Future of Finance

The CFO agenda for a radically different tomorrow

read.kpmg.us/FutureFinance
Foreword

Artificial intelligence everywhere. Everything as a service. Predictive and prescriptive insights.

Finance is on the cusp of a technology explosion that will change its world, and chief financial officers (CFOs) better get ready.

That’s because this new world is not a vision of some faraway tomorrow. It’s already starting to take shape. And to prepare, leading CFOs are starting to reimagine their workforce, capabilities, and overall operating model.

For example, how would you redeploy talent if you could reduce labor requirements by 70 percent on core accounting processes? How would services change if you could instantly determine which customers, products, and channels are most profitable? What new value could you provide if finance moved at the speed of the customer?

These kinds of dreams will soon become realities, and now is the time to plan. CFOs must consider the new skills and roles the organization will need, the portfolio of services they will offer, how they will integrate new technologies, and more.

Inside, we explore the changing demands on finance and how CFOs can get into action, because business as usual is simply not an option. Instead, extreme disruption requires finance to disrupt itself, and top CFOs are tackling the changes head-on, turning disruption into opportunity.

Will you be one of them?

Ron Walker
Finance Transformation
Service Network Lead

Sanjay Sehgal
Principal, Advisory
Finance Transformation
Contents

p.1  Finance disrupted
     How should the CFO respond to a business environment in turmoil?

p.5  Think like a venture capitalist
     The CFO’s new role in enterprise innovation

p.9  Extreme automation
     Transforming finance operations with disruptive technology

p.13 The insights imperative
     Building capabilities in data and analytics to drive advantage

p.21 Infographic

p.25 Evolving finance
     Embracing new talent structures and strategies

p.29 Reshaping finance
     Building the service delivery model of the future

p.37 Elevating risk management
     The CFO’s agenda for disruption will shape risks and controls
As we edge toward the third decade of the century, business-as-usual methodologies no longer keep pace with the tides of innovation and unprecedented change. According to KPMG LLP’s (KPMG) 2019 U.S. CEO Outlook survey, 76 percent of chief executive officers (CEOs) admit that their growth relies on their ability to challenge and disrupt any business norm.

In fact, nearly 70 percent of CEOs believe that agility is a do-or-die for business and that being too slow can lead to obsolescence. “[Building resilience] is a process that often takes recalibrating timelines and expectations, understanding the opportunities and potential pitfalls of technologies, and making choices between what to disrupt and what to protect,” explains Lynne Doughtie, chairman and CEO of KPMG. “The wrong choice in any of these areas can lead to irrelevance.”

Changing demands on finance

The dynamic nature of contemporary business urgently calls for a new breed of finance function. The reality, however, is that most finance teams are not prepared to meet these wider demands. “The finance function is, by nature, very conservative, detail-oriented, rule-oriented, and structured,” says Jim Carroll, a futurist and trends and innovation expert.

“To make the transition to a more forward-looking model requires a lot of innovative thinking. Unfortunately many finance functions are not structured to support that.”

Yet, over the next decade, finance will have to disrupt itself to meet the demands of its customers, including regulators, corporate boards, sales and marketing departments, suppliers, and internal and external auditors. These stakeholders increasingly expect finance to serve as a true business partner, not a back-office department focused on transactional processing and historical reporting.

“It’s a move from bean counter to bean grower,” says Samantha Louis, vice president for Strategic Engagement.

76% of CEOs admit that their growth relies on their ability to challenge and disrupt any business norm.
that are driving market disruption. They must first understand the trends and economics underpinning the changes in their sectors. They can then manage innovation investments as a portfolio, using metrics aligned with the organization’s overall strategic objectives and governance program.

**How should the CFO respond?**

Today’s rapidly changing business environment requires finance to address disruption head-on or risk being left behind more nimble competitors. Leading chief financial officers (CFOs) are focusing on leveraging disruption into opportunities for competitive advantage and growth while also improving their delivery of products and services to their stakeholders. Experience shows that CFOs are deriving specific benefits for their companies by focusing on these key areas:

**Innovation and investment**

CFOs need to maintain a firm grip on the numbers while preserving a focus on market opportunities, threats, sector disruptions, and customer retention. That means serving as creative strategist while continuing to oversee capital allocation and, ultimately, playing a key role in enabling innovation across the enterprise.

In essence, CFOs need to think like venture capitalists. They must first understand the trends and economics that are driving market disruption.

Over 50% of finance leaders rate emerging technologies and big data as the biggest disruptor to their business.  

85% say their organization is taking an active role to address this technology-driven and analytics-fueled disruption.

**Extreme automation**

Finance professionals must embrace technology disruptors to transform their operating models and unlock the benefits of extreme automation.

Leading finance organizations are already reaping the rewards of cloud enterprise resource planning (ERP) and robotic process automation (RPA)—from reduced costs and risks to heightened efficiencies and improved cybersecurity. With a baseline technology infrastructure in place, these organizations can look to future investments in more advanced technologies. Indeed, 58 percent of finance leaders report that their organization is already exploring emerging technologies such as machine learning and artificial intelligence.

Successful financial functions will make good use of blockchain, data analytics, and other enabling technologies, while emerging technologies will change the nature of shared services centers. Furthermore, businesses can exploit artificial intelligence for sharper predictive insights and better deployment of capital.

**Insights and analysis**

As the only person in the enterprise with both the permission and the duty to integrate strategy, finance, and analytics, the CFO is uniquely positioned to define the analytics agenda.

“Finance leaders will need to capitalize on their unique position in the company to pursue a data and analytics agenda closely tailored to their companies’ needs—or risk the finance function’s relevance as a strategic and business partner,” say the authors of Advanced Analytics and the CFO, a Harvard Business Review article.

The current generation of CFOs can learn from other leading organizations that have already disrupted their finance functions. One broadcast television company wished to streamline its business processes in the cloud, while at the same time leverage financial, procurement, and supply chain data from one of its subsidiaries. The company also wanted to explore RPA to further drive operational efficiency.

KPMG’s Powered Enterprise methodology was used to design an Oracle cloud solution that met the company’s goals. KPMG also identified opportunities for automation outside of the ERP system.

To address global growth challenges, a consumer products firm sought to become more efficient in its back office and reduce finance costs. KPMG helped develop a next-in-class operating model that trimmed finance costs from 1.7 percent to 1.3 percent of their revenue and increased global workflow efficiencies, internal controls, and business partnering. It focused on simplifying and standardizing work through technology-enabled collaboration and exploiting global data and analytic capabilities. The new design included a service delivery model, a responsibility matrix, and global governance process.

---

1 Aggregate of 801 finance and business leaders’ responses to a polling question collected during KPMG LLP’s CFO Real Insights Webcast, The CFO agenda: Leveraging disruption into opportunity (December 2017).

2 Aggregate of 591 finance and business leaders’ responses to a polling question collected during KPMG LLP’s CFO Real Insights Webcast, Advanced Analytics and the CFO (March 2018).

© 2019 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved. The KPMG name and logo are registered trademarks or trademarks of KPMG International. NDPPS 881360

---

Tomorrow’s agenda: Leveraging disruption into opportunity (December 2017)

Advanced Analytics and the CFO (March 2018)

The current generation of CFOs can learn from other leading organizations that have already disrupted their finance functions. One broadcast television company wished to streamline its business processes in the cloud, while at the same time leverage financial, procurement, and supply chain data from one of its subsidiaries. The company also wanted to explore RPA to further drive operational efficiency.

KPMG’s Powered Enterprise methodology was used to design an Oracle cloud solution that met the company’s goals. KPMG also identified opportunities for automation outside of the ERP system.

To address global growth challenges, a consumer products firm sought to become more efficient in its back office and reduce finance costs. KPMG helped develop a next-in-class operating model that trimmed finance costs from 1.7 percent to 1.3 percent of their revenue and increased global workflow efficiencies, internal controls, and business partnering. It focused on simplifying and standardizing work through technology-enabled collaboration and exploiting global data and analytic capabilities. The new design included a service delivery model, a responsibility matrix, and global governance process.

---

1 Aggregate of 801 finance and business leaders’ responses to a polling question collected during KPMG LLP’s CFO Real Insights Webcast, The CFO agenda: Leveraging disruption into opportunity (December 2017).

2 Aggregate of 591 finance and business leaders’ responses to a polling question collected during KPMG LLP’s CFO Real Insights Webcast, Advanced Analytics and the CFO (March 2018).

---

Turning vision into reality

The current generation of CFOs can learn from other leading organizations that have already disrupted their finance functions. One broadcast television company wished to streamline its business processes in the cloud, while at the same time leverage financial, procurement, and supply chain data from one of its subsidiaries. The company also wanted to explore RPA to further drive operational efficiency.

KPMG’s Powered Enterprise methodology was used to design an Oracle cloud solution that met the company’s goals. KPMG also identified opportunities for automation outside of the ERP system.

To address global growth challenges, a consumer products firm sought to become more efficient in its back office and reduce finance costs. KPMG helped develop a next-in-class operating model that trimmed finance costs from 1.7 percent to 1.3 percent of their revenue and increased global workflow efficiencies, internal controls, and business partnering. It focused on simplifying and standardizing work through technology-enabled collaboration and exploiting global data and analytic capabilities. The new design included a service delivery model, a responsibility matrix, and global governance process.

---

© 2019 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved. The KPMG name and logo are registered trademarks or trademarks of KPMG International. NDPPS 881360

---

Future of Finance: Finance disrupted 2
Review Analytic Services white paper sponsored by KPMG. 5

Nearly 80 percent of finance leaders indicate their organization is currently laying the foundation for advanced analytics.6 As traditional, historical analysis becomes fully automated, analytics capabilities will shift from descriptive (analysis of past data to find out what happened) and diagnostic (analysis of why it happened) to predictive (what will happen in the future) and prescriptive (what we should do about it).

A powerful technology toolbox also strengthens finance’s ability to identify and make investments in the right projects to drive innovation. The increasing ability to automatically analyze very large data sets will help CFOs decide whether to invest capital to expand capacity. 7

Organization and talent
The renewed groundswell of digital transformation will turn finance into a business support function that combines strong analytical and strategic capabilities with traditional accounting skills. “Skills requirements are changing really fast,” says Carroll. “How can we make sure that we get the right skills, at the right time, for the right purpose?”

