholders of The Law Company will enjoy, under the TCJA, a 20% tax deduction on qualified business income. (At such entities, profits or losses are passed through to shareholders, who are taxed on them.)

However, Porter observes, that tax break is hardly guar-

The 2018 State Tax Survey Results

The charts highlight states ranked best and worst on six key measures.

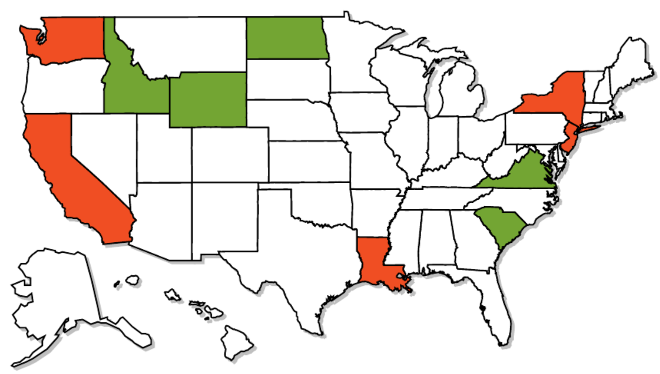
1. What is your overall impression of the tax environment in each state?



Survey respondents ranked states on a scale, with:
1 = Very fair and predictable
5 = Very unfair and unpredictable

VERY FAIR AND PREDICTABLE	VERY UNFAIR AND UNPREDICTABLE
1. **WY** [1.93]	46. **PA** [3.66]
2. **NE** [2.17]	47. **IL** [3.71]
3. **NV** [2.19]	48. **NJ** [3.72]
4. **ME** [2.28]	49. **CA** [3.82]
5. **ND** [2.35]	50. **NY** [3.97]

2. How fair and transparent are corporate income tax audits in each state?



1 = Very fair and transparent
5 = Very unfair and nontransparent

VERY FAIR AND TRANSPARENT	VERY UNFAIR AND NONTRANSPARENT
1. **WY** [2.24]	46. **CA** [3.46]
2. **ID** [2.38]	47. **LA** [3.50]
3. **SC** [2.43]	47. **WA** [3.50]
4. **ND** [2.47]	49. **NY** [3.62]
5. **VA** [2.50]	50. **NJ** [3.62]

anteed at the state level. "All states have to do is pass a statute that says you have to add back the 20%," he says. And he suspects some states might do just that.

Mounting Discrepancies

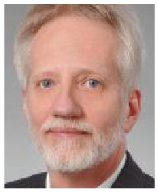
The inconsistency in state tax laws was worsened by state legislatures scrambling to react to the TCJA, which was enacted on December 22, 2017. With many legislatures starting 2018 sessions on Jan. 15, "time was really short" to incorporate the complexities of the TCJA into state tax law, especially provisions concerning offshore earnings, says Harley Duncan, managing director of tax for KPMG.

No matter what impact the TCJA ultimately will have on the accounting for and payment of state taxes, it's the biggest state tax issue for companies this year, according to Marji Gordon-Brown, a tax counsel at MacAndrews & Forbes, a diversified holding company.

The TCJA mandates that tax-deferred offshore earnings be "deemed repatriated" and taxed at a 15.5% one-time rate if held in the form of cash and cash equivalents.

And, with some companies expected to move large amounts of revenue-generating assets back onshore, their future taxable income could also change markedly. Such changes could make it extremely difficult to forecast corporate income for the purposes of state tax filing.

The states themselves are adding to the confusion by changing their own rules in response to the TCJA. "Every day, we're hearing about another state opposing a particular provision or enacting a particular piece of legislation" that addresses whether to decouple with provisions of the TCJA, Gordon-Brown says.



"It takes a lot longer to deal with state income taxes than the federal taxes."