By redefining the skills, roles, and structure of its workforce, finance will be able to attract, retain, and develop talent to match its evolving needs. In the future, it will require both strategy and finance skills, process and control leaders, and the ability to collaborate and build relationships across formerly siloed departments. “The more integral that finance is to the business, the more the silos will break down,” says Louis. “Leading organizations already have finance sitting with the teams they support as opposed to sitting in a centralized finance function.”

Service delivery model
Extreme automation will dramatically change the size, structure, and delivery model for finance, separating human expertise from automated execution and simplifying the organization’s operations. Finance organizations must assess what new work needs to be done, how those demands translate to the skill sets of their workforce, and how to manage processes end to end, rather than in a silo. They will need fewer people with higher skills, less hierarchy, and fewer offshore locations. A smaller finance team will represent a diverse range of high-level skills of employees who are freed up by intelligent automation to work on tasks that add real value across the enterprise.

6 Aggregate of approximately 500 finance and business leaders’ responses to polling questions collected during KPMG LLP’s CFO Real Insights Webcast, Advanced Analytics and the CFO (March 2018).
8 53% of finance leaders see a need to develop existing or future talent in the face of advancing technology and analytics. 8
As the process of preparing compulsory reporting becomes increasingly automated, finance functions have more time to solidify their position as valued business partners, using advanced analytics to model future scenarios and map the best outcomes for the enterprise.

“That’s very much about the head of finance or CFO sitting on the board, being part of setting the strategic direction of the organization, and then monitoring the performance and achievements against targets,” says Louis.

To drive this process, CFOs need to take steps to disrupt their finance functions or face a talent drain as well as an inability to grow revenue or deploy capital effectively. The key to success is to create a blueprint for how the finance organization can turn disruptors into opportunities.

Such an effort involves taking steps to:

Set organizational strategy by understanding future trends
Scan signals of change to better understand and prepare for potential disruption with innovative solutions.

Build a portfolio that enables the business to make smarter bets
Use a venture-capitalist approach to balance riskier investments in disruption with ongoing investments to sustain the core.

Establish a strategic framework based on a disciplined process
Align investments to strategic, operational, and financial plans to help ensure the organization is nimble and competitive.

Use appropriate metrics and models for evaluation
Utilize financial metrics that blend customer, operational, and risk assessments; effective metrics will yield opportunities for learning and strategic fit.

Adopt strong governance to drive alignment
Deploy scarce capital and labor with a structure that drives alignment from the C-level through operations to prevent mismanaged resources.

The key to success is to create a blueprint for how the finance organization can turn disruptors into opportunities.

Risks and controls
An estimated 60 percent to 70 percent of manual controls performed today will be automated over the next five to ten years. And it is no wonder—extreme automation promises to improve controls while reducing internal and external compliance costs. This can be achieved by maintaining a flexible control environment that supports innovation, automation, and other organizational changes.

Despite the potential benefits, disruptive technologies also pose significant challenges. From process integration and system compatibility issues to data protection and privacy concerns, risks must be proactively managed and continuously monitored.

Call to action
As the process of preparing compulsory reporting becomes increasingly automated, finance functions have more time to solidify their position as valued business partners, using advanced analytics to model future scenarios and map the best outcomes for the enterprise.

* Estimate from KPMG LLP
Think like a venture capitalist

The CFO’s new role in enterprise innovation

The world is changing fast, as disruptive technologies upend operating models, displace existing products and services, and unlock new opportunities. As a result, a company’s growth and earnings have never been more uncertain, so business leaders are under pressure to make bigger bets on innovation and execute against them.

However, while almost all organizations are in some phase of transformation, about a third of executives say they have failed to achieve value from their initiatives, due to a lack of effective processes for managing innovation.¹

Most chief financial officers (CFOs), therefore, are facing an overarching tension: How can their companies make money today while still investing appropriately in the future? Where will earnings per share come from in the next three to five years? How can they ensure the right investments at the right time and in the right sequence?

As the stewards of past and future earnings, CFOs will play a critical role in answering these questions. They will wear two hats: one for ensuring stability and control of the finance function and another for enabling agility and profitability in enterprise innovation.

Wearing this second hat, the CFO must think like a venture capitalist (VC), building a strategic portfolio of investments that can be continually adapted to changing needs. This mind-set requires new approaches to budgeting, measurement, and governance of innovation investments.

From annual budgeting to dynamic funding

In a 2018 study of more than 270 global companies, conducted by Innovation Leader—an information firm that serves executives in large organizations—and sponsored by KPMG LLP (KPMG), nearly 70 percent of respondents said innovation efforts are funded through an annual budgeting process.² However, innovation leaders in the business units are often frustrated by this approach, because by the time the annual cycle rolls around, the window for competitive differentiation has closed. Moreover, the traditional annual budgeting process often favors legacy initiatives, building on the previous year’s plan, versus new investments that may be seen as risky or unproven.

A more agile way to invest in enterprise innovation is through


Nearly 42% of executives say that an obstacle to innovation is the inability to act on signals critical to the future of business.³
A new CFO mind-set

The leading CFOs of the future will have a mind-set that goes beyond traditional finance. They will also play a critical role in business strategy and innovation investment.

Already, companies are increasingly looking externally for their next CFO, recruiting them from industries such as investment banking, consulting, or private equity firms. As sharp generalists versus accounting specialists, these leaders are making strategic decisions grounded not only in the economics of the business but also in a broad view of industry disruption.

More traditional CFOs, on the other hand, will need to up their game. These leaders, who may have come to the role through accounting, auditing, or controllership, must transcend their typically narrower view of the business.

To position their companies for the future, CFOs will need to change their approach to their role, adopting a VC-like mind-set to build an optimized portfolio of innovation investments.

92% of CEOs want their employees to feel empowered to innovate without worrying about negative consequences for them if their initiatives fail.5

Finding the right balance: Investing in disruption while sustaining the core

Whereas an annual budgeting process sets forth clear expectations for investments, a dynamic funding process is based on clear hypotheses—with the ability to test, learn, and iterate. Indeed, according to the 2018 study by Innovation Leader, sponsored by KPMG, this ability is second only to leadership support as the factor that most enables innovation success.4

However, the ability to test, learn, and iterate—while responding with agility to market changes—can be difficult for large companies to develop, as many are designed to reduce risk and aren’t always keen to experiment with ideas. How can companies manage investments when the market is always changing and they only have so many chips to put on the table?

The VC-minded CFO will bring strategic decision-making to this conversation, helping the enterprise develop a portfolio that balances riskier disruptive investments with ongoing investments to sustain the core business. That also means developing investment assessment criteria such as market attractiveness, urgency, competitiveness, feasibility, and strategic fit.

“We must continue to adopt new leadership behaviors, redefine our approaches to risk mitigation, and diversify our metrics to encourage, not stifle, experimentation with emerging technologies and business models in our function and across the enterprise,” says Mr. Ruh.

CFOs are wise to look at the business through a lens of future earnings and potential vulnerabilities, while also evaluating the cost of not innovating. Could the company lose customers in some areas due to emerging competitors? How much revenue is at risk? Is a company’s cost structure sustainable? For instance, some long-standing companies have hundreds of people-intensive systems, and without investments in automation, they may find their business too costly to operate when new competitors enter the market with more nimble, lightweight technology.

When it comes to sustaining the core, the right incremental investments will not only keep the lights on; they can also generate cash to fund riskier innovation.

© 2019 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved.

The KPMG name and logo are registered trademarks or trademarks of KPMG International. NDPPS 881360

© 2019 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved. The KPMG name and logo are registered trademarks or trademarks of KPMG International. NDPPS 881360

KPMG LLP, 4 Innovation Leader LLC, sponsored by KPMG LLP, initiatives fail.5

Consequences for them if their initiatives fail.5

Without worrying about negative consequences for them if their initiatives fail.5

To feel empowered to innovate without worrying about negative consequences for them if their initiatives fail.5

© 2019 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved.

The KPMG name and logo are registered trademarks or trademarks of KPMG International. NDPPS 881360

© 2019 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved. The KPMG name and logo are registered trademarks or trademarks of KPMG International. NDPPS 881360

92% of CEOs want their employees to feel empowered to innovate without worrying about negative consequences for them if their initiatives fail.5

Finding the right balance: Investing in disruption while sustaining the core

Whereas an annual budgeting process sets forth clear expectations for investments, a dynamic funding process is based on clear hypotheses—with the ability to test, learn, and iterate. Indeed, according to the 2018 study by Innovation Leader, sponsored by KPMG, this ability is second only to leadership support as the factor that most enables innovation success.4

However, the ability to test, learn, and iterate—while responding with agility to market changes—can be difficult for large companies to develop, as many are designed to reduce risk and aren’t always keen to experiment with ideas. How can companies manage investments when the market is always changing and they only have so many chips to put on the table?

The VC-minded CFO will bring strategic decision-making to this conversation, helping the enterprise develop a portfolio that balances riskier disruptive investments with ongoing investments to sustain the core business. That also means developing investment assessment criteria such as market attractiveness, urgency, competitiveness, feasibility, and strategic fit.

“We must continue to adopt new leadership behaviors, redefine our approaches to risk mitigation, and diversify our metrics to encourage, not stifle, experimentation with emerging technologies and business models in our function and across the enterprise,” says Mr. Ruh.

CFOs are wise to look at the business through a lens of future earnings and potential vulnerabilities, while also evaluating the cost of not innovating. Could the company lose customers in some areas due to emerging competitors? How much revenue is at risk? Is a company’s cost structure sustainable? For instance, some long-standing companies have hundreds of people-intensive systems, and without investments in automation, they may find their business too costly to operate when new competitors enter the market with more nimble, lightweight technology.

When it comes to sustaining the core, the right incremental investments will not only keep the lights on; they can also generate cash to fund riskier innovation.

92% of CEOs want their employees to feel empowered to innovate without worrying about negative consequences for them if their initiatives fail.5

Finding the right balance: Investing in disruption while sustaining the core

Whereas an annual budgeting process sets forth clear expectations for investments, a dynamic funding process is based on clear hypotheses—with the ability to test, learn, and iterate. Indeed, according to the 2018 study by Innovation Leader, sponsored by KPMG, this ability is second only to leadership support as the factor that most enables innovation success.4

However, the ability to test, learn, and iterate—while responding with agility to market changes—can be difficult for large companies to develop, as many are designed to reduce risk and aren’t always keen to experiment with ideas. How can companies manage investments when the market is always changing and they only have so many chips to put on the table?

The VC-minded CFO will bring strategic decision-making to this conversation, helping the enterprise develop a portfolio that balances riskier disruptive investments with ongoing investments to sustain the core business. That also means developing investment assessment criteria such as market attractiveness, urgency, competitiveness, feasibility, and strategic fit.

“We must continue to adopt new leadership behaviors, redefine our approaches to risk mitigation, and diversify our metrics to encourage, not stifle, experimentation with emerging technologies and business models in our function and across the enterprise,” says Mr. Ruh.

CFOs are wise to look at the business through a lens of future earnings and potential vulnerabilities, while also evaluating the cost of not innovating. Could the company lose customers in some areas due to emerging competitors? How much revenue is at risk? Is a company’s cost structure sustainable? For instance, some long-standing companies have hundreds of people-intensive systems, and without investments in automation, they may find their business too costly to operate when new competitors enter the market with more nimble, lightweight technology.

When it comes to sustaining the core, the right incremental investments will not only keep the lights on; they can also generate cash to fund riskier innovation.

92% of CEOs want their employees to feel empowered to innovate without worrying about negative consequences for them if their initiatives fail.5

Finding the right balance: Investing in disruption while sustaining the core

Whereas an annual budgeting process sets forth clear expectations for investments, a dynamic funding process is based on clear hypotheses—with the ability to test, learn, and iterate. Indeed, according to the 2018 study by Innovation Leader, sponsored by KPMG, this ability is second only to leadership support as the factor that most enables innovation success.4

However, the ability to test, learn, and iterate—while responding with agility to market changes—can be difficult for large companies to develop, as many are designed to reduce risk and aren’t always keen to experiment with ideas. How can companies manage investments when the market is always changing and they only have so many chips to put on the table?

The VC-minded CFO will bring strategic decision-making to this conversation, helping the enterprise develop a portfolio that balances riskier disruptive investments with ongoing investments to sustain the core business. That also means developing investment assessment criteria such as market attractiveness, urgency, competitiveness, feasibility, and strategic fit.

“We must continue to adopt new leadership behaviors, redefine our approaches to risk mitigation, and diversify our metrics to encourage, not stifle, experimentation with emerging technologies and business models in our function and across the enterprise,” says Mr. Ruh.

CFOs are wise to look at the business through a lens of future earnings and potential vulnerabilities, while also evaluating the cost of not innovating. Could the company lose customers in some areas due to emerging competitors? How much revenue is at risk? Is a company’s cost structure sustainable? For instance, some long-standing companies have hundreds of people-intensive systems, and without investments in automation, they may find their business too costly to operate when new competitors enter the market with more nimble, lightweight technology.

When it comes to sustaining the core, the right incremental investments will not only keep the lights on; they can also generate cash to fund riskier innovation.

92% of CEOs want their employees to feel empowered to innovate without worrying about negative consequences for them if their initiatives fail.5

Finding the right balance: Investing in disruption while sustaining the core

Whereas an annual budgeting process sets forth clear expectations for investments, a dynamic funding process is based on clear hypotheses—with the ability to test, learn, and iterate. Indeed, according to the 2018 study by Innovation Leader, sponsored by KPMG, this ability is second only to leadership support as the factor that most enables innovation success.4

However, the ability to test, learn, and iterate—while responding with agility to market changes—can be difficult for large companies to develop, as many are designed to reduce risk and aren’t always keen to experiment with ideas. How can companies manage investments when the market is always changing and they only have so many chips to put on the table?

The VC-minded CFO will bring strategic decision-making to this conversation, helping the enterprise develop a portfolio that balances riskier disruptive investments with ongoing investments to sustain the core business. That also means developing investment assessment criteria such as market attractiveness, urgency, competitiveness, feasibility, and strategic fit.

“We must continue to adopt new leadership behaviors, redefine our approaches to risk mitigation, and diversify our metrics to encourage, not stifle, experimentation with emerging technologies and business models in our function and across the enterprise,” says Mr. Ruh.

CFOs are wise to look at the business through a lens of future earnings and potential vulnerabilities, while also evaluating the cost of not innovating. Could the company lose customers in some areas due to emerging competitors? How much revenue is at risk? Is a company’s cost structure sustainable? For instance, some long-standing companies have hundreds of people-intensive systems, and without investments in automation, they may find their business too costly to operate when new competitors enter the market with more nimble, lightweight technology.

When it comes to sustaining the core, the right incremental investments will not only keep the lights on; they can also generate cash to fund riskier innovation.
projects. For example, as retailers vie to retain increasingly demanding and tech-savvy consumers, many of these companies are developing new mobile apps to improve consumers’ digital experience. This kind of investment in loyalty can drive sales to fund more transformational innovation, such as an entirely new kind of product offering or operating model.

“Many companies that opt not to invest in their own transformational innovation efforts find themselves getting outpaced by start-ups or competitors,” says Scott Kirsner, chief executive officer of Innovation Leader. “What happens then is they’re forced to acquire that transformational innovation—and the price tag usually ends with a capital ‘B,’ not an ‘M,’ as when Unilever bought Dollar Shave Club, or General Motors bought Cruise Automation.”

The right ways to measure: Leading versus lagging

Too often, innovation investments are killed prematurely because CFOs attempt to apply traditional financial metrics such as revenue or return on investment. These kinds of lagging indicators may not be relevant because innovation investments don’t necessarily generate revenue or return right away.

Since an early-stage innovation investment is really the test of a hypothesis, a better approach is to measure leading indicators—or “learning milestones”—that confirm whether an investment is on the right track. What kind of customer feedback is the project receiving? What is the willingness to pay? Is the number of customers or users steadily increasing? What is the expected profitability?

For example, as consumers increasingly use mobile phones to order rides rather than driving their own cars, some carmakers are making transformational investments in their business models, moving from selling cars and parts to also selling mobility services related to ride hailing and car sharing. Investment in these

Key questions for CFOs

— Are you confident in your organization’s ability to identify and prioritize signals of disruptive change in the market?
— How is your organization structured to invest for future growth and relevance?
— Do you feel you are investing enough to transform and meet earnings-per-share goals in the next three to five years?
— Have you incorporated innovation investments into your budgeting process?
— What percentage of your organization’s investments is consumed by legacy challenges?
— Is your finance team capable of efficiently assessing investment options and allocating funds to the most promising pursuits?
— Are you actively exploring emerging opportunities to build, buy, and partner to respond to market shifts?
— Do you have an innovation investment portfolio, or is innovation scattered around the organization?

© 2019 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved. The KPMG name and logo are registered trademarks or trademarks of KPMG International. NDPPS 881360
kinds of services will require all-new performance metrics for growth, profitability, and sustainability. Instead of traditional measures such as the number of units manufactured, gross margin percent, and market share, CFOs will track indicators such as the number of active customers, cost per available seat mile, and levels of churn.

In another example, as autonomous vehicles start to enter the market, auto insurance providers face a big question: Who will assume the risk? While insurers don’t know the answer today, they need to start planning for the future by pursuing an innovative solution.

But this also presents a measurement quandary: If companies try to apply traditional metrics such as revenue and income, the project may get discontinued, but if they don’t invest in the innovation, they could jeopardize their future business. Some valuable measures in this kind of scenario could relate to the percentage of the client base or revenue that’s at risk, the timing of that risk, and the level of competitor investment in the space.

“Some things may sound at first like ‘soft’ metrics—like measuring positive word of mouth using Net Promoter Score, or even how many experiments you’ve run and what they’ve taught you about a particular customer segment,” says Mr. Kirsner. “But those kinds of metrics can help confirm that you’re on the right track when it comes to investing in innovation, and developing a culture that supports it over the long haul.”

**Governing the portfolio and making way for innovation**

In addition to a new process for investment funding, companies need a new decision-making body for responding to innovation ideas from the business. The VC-minded CFO, as a key member of this committee, will bring valuable perspective not only on the available funds but also on factors such as the strategic suitability of the investment, how much to invest, the potential economic impact, how it will be measured, and whether the project should be build, buy, or partner.

Moreover, as the overseer of a diversified enterprise portfolio of investments, the governance committee must assess trade-offs for all uses of cash, including mergers and acquisitions, research and development, capital expenditures, share buybacks, and dividends. CFOs will need to continually measure, review, and reallocate the investments based on changing priorities.

In today’s fast-changing world, strategy simply cannot exist without innovation. To remain competitive, companies must invest the right level of capital at the right time—in transformative projects as well as the core business—and the CFO is well positioned to take a leadership role. It’s time to start thinking like a venture capitalist.

![Taking a new approach to enterprise innovation](image)

**KPMG helps finance organizations develop effective strategies for investing in innovation:**

---

___

**A FORTUNE 35 healthcare company set out to gain a better understanding of its capital expenditures, improve efficiency, and ensure priorities are aligned with the overall strategy of the company.**

KPMG worked with the company to design and deploy an end-to-end framework for capital expenditure target setting and value realization that reconciles with the company's enterprise strategic vision. The company achieved a standardized, enterprise-wide capital expenditure process with clear alignment to corporate strategy. This includes formal guidelines and controls to make sure projects are meeting or exceeding their expected returns—putting a new meaning to stretching the dollar.