— Marc Porter, CFO, The Law Company

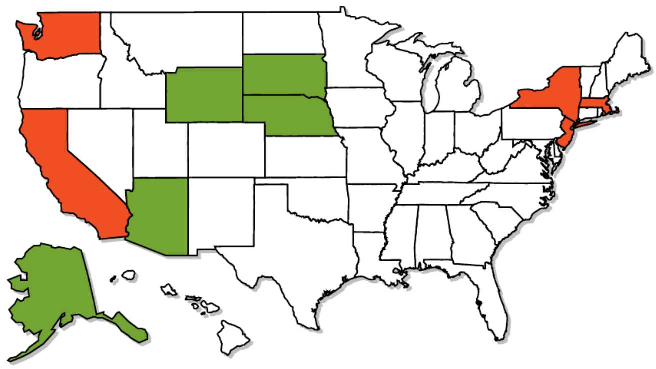
"An organization's calculation today may not be accurate a month from now, when another state enacts a different piece of legislation," she says, noting that the more states a company operates in, the more complicated its tax preparation becomes.

Several states, for example, have decoupled from a component of the TCJA that allows deductions on foreign expenses, notes Gordon-Brown. In such states, "if you have income that's excluded from the federal tax, you have to attribute some of your expense to that income on your state return," she notes.

The mounting discrepancies between federal and state taxation mean that federal and state corporate tax department functions must be much more tightly linked, according to Gordon-Brown.

"If the people who are doing the federal returns and the people who are doing the state returns are not the same people, they need to be increasingly connected and commu-

3. How would you rate each state's stance on asserting income tax nexus when companies have only an economic presence in the state?



1 = Not Aggressive
5 = Very Aggressive

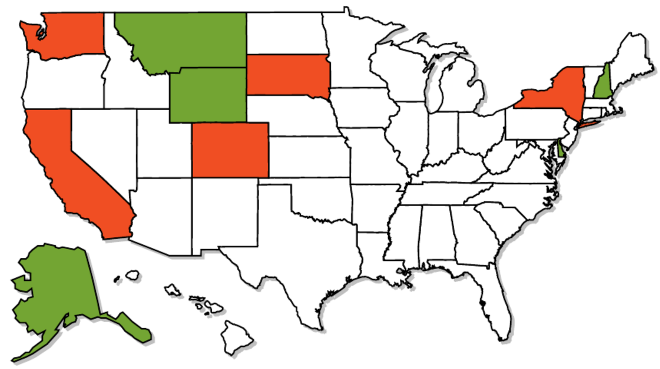
NOT AGGRESSIVE

1. **WY** [2.18]
2. **AK** [2.28]
3. **SD** [2.53]
4. **AZ** [2.56]
5. **NE** [2.57]

VERY AGGRESSIVE

46. **MA** [3.92]
47. **NJ** [4.04]
48. **WA** [4.21]
49. **NY** [4.26]
50. **CA** [4.49]

4. How would you rate each state's stance on asserting sales and use tax nexus?



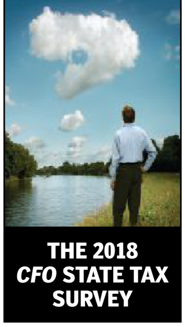
1 = Not aggressive
5 = Very aggressive

NOT AGGRESSIVE

1. **DE** [2.11]
2. **AK** [2.12]
3. **NH** [2.24]
4. **WY** [2.28]
5. **MT** [2.29]

VERY AGGRESSIVE

46. **NY** [3.84]
47. **WA** [3.86]
48. **SD** [3.91]
49. **CA** [3.94]
50. **CO** [4.11]



nicative." she says. "Otherwise things are for sure going to fall through the cracks."

Who's the Tax Man?

A wide-open question is how states will collect taxes on sales made by out-of-state online vendors to in-state consumers. In most states, businesses with a clearly defined physical presence, like property or employees, have long been required to collect sales taxes from their customers.

However, since a 1967 U.S. Supreme Court decision, *National Bellas Hess, Inc. v. Department of Revenue of Ill.*, out-of-state retailers selling products via mail order, for instance, have been excused from that responsibility. Under that decision, use taxes (sales taxes on out-of-state purchases) are still due. But they must be collected from the in-state customer, not the out-of-state seller. A 1992 Supreme Court ruling, *Quill Corp. v. North Dakota*, reaffirmed the 1967 judgment.

But because of the vast changes in how business has been conducted since then—especially the changeover to Internet sales—the existing regime of sales tax collection needs a second look, Justice Anthony Kennedy wrote in his concurrence with another Supreme Court opinion in March 2015.