---

**Facing a rapidly changing business environment, market saturation, and disruption on a number of fronts, an international business insurer sought to establish a new innovation and investment capability integrated with its core business and accountable to senior leadership.**

To enable the identification, assessment, development, and commercialization of potential investments, KPMG helped the company develop an innovation vision and strategy based on sensing signals of change and prioritizing opportunities. This strategy empowered leadership to accelerate the drive from market signals to hypothesis, and finally to action—making the right investments to unlock sustainable value.
Disruptive technologies are the largest drivers of change in business today. In fact, technology is shifting so fast that organizations such as Samsung, Ford, and NATO are enlisting science fiction writers to help them visualize the future and consider opportunities for innovation.¹

Meanwhile, the combination of connected sensors, massive data gathering, and machine learning is driving unprecedented changes at home and work, with Amazon’s Alexa and Google’s Nest becoming standard fixtures. In addition, robots are maturing in both their accuracy and their interactions with humans, creating new applications from remote surgery to autonomous aircraft navigation.²

Technological disruption is affecting all corners of business, and finance is no exception. Indeed, extreme automation—the confluence of robotics, advanced analytics, cloud applications, blockchain, and more—is expected to create an all-new operating model. It is expected to empower finance to deliver more value with less effort, respond quickly to the needs of the business, and truly shift from traditional processing to strategic partnering.

For example, instead of providing reactive answers to unforeseen problems, the finance organization of the future may deliver predictive insights to drive growth. Rather than cumbersome foundational systems, finance will likely have as-a-service architectures for instant agility and scalability. And instead of siloed, people-intensive processes, finance will likely be part of end-to-end, automated processes—with real-time, cross-functional data for dynamic reporting and analysis.

This is the future of finance, and chief financial officers (CFOs) must start creating it now, lest their companies get disrupted by more nimble competitors. The winners in finance will reimagine their operating model and develop a long-term strategy for extreme automation.

**Implementing technology at new extremes**

According to a recent KPMG LLP (KPMG) study, 97 percent of chief executive officers (CEOs) see

---


Extreme automation is the combination of multiple disruptive technologies:

**Data management.** The progressive integration and governance of internal and external data, along with the mining of untapped data sources, will drive predictive and prescriptive insights. Finance must rethink its data management to deliver fast, dynamic insights and better business partnering.

**Cloud technologies.** As-a-service software for enterprise performance management (EPM) and enterprise resource planning (ERP) is enabling integrated, real-time data and end-to-end global processes. In addition to creating a collaborative platform that positions finance as a business partner, these technologies can help finance standardize processes and improve efficiency in areas such as budgeting and planning, management reporting, and payroll processing.

**Robotic process automation.** This software automates repetitive, rules-based activities that have traditionally been done by humans. Finance can use RPA for activities such as closing and reconciling subsidiary ledgers, processing journal entries, creating purchase orders, and preparing and distributing management reports.

**Digital analytics and delivery.** Cloud technologies and process automation enable on-demand, customized analytics and real-time collaboration to support key business decisions. For example, finance may use these capabilities for management reporting and analysis, live monitoring of the financial close process, and analysis of strategic scenarios.

**Machine learning.** These software algorithms, which power AI, can augment human reasoning, problem-solving, and decision-making. Finance can use machine learning for processes such as management of payment exceptions, supplier and contract management, P-card reconciliation and analysis, and preparation of statutory filings and shareholder reports.

**Natural language processing.** This technology quickly processes large volumes of textual data that previously could be understood only by humans. For example, natural language processing can enable a system to answer inquiries from finance professionals, such as “What were comparable store sales in February?”

**Cognitive.** This class of automation, which encompasses machine learning and AI, refers to electronic brains that will challenge the finance and accounting opinion, provide deep analytics, and enable dynamic insights. Cognitive technologies can perform financial close analysis, forecast performance, manage customer contracts, develop strategic plans, and conduct other judgement-based activities.

**Blockchain.** This revolutionary recordkeeping technology may increase data security, shorten transaction cycles, and eliminate the need for reconciliations. The technology may improve efficiency and security in processes such as source-to-pay, order-to-cash, and acquire-to-retire.
prescriptive insights to help business units make better decisions.

Already, one agricultural company is using AI to improve forecasting on crop yields. The company deploys drones to collect data on the color, height, and other characteristics of the corn crop, which AI can then analyze in order to predict the yield within two percent.

As another example, if a company is rolling out a new product, a finance business partner could provide analytics using internal and external data—such as real-time sales data and social media sentiments—to predict the product’s reception in various markets and inform the launch plan.

These kinds of forward-looking, data-driven decisions are expected to become the norm, which is in sharp contrast to today, as many leaders simply do not trust the misaligned or incomplete data that is informing their company’s algorithms. Indeed, 66 percent of CEOs say that over the last three years, they have overlooked insights provided by computer-driven data analysis because they were contrary to their experience and intuition.5 This confidence will change significantly as finance applies extreme automation to processes and builds reliable analytics.

A new labor footprint and service delivery model

As routine activities such as regulatory reporting or accounts payable become highly automated, labor requirements are expected to decline significantly. However, the automation of other areas of finance—such as reporting and planning—may result in an increase in the number of humans who will work with intelligent automation to provide strategic insights to the business. In fact, nearly three out of four CEOs expect AI and robotics to create more jobs than they destroy.6

An automated environment may help finance compete for the best talent, and that talent will bring an entirely new set of competencies, from advanced analytics to business partnering. Another critical role will be the data scientists who prepare data for use by machine learning, but as demand for data scientists continues to exceed the supply, finance may need a strategy for outsourcing this work.

As extreme automation changes the size of finance teams and the types of services, it is expected to also dramatically change the service delivery model. For example, instead of embedding financial planners in each part of the business, FP&A can use advanced analytics and cloud-based EPM to create an integrated view of the front, middle, and back offices. As such, companies may effectively replace the “F” in FP&A with a “B,” creating a new business planning process that integrates finance forecasting with operations, supply chain, sales, marketing, and other functions.

Getting into action with an automation strategy

To implement extreme automation, no organization will be able to “flip the switch” on a big bang. “Transformation is a journey,” said Lance G. Morton, Advisory principal at KPMG LLP. “And while every company’s journey will be different, the goal is the same: to prioritize investments to achieve the highest impact—on both efficiency and strategic value—in both the short and long term.”

How will extreme automation disrupt the finance operating model in the next year, the next five years, and the next ten years? What is the potential of each technology, how will it be implemented, and how can it be knitted together with other technologies, including legacy systems, to drive new kinds of value? Successful CFOs will look holistically at extreme automation—considering the impact on services, systems, processes, and people—to create a long-term finance automation strategy that is aligned with the enterprise vision.

“Companies that focus only on new technology may be able to execute processes more quickly, but if their processes are broken, then they’re likely to stay broken,” said Julie Munn-Sims, principal in KPMG LLP’s Finance Transformation practice. “Market leaders are looking at the entire finance operating model. They’re using disruptive technology as a driver while also addressing process design, service delivery, and the rest of their finance operations.”

---


6. “Transformation is a journey. And while every company’s journey will be different, the goal is the same: to prioritize investments to achieve the highest impact—on both efficiency and strategic value—in both the short and long term.”

Lance G. Morton
Principal, Advisory
KPMG LLP
To develop an automation strategy, CFOs should contemplate the future state and develop a multiyear road map, with sequenced investments for getting there.

For example, the CFO of one consumer packaged goods company envisions a finance organization that will reduce cost, improve service delivery, and create a new level of business partnering, with a focus on three key subprocesses: FP&A, financial close and consolidation, and management reporting. The organization’s road map includes cloud technologies in the near term, to be followed by RPA and, eventually, AI and blockchain. With this approach, the company prioritized cloud EPM and ERP as the foundation for the new design—a way to standardize processes while putting finance in position to adopt emerging technology.

Another key consideration for an automation strategy is risk. On one hand, the implementation of RPA, cloud applications, and other technologies is expected to lower risk by reducing manual work and associated inaccuracies, improving access to data, increasing efficiency, supporting enterprise decisions, and positioning finance for the future. On the other hand, when intelligent automation starts to drive much of the business, the reliability of the algorithms becomes a critical risk. Is the underlying data model correct? How trustworthy are the sources of internal and external data?

Data quality and governance should be important parts of the extreme automation strategy, and CFOs—with their expertise in process governance and controls—are in a great position to lead this inquiry. What kinds of controls will be necessary in the automation of record-to-report and other end-to-end processes? How will finance ensure data integrity? How will bots be authenticated and monitored? Extreme automation must come with a strong focus on risk management.

Ultimately, to build the finance organization of the future, leaders must get into action today to harness extreme automation, transcend their transactional role, and provide new value. The organization’s ability to meet changing requirements—both in and outside the company—depends on it.

Disruption in action

Leading finance organizations have already started their technology-enabled transformation.

A FORTUNE 100 global retailer wanted to become more nimble, quickly reacting to market changes through innovative technology and creating true value for its business and its shoppers. The retailer saw intelligent automation as the key to continuing its mission and worked closely with KPMG on an intelligent automation program.

Teams from across KPMG joined forces to identify automation opportunities, establish a center of excellence around RPA, and configure intelligent automation solutions. As the project progressed, the client looked to an entire suite of intelligent automation tools to transform the back office.

Utilizing automation, KPMG helped the retailer identify 118 processes and 445 impacted headcount, resulting in a possible $14 million in annual savings. Throughout the project, the retailer thought ahead not only to technology implementation, but also to the governance and program management needed to keep everything on track and future ready.

With streamlined back-office functions, high-quality analytics, and global oversight, the retailer can pass its benefits on to its customers the world over.
Most chief financial officers (CFOs) know they need to take a leadership role in insights and analysis, as companies turn to finance for answers to critical questions. Which customers, products, and channels are most profitable? How can we accurately predict forecasts for demand, sales, and profitability? Which new markets should we target?

It’s no wonder that, according to a recent KPMG study, 90 percent of finance organizations see data and analytics (D&A) as a high or moderate investment priority— with a high priority also placed on moving toward predictive and prescriptive analytics. However, despite the high appetite for D&A, most finance organizations are struggling to get the value they want, and many CEOs are concerned about the integrity of the data that drives enterprise decisions.

One of the most common stumbling blocks for finance organizations is the business case. Many cannot see a clear return on investment (ROI) beyond cost reduction as their top driver, so they simply have not equipped themselves with the right capabilities to drive their strategy in insights and analysis.

But building maturity is not as simple as embracing new technology and reducing headcount. Instead, to realize the greatest benefit from insights and analysis—which is the accurate, real-time intelligence that drives profitable growth—finance must look beyond cost savings alone and accept that the entire ROI may not be visible at the beginning of the journey. The organizations that succeed will build trust in D&A and bravely move forward.

A new mandate: the need for speed in building analytics

Amid the unprecedented speed of change and the growing pressure for accurate insights, this leap of trust is becoming the new imperative for finance. It means ensuring data 90% of finance organizations see data and analytics as a high or moderate investment priority.
quality, integrating processes, adopting emerging technology, developing new skills and talent, and creating an analytics-based culture that supports business partnering. To remain relevant, finance organizations must transcend their role as recordkeepers and become enterprise-focused business partners that deliver financial, operational, and strategic insights. And as the speed of disruption increases, finance also must move quickly. But all too often, organizations start by assessing requirements for a new process technology; then they spend months or years trying to harmonize systems and perfect their data before building the solution.

A better, faster approach is to start with the endgame—the business questions the company is struggling to answer—and then work backwards to determine what data is necessary, where to get it, what technology is required to answer the questions, and what kinds of people skills are needed to analyze the results and take the right action. With this kind of reverse engineering, or “right-to-left” planning, companies can build analytics relatively quickly for a specific area of strategic focus.

For example, a large global insurance company started by asking these questions: Where are the leading opportunities to improve profitable growth? How can we increase the volume and value of new business and renewals? How much value comes from digital businesses, and how can we grow these channels? The finance organization quickly aligned the enterprise on which key performance indicators (KPIs) to measure; the value drivers for each; and what content, data, and tools would be required to support key decisions and go from insights to action.

To remain relevant, finance organizations must transcend their role as recordkeepers and become enterprise-focused business partners that deliver financial, operational, and strategic insights.
Using this framework, the company implemented new, driver-based models for planning and forecasting, which delivered fast, tangible results while creating a forward-looking analytics culture.

While organizations are rightfully concerned about the reliability of their analytics, they don’t need all of their data perfect before getting started. Leading finance organizations are taking a two-prong approach to their insights and analysis strategy, building long-term reliability while getting into action right away:

- **Longer term.** Finance is developing governance programs for enterprise data, especially the structured financial and planning data that employees use every day. These programs include the establishment of a D&A center of excellence (COE) to effectively provide, govern, and evolve the data and insights required for decisions. See page 20 for more information.

- **Shorter term.** Meanwhile, finance can empower its teams—especially financial planning and analysis—to use analytics tools and dashboards in innovative ways, experiment with unstructured and third-party data, and create new insights. Downloaded from various sources, this data is not governed, but teams can still generate insights from it and consider how the tool can be applied to other areas. Over time, these data sources can be absorbed into the more rigorously governed data set.

### Finance on the D&A continuum: High appetite, low maturity

<table>
<thead>
<tr>
<th>Descriptive (What happened?)</th>
<th>Very mature</th>
<th>Very immature</th>
</tr>
</thead>
<tbody>
<tr>
<td>9%</td>
<td>31%</td>
<td>45%</td>
</tr>
<tr>
<td></td>
<td>12%</td>
<td>4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Diagnostic (Why did it happen?)</th>
<th>Very mature</th>
<th>Very immature</th>
</tr>
</thead>
<tbody>
<tr>
<td>13%</td>
<td>53%</td>
<td>26%</td>
</tr>
<tr>
<td></td>
<td>7%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Predictive (What will happen?)</th>
<th>Very mature</th>
<th>Very immature</th>
</tr>
</thead>
<tbody>
<tr>
<td>4%</td>
<td>26%</td>
<td>43%</td>
</tr>
<tr>
<td></td>
<td>26%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prescriptive/Cognitive (What should I do about it?)</th>
<th>Very mature</th>
<th>Very immature</th>
</tr>
</thead>
<tbody>
<tr>
<td>21%</td>
<td>31%</td>
<td>44%</td>
</tr>
<tr>
<td>3%</td>
<td>1%</td>
<td></td>
</tr>
</tbody>
</table>


Note: Values may not add up to 100 percent due to rounding.
We are starting to see organizations use well-governed financial planning data plus external signals and operational data in their business intelligence tools,” said Morris Treadway, Finance and Enterprise Performance Management Principal at KPMG LLP. “With this internal and external data, companies can rapidly prototype dashboards to answer key questions while using machine learning to find patterns in disparate data and uncover predictive insights. Right now, for many companies, data collection is largely a manual process, but the digital technologies exist today to automate this data and deliver greater actionable insights with speed.”

Know what to measure and analyze to drive company performance

As expectations for insights and analysis shift from descriptive and diagnostic to predictive and prescriptive, finance must become not only technology-enabled but also performance-centric. That requires accurate insights through dynamic forecasting and planning.

Part of this effort is identifying the right KPIs to measure, based on the internal and external drivers of growth, profitability, and sustainability. Another part is integrating the company’s planning processes. Indeed, CEOs expect that one of CFOs’ top priorities should be aligning planning to corporate strategy.4

Accordingly, the CFO of the future will need to be commercially astute, going beyond mere value preservation to also understand product strategy, marketing strategy, customers, channels, talent, and other parts of the business—while identifying the key performance drivers in each. With tools for enterprise performance management

Emerging performance indicators

By identifying the right KPIs for corporate strategy, the CFO of the future will set the drumbeat for how the company operates. Finance organizations are starting to look at performance measures in new ways:

Customer lifetime value. This measure, long used in telecommunications, is becoming common in other industries as well. Instead of focusing just on short-term revenue, companies are focusing increasingly on long-term customer retention.

Customer experience profitability. Finance will help companies strike the right balance between the experience that customers expect and what makes financial sense to deliver.

Growth from digital channels. This emerging metric, becoming especially prominent in insurance and banking, reflects the ROI in digital products and services.

A twist on traditional capital metrics. Going beyond return on assets, invested capital, or capital employed, leading finance organizations are taking a venture capitalist’s (VC’s) view. They’re contemplating what the future could look like—in terms of new services, markets, and business models—and evaluating alternative investment scenarios with less traditional measures of value.

For example, some power and utilities companies are looking at how to increase the total market share per customer to provide regulated and non-regulated services versus the traditional focus on regulated revenue and reliability indices. While both are important, looking at prospective investments through a VC’s view encourages more innovative marketing, pricing, and investment strategies.


© 2019 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved. The KPMG name and logo are registered trademarks or trademarks of KPMG International. N07PS 881360

Future of Finance: The insights imperative 16
EPM, CFOs will integrate data from these areas to link business strategy and performance.

How are a company’s strategic initiatives reflected in financial plans, workforce plans, and capital plans? What metrics will hold organizations accountable? EPM can help CFOs drive strategy throughout the business, create an operational rhythm, and motivate the workforce in the right direction. Plus, companies with mature EPM capabilities have been shown to significantly outperform others. In a recent KPMG survey, 40 percent of “mature EPM” companies reported more than 10 percent revenue growth, while only 17 percent of “less mature EPM” companies could say the same.5

CFOs will also need iterative, scenario-based planning models—incorporating both internal and external data—to improve forecasting accuracy, anticipate change, and act to improve performance.

For example, drilling companies can predict their revenue on current assets by monitoring production, assessing the price of oil today, and estimating the price in the future. But how can companies predict the return on the holes they are yet to drill so they can plan their investment? In this kind of planning, analytics must consider multiple internal and external factors, including probabilities, prices, available cash flow, and competitors’ discoveries relative to targeted drilling locations. These kinds of factors are volatile, potentially changing every day, so finance needs agile analytics that deliver scenarios both optimistic and pessimistic, enabling the company to continually update its planning.

“Finance cannot keep up with market changes through traditional annual planning processes. To create competitive advantage, organizations are moving toward dynamic, predictive planning with agile analytics.”

Sanjay Sehgal
U.S. Consumer and Retail Management Consulting Leader
Principal, Advisory, Finance Transformation
KPMG LLP

New technologies will extract data in real time from multiple systems and publish it straight to user-friendly dashboards that are available to the business for collaboration, analysis, and better decision-making.

“Finance cannot keep up with market changes through traditional annual planning processes,” said Sanjay Sehgal, U.S. Consumer and Retail Management Consulting leader and Financial Transformation principal at KPMG LLP. “To create competitive advantage, organizations are moving toward dynamic, predictive planning with agile analytics.”

Embrace emerging technologies to automate and act with new insights

In the future, the data for these predictive and prescriptive analytics—along with the descriptive and diagnostic measurements used for financial statements and operational reporting—will become fully automated, improving speed to insight. New technologies will extract data in real time from multiple systems and publish it straight to user-friendly dashboards that are available to the business for collaboration, analysis, and better decision-making.

Across industries, leading finance organizations have already started down the path. For example, by collecting and analyzing wear-and-tear data in real time, some Industrial manufacturers can determine component failure rates and develop schedules for servicing and maintenance. This kind of solution for predictive and corrective maintenance is helping them reduce costs, structure better service agreements, enhance capital planning, and improve asset life and efficiency.

As another example, some retailers are using computer vision and product sensors to generate real-time insights on consumer behavior, such as shopping paths and how consumers respond to in-store promotions. With these insights, companies can improve the accuracy of sales and demand forecasting, develop strategic pricing and discounting models, properly allocate funding to certain products and markets, and better track the effectiveness of promotional spend.

Meanwhile, other retailers are using facial recognition to strengthen opt-in loyalty programs, so when consumers visit a store, sales associates can see their product preferences and make recommendations.

Some companies have begun using machine learning to correlate multiple data streams, uncover new insights, and develop more accurate forecasts. For instance, the finance teams at one retailer thought they understood the drivers of same-store sales, but when they combined several sources of data and applied a correlation algorithm, they discovered that the chief factor affecting same-
Use the following questions to gauge your finance organization’s progress in insights and analysis:

• To what extent are your descriptive and diagnostic analytics automated?

• What use cases would add the most value for applying predictive and prescriptive analytics?

• How is corporate strategy connected to financial planning and operational planning?

• Who owns data and analytics in the organization today? What is the role of data scientists?