Over the last few years, the matter of whether online out-of-state retailers could be required to collect taxes on purchases by their customers in a given state has hung in the balance. On January 12, the Supreme Court provided some hope that the matter might be settled by agreeing to hear a lower-court decision involving a lawsuit by South Dakota against Wayfair, an e-commerce company that sells home goods.

"Today, states' inability to effectively collect sales tax from internet sellers imposes crushing harm on state treasuries and brick-and-mortar retailers alike," South Dakota argued in its attempt to overturn the *Quill* decision's physical-presence requirement.

In stated defiance of the past Supreme Court rulings, South Dakota's legislature passed a law requiring sellers with gross revenue from sales in South Dakota of more than $100,000 within a year, or at least 200 separate transactions in a year, to collect taxes on behalf of the state.

Corporate tax and finance officials worry that, if the Supreme Court rules in favor of South Dakota, other states will set out to fashion their own nexus rules.

The Survey

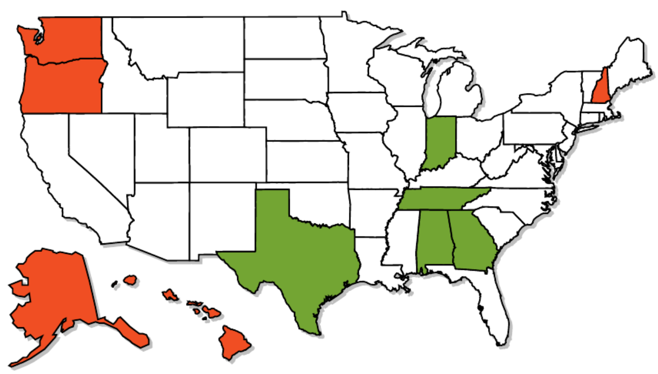
CFO's latest biennial tax survey was conducted in April and May 2018, with the cooperation of KPMG and the Tax Executives Institute, and drew 94 respondents.

In addition to the questions covered in the accompanying charts, beginning on page 42, respondents were asked about their understanding of how the Tax Cuts and Jobs Act will affect state taxes, how closely states should align their laws with the TCJA, and how confident they were in their tax system's ability to handle remote sales tax collection if the *Wayfair* decision requires it.

About 38% of tax executives indicated their understanding of the TCJA's effects on state tax obligations was "unclear" or "completely unclear," while 32% said they were "clear" or "very clear." A majority (73%) felt that states should "closely" or "very closely" align their tax laws with the TCJA's provisions. And, finally, a little more than half of the tax executives were "totally confident" or "confident" that their existing tax systems could adapt to a requirement that they collect sales tax on behalf of states in which they don't have a physical presence. CFO

David M. Katz is a freelance writer based in New York.

5. How would you rate each state's willingness to grant business tax incentives to individual companies?



1 = Very willing
5 = Not willing

VERY WILLING	NOT WILLING
1. **GA** [2.09]	46. **HI** [3.28]
2. **IN** [2.35]	47. **NH** [3.31]
3. **TN** [2.35]	48. **WA** [3.35]
4. **TX** [2.37]	49. **OR** [3.45]
5. **AL** [2.40]	50. **AK** [3.53]

Methodology

This survey has been conducted biennially since 1996 with the help of KPMG LLP, the audit, tax, and advisory firm, and this year with the additional help of the Tax Executives Institute. The survey aims to capture tax executives' impressions of the differing tax environments in each state in which they do business. The results presented here represent those impressions, rather than quantitative assessments of actual policies, tax rates, or other criteria.

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FIELD NOTES

Perspectives from CFO Research

Tax Law Drives Pension De-Risking Opportunity

The lower corporate tax rate is leading CFOs to finally address the problems of underfunding, rising costs, and mounting liabilities. By Chris Schmidt

Among the many effects on corporate finance from the Tax Cuts and Jobs Act is a greater motivation to address problems with defined benefit (DB) employee pension plans. Thanks also to the savings from a lower corporate tax rate for 2018, senior finance executives think that this year may be an opportune time to reduce the liability risks associated with their companies' DB pensions.

Those were among the important findings of a recent CFO Research study on how the new tax law is influencing a range of pension-related decisions.

The online survey, conducted in collaboration with Prudential Financial, drew 127 responses from finance executives whose companies have DB plans for current or former employees. This is the eighth consecutive year Prudential has surveyed CFOs on pension issues.