• What is the role of finance in data management and governance, beyond traditional controllership?

• Do you see your role in finance to challenge the business to make better decisions?

• Do you have the skills and capabilities to make use of analytical information?

store sales is the proximity of new competitor stores. Based on this new insight, the company is now adding a new kind of competitor data to its forecasting models.

In particular, high-tech companies have been at the forefront of using emerging technologies to tap new insights. For example, by applying machine learning to historical data, Microsoft improved the accuracy of its sales forecasts and prediction of financial outcomes. Based on the new insights, the company redirected its sales force and adjusted its approach to production, inventory, and distribution. Even more, Microsoft applied machine learning, predictive analytics, and natural language processing to evaluate financial performance prior to period closings, which improved the speed to insights.

Who should own the data strategy?

Since finance is becoming the enterprise provider of data-driven insights, it stands to reason that CFOs should play a critical role in the enterprise data strategy. Indeed, according to Harvard Business Review Analytic Services, “The finance function is the focal point of enterprise activity, connecting business strategy to operations to financial results.”

Accordingly, most CFOs today are at least participating in the data strategy, and some are taking a more influential role by designing KPI dashboards and other enterprise technology. In the future, however, finance has an opportunity to lead the enterprise data strategy while partnering with other business functions to implement robust analytics.
In addition to owning and organizing all financial data, finance can take responsibility for the quality and governance of other data as it impacts enterprise performance—including which data is used, how to ensure its reliability, and how to structure it to answer key business questions. Again, from Harvard Business Review Analytic Services, “Finance teams have expanded their data and information stewardship beyond financial data to include the bodies of operating data that eventually flow into financial metrics.”

But have no fear: The CFO does not need to own all of the company’s data, which will continue to lie with information technology, other functions, and individual business units. Rather, finance should govern—and improve the integrity, speed, and relevance of—data that has a direct influence on enterprise performance and KPIs, including market, customer, and operational drivers.

One way to spearhead this strategy is an internal COE for enterprise analytics, and finance is uniquely positioned to create it. Already, such COEs are emerging across industries. They include the sourcing and integration of internal and external data, the governance of it, performance reporting, and analytics technology. Importantly, the COE will also provide a much-needed career path for data scientists. Today, these professionals are typically hired by various business groups to address a particular challenge and then remain in a silo, which minimizes their value to the business. A finance-led COE, on the other hand, can create an organization for data scientists, and finance can deploy them as needed in the course of business partnering.

As finance takes a leadership role in insights and analysis, the CFO will need to continue working closely with the chief information officer (CIO), who will be an invaluable partner for technology selection, security, and data integration. In fact, in some companies today, the CIO reports to the CFO, which shows the strategic importance of the partnership—and of the CFO’s leadership in the enterprise data strategy.

**Creating advantage with analytics**

**KPMG helps finance organizations build their capabilities in insights and analysis.**

**Coca-Cola Enterprises**: Even a business as adept at bottling success as Coca-Cola Enterprises can refresh its approach to performance reporting. KPMG in the U.K. led an ambitious program to set up a new center of expertise in Sofia, Bulgaria, which now delivers far more effective analytics and insights to the business with greater efficiency. Better insights bring renewed sparkle to business performance, accompanied by cost savings running into the millions.

*Now part of Coca-Cola European Partners*

**A global insurance company**: This company wished to enhance its processes and technology while also gaining the proper information for better decision-making. KPMG helped the company develop a new end-to-end performance management framework as well as a driver-based planning process supported by cloud EPM and business intelligence technologies. In addition to achieving a balanced view of the business, the client benefited from forward-looking analysis and forecasting capabilities as well as digital and mobile reporting accessible to all stakeholders.

---

The Future of Finance

The art of the possible
Finance will be radically different in the future.

New capital allocation approaches
Cornerstone of strategy, finance, and analytics
Emerging technologies will change the nature of shared services
Cloud everywhere and the dominant platform
Amazon’s “Alexa” provides instant information
Process leadership is a profession
Artificial intelligence (AI) processes big data
Finance professional as a strategist

To disrupt is to exist

76% of CEOs say that their growth relies on their ability to challenge and disrupt any business norm.
73% of CEOs are actively disrupting the sector in which they operate, rather than waiting to be disrupted by competitors.
68% of CEOs believe that agility is a do-or-die for business—that being too slow can lead to obsolescence.


© 2019 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved.
The KPMG name and logo are registered trademarks or trademarks of KPMG International.
The CFO agenda for disruption
Leading finance organizations are focusing on six key areas:

Innovation and investment

CFOs will wear two hats:
- Ensuring stability and control of the finance function
- Enabling agility and profitability in enterprise innovation

The biggest enabler of innovation, according to innovation, strategy, and R&D executives:
- 73% point to leadership support
- 56% say the ability to test, learn, and iterate

Extreme automation
Eight disruptive technologies will transform all levels of existing finance competencies.

Cloud technologies
Machine learning
Robotic process automation
Cognitive
Blockchain
Natural language processing
Digital analytics and delivery
Data management

© 2019 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved.
The KPMG name and logo are registered trademarks or trademarks of KPMG International.

Insights and analysis

The CFO is uniquely positioned to define the analytics agenda for the enterprise.

90% of finance organizations see data and analytics as a high or moderate investment priority.3

Data integrity concerns:

66% of CEOs have put their own experience and intuition over data-driven insights in the past 3 years.4

Service delivery model

For sustainable success, finance should consider:

- What work gets done: Higher-value services
- Where work gets done: Geography no longer matters
- Who does the work: Reshaped support structure
- How work gets done: Automation and integration

Finance service delivery will optimize automation while balancing global, regional, and local activities. Strategic business partnering will be a primary focus.

Analytics capabilities will shift from “descriptive” to “prescriptive.”

- Descriptive: What happened?
- Diagnostic: Why did it happen?
- Predictive: What will happen?
- Prescriptive: What should we do about it?

Future of Finance: Infographic
Future of Finance: Infographic

**Organization and talent**

Skills and capabilities needed to support the future finance organization:

- **Data utilization and technology:** up to 70%
- **Behavioral:** 73%
- **Finance technical:** of labor requirements will likely be reduced; however, of CEOs believe AI and robotics will create more jobs than they will eliminate.

**Risks and controls**

- **51%** of CEOs say it is just a matter of time before their organization is hit by a cyberattack, yet only 25% consider themselves very well prepared.
- **60%–70%** of manual controls performed today are expected to be automated in the next 5 to 10 years.

> Internal audit will need to transform into a ‘value lens’ for the business.

© 2019 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved. The KPMG name and logo are registered trademarks or trademarks of KPMG International, NDPPS 881360.

---

1. Estimate from KPMG LLP
Evolve the finance function

Embracing new talent structures and strategies

From geopolitical and regulatory volatility to digital disruption transforming the way entire industries operate, the world of business is rapidly changing. To survive, organizations are evolving their operating models to boost value creation—rather than mere value preservation. In fact, 63 percent of chief executive officers (CEOs) say that over the next three years they need to improve their innovation processes and execution, according to KPMG research.¹

Leading organizations are focusing individual business units outward, operating in a collaborative setting to drive value across the enterprise. These organizations are moving away from bureaucratic, functional silos and towards service-driven teams that can be deployed throughout the business as necessary.

Beyond these structural changes, the finance function will require new capabilities, skills, and roles to meet the growing pressure to deliver more value and serve as a true partner to the business. Ultimately, finance will need to alter its approach to attracting, retaining, and developing talent to step up to the challenge.

The role of the CFO must expand

Managing and measuring enterprise performance and value contribution will be a top priority for chief financial officers (CFOs) of the future. They will be expected to unite their organization towards one goal: understanding inputs, perspectives, and challenges in order to drive the right strategic decisions for both investments and growth.

To achieve this, CFOs will need to treat their core accounting duties as a set of processes and determine how technology can be applied to improve efficiency, as noted in “Tech Innovation to Reinvent the CFO Suite,” a KPMG and Bloomberg Studios article. They will also need to recognize and take advantage of their unique position in the company—at the center of enterprise performance, connecting finance, operations, and strategy.²

While there is no single path for the next-generation CFO, the position’s increasing importance to the organization of CEOs are planning to upskill more than half of their workforce over the next 3 years.³

³ Future of Finance: Evolving finance 25

© 2019 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved. The KPMG name and logo are registered trademarks or trademarks of KPMG International.
will be universal. CFOs will need the right tools, structure, and workforce to support growing responsibilities.

**Leveraging extreme automation**

Findings from the KPMG and Forbes Insights survey, Digital transformation, reveal that 79 percent of financial executives think advanced technologies will be a “must-have” for their organization by 2022. Disruptive technologies make way for new value creation opportunities and can help propel the CFO’s agenda forward.

Blockchain, for instance, can help finance become more efficient by enabling faster processing, improving data accuracy and security, and eliminating out-of-sync ledgers and, therefore, the need for reconciliations. Finance can utilize predictive and prescriptive analytics to deliver meaningful insights to the business and help it respond more effectively to changing business conditions. And intelligent automation will provide finance professionals with tools to glean essential information for decision making and enable them to focus on more strategic work.

“The ability to analyze bigger data sets and identify patterns enables the finance function, often in cooperation with the commercial and operations functions, to identify higher return-on-investment activities or areas of savings,” points out Jolande Bot-Vos, program director, MSc Management at Imperial College Business School. “The exciting aspect of these changes is that it allows finance to eliminate traditional lower value-added activities and get into value-added contributions.”

**Redesigning finance**

Digital disruption will inevitably spur organizational changes for the finance function. New centers of excellence will be developed to manage the implementation of disruptors, such as intelligent automation and data and analytics, and leverage the expertise of critical resources. Virtual service delivery will remove companies’ geographical boundaries, reducing the need for a local presence. Many people will be based remotely—either at home or in local offices—and will work in a virtual environment. The future will also likely see an increase in end-to-end process ownership, with finance collaborating with other parts of the business. This will ultimately give way to a less rigid hierarchical structure.

To address changing priorities, the CFO will need to lead a diverse finance team equipped with the right skills. The demand for a performance-centric and technology-enabled workforce will prompt finance to step outside of its traditional transaction processing and accounting role to focus on higher-value services.

The finance function will comprise talent specializing in data and analytics technologies; strategic thinkers to ask the right questions, glean insights from data, and communicate to the business; and technical workers adept at business modeling, process design, and core financial driver analysis. To align with changing business models, some organizations have already created new positions—such as chief data officer, chief robotics officer, and chief experience officer—to report to the CFO or act as a strategic partner. More roles are anticipated to emerge, as 73 percent of CEOs believe that technology will create more jobs than it will eliminate.5

**Emerging roles in finance**

Shifting priorities are prompting changes to the finance workforce. Below is a sampling of emerging roles to support new capabilities and skills requirements.

**Financial data modelers/scientists** will execute complex financial models and advise on the financial and business impacts of different scenarios.

**Business solutions architects**, with experience managing a digital workforce and overall knowledge of the systems landscape, will identify required finance and accounting process changes and implement new and relevant technologies.

**Innovation and investment strategists** will identify changes in customer and competitor behavior and business implications, by taking an “outside-in” approach to developing insights from trend signals.

**Business planning analysts** will handle interactions between different business groups and communicate information effectively. They are also likely to have extensive business knowledge and deep technical finance and accounting expertise.

**Business partners** will need a strong understanding of external markets to examine and leverage threats and opportunities into strategic direction for the business. They will accordingly navigate ambiguity and influence a potential shift in the business model.
Talent strategies

With the need for new roles and retraining of those who will be affected by the fallout from increasing automation and other organizational changes, finance functions require an effective talent management strategy. KPMG research indicates that nearly all CEOs believe nothing is more important than attracting and retaining top-notch finance talent.6 A holistic approach for addressing the critical aspects of managing finance talent will be essential and can be achieved through a number of strategies:

**Buy outside talent.** Achieving this at scale involves fostering relationships with key universities and possibly bringing in people from less traditional routes, such as those with science, technology, engineering, and mathematics, rather than finance, backgrounds. With over a third (38 percent) of CEOs agreeing that they need to reposition their business to meet the needs of millennials,7 companies may also consider redefining their employee value proposition and redesigning their talent acquisition strategy for digital natives.

**Build the organization’s internal talent pipeline.** Consider investing in career path design, learning, and development; reskilling the workforce to deliver more business-centric services; redefining role definitions and core competencies; and developing succession plans to address the retiring and incoming workforce. Older workers can play an important role in helping to develop younger ones, and we can expect to see an increase in “reverse mentoring,” where younger workers help older generations learn new skills, particularly around digital technologies.

**Borrow or partner.** An increasingly popular strategy is injecting specific talent or teams into a workforce through partnerships or borrowed talent. Businesses can simply integrate flexible workers or develop a multifaceted workplace ecosystem that includes elements of onshore, nearshore, or managed service working. Functions might also choose to work closely with a partner to build capabilities that feed into an environment of high-performing talent.

**Develop high performers.** A particularly popular route for larger corporations, leaders can focus on retaining and developing high performers by creating rotational programs. They need to understand which roles in their organization are critical and identify any areas where the business might be at risk of becoming overly dependent on an individual or team for institutional knowledge.

**How to get started**

Regardless of the strategies finance organizations decide are right for their business, they will need to ensure their workforce is prepared for the changes to come. The journey forward will require the following steps.

**Define a compelling vision.** Aligning the finance vision with business objectives and ensuring commitment across the organization is key. To help garner stakeholder support, clearly articulate the project scope, measurable and realistic goals, and potential benefits—using simulations and other supporting materials that demonstrate the value to the organization.

**Establish new ways of working.** Identify workplace behavior and process changes that support the future state, such as adopting new collaboration techniques, implementing end-to-end process ownership, and establishing cross-functional governance.
Current CFOs can learn from leading companies that have already reconceived their finance organizational design and talent strategies.

The finance function of a power and utilities company was burdened with failing core processes, a top-heavy workforce structure, redundancies, capability gaps, poorly defined culture, and employee turnover.

KPMG helped the company define 400+ roles and 650+ processes to govern finance operations, identify core end-to-end processes, adjust its competency framework, and create a compelling employee value proposition to attract top talent. To improve retention, the employee experience was examined for gaps, and employees were provided with the tools to create actionable career development guides.

After identifying functional skill and industry knowledge requirements, KPMG and the company facilitated workshops to close technical and behavioral capability gaps. With a combined 4,349 hours of training, finance employees discovered how to apply tools and frameworks to better understand business operations, drive performance, and support key performance indicators set by stakeholders.

The finance function has already made significant progress to its future state—process-driven, stakeholder-centric, and focused on delivering value across the business.

**Taking action**

- **Determine a talent strategy.** Explore how the workforce may evolve over time and adopt an agile response to managing potential risks, such as talent pool depletion, lack of innovation, and a disengaged workforce. Consider a proactive approach to managing talent—for instance, by making opportunistic hires around the skill sets that are anticipated for the future, rather than waiting for a new technology implementation.

- **Consider people and change impacts.** Understand how new strategies will affect key roles and keep the organization apprised of changes. Build trust and help ease automation anxiety by explaining how job roles will evolve rather than disappear. Ahead of implementing a new technology or process change, increase employee engagement by encouraging participation in brainstorming and planning sessions.

- **Assess learning and development (L&D).** To enhance the capabilities and skills of today’s workforce to meet future needs, organizations should provide a dynamic, learner-centric L&D experience—combining engaging content (e.g., “gamified” assets and subscriptions), on-demand delivery (e.g., mobile and self-directed learning), and platforms that bring all learning tools together (e.g., learning portals and social learning management systems).

Finance organizations should begin thinking about developing new skills, capabilities, styles, environments, collaboration points, career paths, and operating models for the future. Those able to transform their organization and talent strategies will be better equipped for the challenges and casualties that accompany any fundamental market shift.
In recent decades, the service delivery model for finance has evolved from shared services to multisourcing and, most recently, to global business services (GBS), reaching across multiple processes and geographies. A chief driver behind this evolution has been the imperative to deliver transactional services more efficiently, freeing up finance professionals to add strategic value through the other two layers of their delivery model “stack”—expert services and business partnering.

Extreme automation will dramatically change this approach to service delivery. From intelligent automation to advanced analytics, disruptive technology will enable finance to provide all of its services more effectively and efficiently. These include tax, treasury, audit, planning, and other high-value activities to help the business make better decisions.

But just as technology creates advantage, it can also take it away. That is, while finance has made great strides in building its enterprise identity, it may ultimately need to relinquish some of it. In the service delivery model of the future, finance teams will be smaller, they will have less of a local presence, and they will collaborate more with other functions in the journey toward end-to-end process optimization.

Automation beyond transactional efficiency
Many finance organizations are using robotic process automation (RPA) to reduce manual effort and cost in transaction processing and bookkeeping. Indeed, according to a KPMG LLP (KPMG) study, about 70 percent of finance organizations are using RPA to reduce costs and improve process efficiency, while about half are using it to reduce headcount.

However, as automation becomes more advanced, it will disrupt higher-value services as well. “Increasingly, nimble ‘bots’ can take care of many execution, workflow, and archiving tasks, leaving staff to focus on monitoring, analyzing, and taking decisions on exceptions,” says Jolande Bot-Vos, program director, MSc Management at Imperial College Business School. “At the same time, new data and analytics tools will help

“Increasingly, nimble ‘bots’ can take care of many execution, workflow, and archiving tasks, leaving staff to focus on monitoring, analyzing, and taking decisions on exceptions.”

Jolande Bot-Vos
Program director
MSc Management
Imperial College Business School

Disruptive technology will significantly change the way finance delivers transactional services, expert services, and business partnering.

1990s
Shared services
- Internal delivery of core services; predominantly regional models
- Outsourcing/multiregional outsourcing with select global providers
- Focus on transactional activities

2000s
Multisourcing
- Emergence of right shoring; near-shore becomes key element of delivery models
- Vendors deliver niche services
- Introduction of multivendor deals
- Emergence of center of excellence (COE) solutions

Since 2010
Integrated service delivery models
- Integrated/multifunctional service delivery models
- Lower-value activities typically outsourced; increasing focus on analytical, judgement, and expert services

2020 & beyond
Digitally-enabled service delivery models
- High availability of data
- Digital technologies shift the service delivery model landscape
- Ability to deliver services virtually
- “As a service” for front, back, and middle office
- Complex, value-add services that leverage technology
finance better understand how the business performs and support fact-based decision-making, close to the business and in real time."

For example, budgeting and forecasting are important parts of business partnership, but these processes today are often mere guesstimates based on past performance, without consideration of external macro and micro economic factors. Moreover, the budgeting process often takes a long, political, and circuitous journey, with finance teams spending months iterating from local to regional to global—only to have the budget pushed back down due to concerns about sandbagging. In the end, the process is not just expensive—it is inherently flawed and static.

In the service delivery model of the future, finance will use automation to extract internal data from cross-functional systems and combine it with external data related to competitors, economic factors, emerging regulations, and more. Using this data with advanced analytics, finance will deliver much more accurate and continually refreshed forecasts in a fraction of the time.

With the assistance of intelligent automation, similarly, finance can deliver expert services more reliably and with smaller workforces. In audit, for instance, technology will help humans by quickly scouring robust datasets for compliance issues. In tax, these systems will extract key data, apply rules, and assist in tax filings.

"Historically, finance and accounting would have been very much about recordkeeping," says Samantha Louis, vice president for Strategic Engagement – Management Accounting at the Association of International Certified Professional Accountants. "We’ve seen that over time the finance function has been transformed so that a lot of the transactional activities have been separated from the analytical, value-add, and reporting parts of finance."
A new look for business partnering—with less concern for geography
As a result of this automation, business partnering in the future will take on a different shape. Finance will not need to embed as many professionals throughout various business units and geographies, because accessing and analyzing data will no longer require a local presence. Instead, delivery models will increasingly use COEs, equipped with data scientists, intelligent automation, and finance experts. They will analyze internal and external data to help the business answer key questions, such as how to deploy capital, where to expand, or which product lines to grow. These COEs will be highly automated, using artificial intelligence to free up human capital for more business analysis and partnering.