Respondents came from a variety of industries, led by financial services/real estate, health care, and auto/industrial/manufacturing. They consisted mostly of chief financial officers, directors of finance, and vice presidents of finance. A majority of respondents came from companies with $250 million to more than $5 billion in annual revenue.

Among the top conclusions of the research: Senior finance executives are using the new tax law's benefits to ramp up DB plan funding. Under the new tax rules, businesses have until mid-September 2018 to deduct pension-plan contributions at the 2017 corporate tax rate of 35%. After that, the new 21% rate kicks in.

Not surprisingly, about three-quarters (74%) of survey respondents said their organization was "very likely to make a substantial DB plan contribution" in time to take advantage of the larger deduction.

Increased Funding

The survey results match what Rohit Mathur, head of global product and market solutions for Prudential's pension risk transfer business, is observing in the market.

"A number of companies are accelerating pension contributions," he says. "We are also noticing an increasing interest in pension risk transfers among plan sponsors."

Even after the September deadline, companies can use savings from the significantly reduced corporate tax rate to fund their pensions at higher levels.

In the survey, 64% of respondents said they were "very likely to use the tax savings from the new law to increase funding of our DB pension plan(s)." (See Figure 1.)

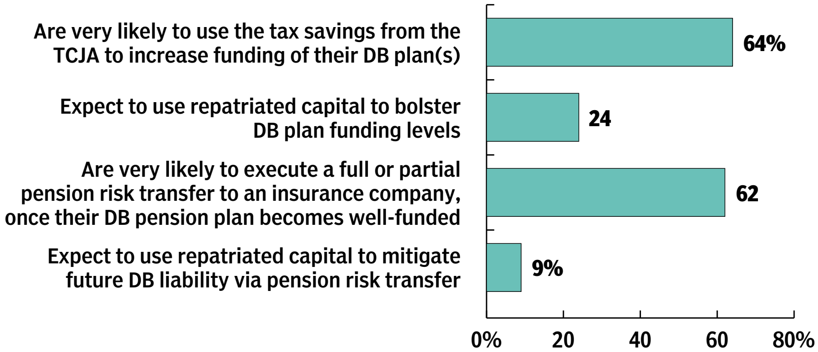
The new law also includes a provision allowing U.S.-based multinationals to repatriate foreign earnings at tax rates far lower than the 35% that applied in the past. Companies can take advantage of a one-time repatriation at the rates of 15.5% for cash holdings and 8% for non-liquid assets.

About a quarter (24%) of survey respondents said they planned to use repatriated capital to bolster their DB funding levels.

Among survey respondents at the companies that expect the TCJA to generate excess income, 29% said they expected to use the funds to minimize liability risk, through such efforts as boosting retiree health-care funding.

FIGURE 2

How the Tax Cuts and Jobs Act will affect respondents' approaches to pension funding and risk transfer



Note: Multiple responses allowed

The study also found that plan sponsors were considering whether to alter their asset management strategies, as well as whether to transfer pension obligations to an insurance company.

Cost Pressures

The decision to improve the funding levels of DB plans isn't solely an outgrowth of the new tax policy. Plan sponsors have long struggled to generate sufficient returns to offset increasing liabilities from persistently low interest rates and increasing lifespans. But the sponsors are now contending with rapidly changing conditions, including rising costs and bond yields.

For example, the premium levied by the Pension Benefit Guaranty Corp. (PBGC) is on the upswing. The variable-rate component of the premium, calculated using a DB plan's unfunded obligations, will increase from this year's $38 per $1,000 of unfunded vested benefits to $42 per $1,000 in 2019.

The variable-rate increase has been an annual ritual since 2013, when the rate stood at $9 (where it had been since 2007). Over the past six years the per-participant component of the premium has increased by almost 115%.

DB plan sponsors are also under pressure to grow plans' investment returns, thanks to the life-expectancy increases as reflected in Internal Revenue Service mortality tables.

24%

Finance executives who said they planned to use repatriated capital to bolster their DB pension plan funding levels

In the Prudential survey, 70% of respondents agreed that "the recent changes in actuarial mortality assumptions, and the prospect of further changes, are creating 'longevity risk' for my organization that places additional pressure on our DB funding levels."

Shifting the Risk

Overall, the growing expense of maintaining DB plans along with the potential risks from underfunding are driving senior finance executives to consider pension risk transfers.

Companies with well-funded plans can offload some or all of their pension obligations to an insurance company as a way to reduce risks and administrative expenses, including PBGC premiums. In return, sponsors purchase a group annuity contract for plan participants.

In the survey, 62% of respondents agreed that once their "DB pension plan becomes well-funded," their organization will be "very likely to execute a full or partial pension risk transfer to an insurance company."

In sum, by skillfully taking advantage of the TCJA, plan sponsors can accelerate DB plan funding and, in the short term, claim deductions on their contributions at a higher rate. By controlling their risks and costs, senior finance executives can stabilize and strengthen their companies' DB pension plans. That shelters the plans from sources of volatility and prepares them to be delivered into the hands of a third party that can reliably serve participants in the long run.

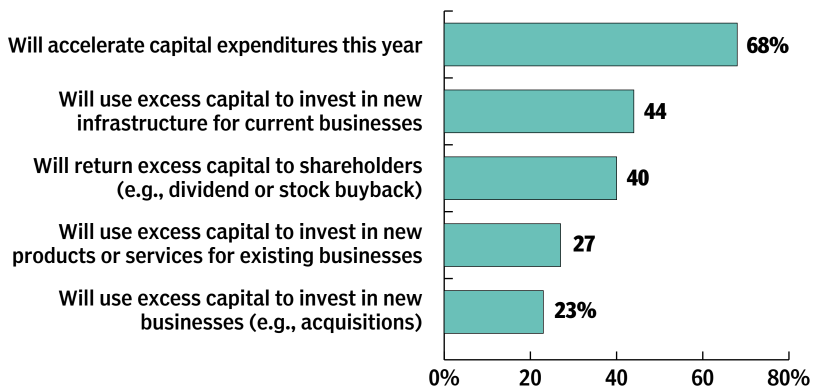
Finally, while DB plan funding and liability management was a core concern of the surveyed CFOs, other financial priorities will also receive a boost from the TCJA.

For example, many finance chiefs said they were likely to utilize newly accessible capital for the benefit of the enterprise, including accelerating capital expenditures and returning capital to shareholders. (See Figure 2.)

For CFOs, figuring out which investment strategies will have the most long-term benefit for their companies is indeed a good problem to have. CFO

FIGURE 2

Effects the TCJA will have on survey respondents' capital allocations



Note: Multiple responses allowed

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THE QUIZ

Public Scrutiny

The market for auditing services shifts from year to year as companies go public, go private, get acquired, and change auditors, all of which may influence the fees that the Big Four and their competitors charge for services. How much do you know about the current state of public companies and their auditors? Take our quiz to find out.

1 How many publicly held companies are there in the United States?*

A. 6,167
B. 7,246
C. 8,035
D. 12,498

2 How does that compare with the number of such companies a year ago?

A. Up 2.7%
B. Down 2.7%
C. Down 4.5%
D. Up 4.5%

3 What percentage of the companies are audited by one of the six largest auditing firms?

A. 45.7%
B. 63.5%
C. 74.8%
D. 55.6%

4 Which of these auditing firms is NOT among the six largest in the United States?

A. KPMG
B. Crowe Horwath
C. Grant Thornton
D. BDO USA

5 How many U.S. "large accelerated filers" (public float of more than $750 million) are there?

A. 2,235
B. 1,960
C. 1,245
D. 2,788

6 Which firm audits the most U.S. public companies?

A. Deloitte
B. PricewaterhouseCoopers
C. KPMG
D. Ernst & Young

7 As a percentage of revenue, what were the average audit fees in fiscal 2017 for U.S. companies in the Russell 1000 with revenue of $10 million to $2 billion?

A. 0.25%
B. 0.32%
C. 0.19%
D. 0.15%

8 As a percentage of revenue, what were the average audit fees in fiscal 2017 for European companies in the EU 1000 with revenue of $10 million to $2 billion?

A. 0.25%
B. 0.32%
C. 0.19%
D. 0.15%

Answers: 1-A; 2-C; 3-B; 4-B; 5-B; 6-D; 7-A; 8-C

*Except as otherwise indicated, numbers are as of April 24, 2018
Source: Audit Analytics