Consider the forecasting activity in a typical finance function. With limited, backward-looking data and a plethora of spreadsheets, these forecasts are not efficient, accurate, or timely. In the delivery model of the future, the financial analyst, sitting in a virtual COE, will be supported by machine learning to crunch through a variety of data sources to create faster, more accurate forecasts. The finance professional will be able to spend less time producing the forecast and more time helping business executives analyze and interpret it.

“With the advent of new, distributed technology, where these roles are performed will increasingly be independent of the office environment and driven by the need for interaction and teamwork with the business,” says Ms. Bot-Vos.

With technology-enabled COEs, finance can scale expertise more effectively. Whereas past models might have required several dozen professionals per COE to be viable, the adoption of intelligent automation will significantly reduce the amount of resources required for transactional activities, in turn reducing the need for a rigid organizational hierarchy.

But finance will also need to ensure it has built the right competencies to deploy, maintain, and govern new technologies, from advanced analytics to blockchain.

“Such a system will generate new jobs,” says Dr. Andrea Moro, director of the MSc Finance programs at Cranfield School of Management. “The access to such a huge amount of detailed data implies the need for skilled analysts who can make sense of those data.”

Moreover, given the pace of disruption, new business requirements will emerge very quickly, so finance will need an agile workforce. The organization may need to borrow and partner to access the right talent for advanced technologies.
future models could have, say, 10 small COEs around the world, working together to deliver a few different kinds of regionalized expertise.

Meanwhile, automation is overtaking labor arbitrage as the most significant source of cost savings, so labor decisions will become less about location and more about accessing top talent. Unlike today’s model of large transactional hubs in low-cost locations, offshore centers in the future will be smaller, more specialized, and more automated centers for high-value services. Moreover, as finance evolves into a more strategic business partner, service providers may play an important role in that partnership, but they will need to take on more complex, more analytical work. And the enterprise will need to govern it with a well-defined model for service management.

Greater collaboration on end-to-end processes

In its ongoing quest to establish its position in the enterprise while providing the highest value, finance has historically vacillated between decentralized and centralized models for service delivery. In decentralized models, finance leadership ceded some control by distributing its professionals among various business units and geographies, while in centralized models, the organization consolidated work to reduce costs and increase efficiency and direct control. With shared services, finance found a nice balance, delivering high quality, responsiveness, and efficient transactions from low-cost locations—all while creating clear ownership for the finance organization.

Finance leaders have walked the hard road to create this level of enterprise identity and control, but they may need to let some of it go as organizations increasingly move toward multifunctional service delivery, or GBS. In this multifunctional model—combining shared services, outsourcing, and internal operations—leading organizations are breaking away from functional silos to provide services across end-to-end processes, such as order-to-cash, record-to-report, or procure-to-pay.

Indeed, all functional heads, from chief financial officers (CFOs) to chief
Finance will need to shift from trying to own all financial data and activities to instead working with others to govern them—as part of a cross-functional analytics model that provides key insights to the business.

Information officers, may feel a loss of control as many of their people begin reporting to the head of GBS versus a functional chain of command. But a multifunctional model is necessary in order to establish end-to-end business process ownership, accountability, and optimization. Going beyond economies of scale, a GBS model enables enterprises to improve flexibility, simplify management and governance, better manage risk, and incorporate more innovation such as RPA and digital technologies.

Accordingly, to retain relevance in the future, finance simply cannot optimize its function in isolation. To take the greatest advantage of disruptive technology, finance will need to break down traditional functional barriers and collaborate with human resources, information technology, procurement, and others to build an enterprise platform for service delivery.

Building a cross-functional analytics model

With technological advancements, end-to-end processes will connect enterprise data that previously lived in functional siloes, and GBS is the way to scale insights across the enterprise. However, to get the most benefit from the new connectivity and availability of data, finance will need to shift from trying to own all financial data and activities to instead working with others to govern them—as part of a cross-functional analytics model that provides key insights to the business.

As end-to-end processes become highly automated and span multiple functions, governance will become far more than a “role.” Instead, governance organizations of the future are likely to include a global process leader who is accountable for ensuring value, improving operational efficiency, and managing cost structure, while a global executive sponsor—perhaps a functional leader—sets overarching policies and requirements.

How will finance leadership participate in this governance organization? How can finance reorganize its workforce based on expertise in technical finance, data and analytics, governance, and transformation? These are the key opportunities in the future of service delivery.

Finance’s top goals for 2018–2019:

1. Reduce costs and optimize the finance service delivery model
2. Invest in intelligent automation to reduce labor and drive efficiencies
3. Contribute to and enable reducing costs across the enterprise as a whole

Finance will need to shift from trying to own all financial data and activities to instead working with others to govern them—as part of a cross-functional analytics model that provides key insights to the business.

---


---

© 2019 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved. The KPMG name and logo are registered trademarks or trademarks of KPMG International. NDPPS 881360
Designing processes with a customer experience lens

Ultimately, building end-to-end delivery models will be necessary but not sufficient. The most successful finance organizations will also thoroughly understand the journey of their customers—both internal and external—and apply design thinking and customer journey mapping to create agile processes. These processes will enrich the customer experience and build loyalty to the services “brand.”

Indeed, when customers can easily access services and get their needs met—whether it’s through digital technology, mobile apps, or even a traditional phone call—they will comply with processes not just because they’re told to but because they want to. Internally, the right process design can increase efficiency on processes from booking travel to procuring vendor services. For external customers, it can drive revenue, reduce exceptions, and increase customer satisfaction.

Building resiliency for continued disruption

As business models and ecosystems continue to change, potentially disrupting entire industries overnight, finance will need to engineer a service delivery model that can quickly adapt to market shifts. For example, what if a finance organization spends three years implementing a new enterprise resource planning system, only to get disrupted by new technology that fundamentally changes the way customers, suppliers, and employees expect to interact with the company? How will finance respond?

As another example, Amazon’s plan to distribute medical supplies is disrupting not only other distributors but also manufacturers, which will now need all-new processes—from order fulfillment to inventory management—for a different kind of channel partner. Are they prepared? Can these manufacturers tap into new technologies such as blockchain in order to create more transparency in the supply chain and streamline processes?

To increase resiliency amid ongoing disruption in a connected marketplace, finance organizations will need to constantly anticipate the possible changes in their industry—not only with current trading partners but also with other players across the market. It will be critical to consider the possible impact, develop resilient processes, and design an agile delivery model.

This effort doesn’t mean boiling the ocean; incremental steps will go a long way toward demonstrating success, mitigating risk, and establishing enterprise confidence.

As business models and ecosystems continue to change, potentially disrupting entire industries overnight, finance will need to engineer a service delivery model that can quickly adapt to market shifts.

Preparing for the future

Some organizations are already changing their service delivery models to meet the challenges ahead. Consider these examples from KPMG engagements:

— A global biotechnology company needed to implement a new model for delivering back-office finance and human resources support—all while acquiring an organization that was in the midst of being spun off into a separate entity. The company engaged KPMG to help manage this unique opportunity, which included consolidating organizations, integrating and standardizing systems, and optimizing processes. The result was a well-defined, well-governed delivery model for GBS, supporting thousands of employees in dozens of countries while significantly reducing costs. The company was also able to handle a significantly higher volume of support and anticipate and address future technology issues.

— A large consumer goods company wanted to expand globally through acquisitions, so it could capitalize on economies of scale and reduce costs across the business. To fully integrate and optimize back-office operations, KPMG designed and implemented the strategy for a new service delivery model that would integrate finance operations and migrate processes to regional and global service centers. With this new foundation, the finance organization quickly improved the efficiency of its workflow, optimized internal controls, and ultimately emerged as a valuable business partner that enabled the company’s acquisition strategy.

Where are you on the road to the future?
Use the following questions to gauge your finance organization’s progress toward a new service delivery model:

— Have you evaluated your ability to keep pace with market disruptions?
— Do you understand your current capabilities in technology, talent, and developing a portfolio of services?
— Is your delivery model flexible enough to adapt to tax reform, changing immigration policy, trade treaties, and other regulatory shifts that are changing the value equation?
— Have you defined your company’s future state for digitally-enabled business services, as well as a clear path to close gaps in capability?
Elevating risk management

The CFO’s agenda for disruption will shape risks and controls

The rapid pace of change in today’s competitive business world is driving chief financial officers (CFOs) to uncover new ways to improve efficiency and reduce risk, all at a lower cost as they seek to deliver maximum value to shareholders. CFOs are rethinking their approaches to disruption, including looking to automation to propel their efficiency and low-cost agendas forward. This migration towards automation is prompting organizations to re-examine their risk management strategies.

The modern organization faces significant risk in a number of areas—including strategy, finance, operations, and technology—as well as reputational issues and the growing threat of cyberattacks. Developing an effective risk governance and controls environment that supports innovation, automation, and organizational changes is one way in which organizations can stay on top of the risk-related challenges they face from disruption.

Extreme automation in practice

Technological advances are impacting how organizations perform business tasks—and ultimately how they handle their approach to risk identification and risk management.

The future will see a shift from descriptive and diagnostic analytics to predictive and prescriptive measures that can help detect potential risks earlier and facilitate data-driven decisions on what should be done to control them. Predictive analytics can be applied to identify vulnerabilities and fraud. By deploying deep pattern analysis algorithms, for instance, organizations can better recognize network anomalies or inappropriate access by hackers via tracking network traffic in real time.

Prescriptive analytics can be leveraged to explore new markets or channels. Artificial intelligence (AI) can produce a scenario analysis of these opportunities, providing valuable insights and identifying weaknesses. Business leaders can identify next steps and adjust their strategies and plans accordingly.

The use of robotic process automation and machine learning will enable faster decisions and lower costs, while automated master data management, cloud technologies, and blockchain will lead to improvements in how data is structured and accessed, reducing the need for repetitive processes and manual interventions.

72% of CEOs believe that strong cybersecurity is critical to engender trust with key stakeholders.

Reducing manual control activities will provide a platform for efficiency, growth, and scalability. The use of such systems will lead to stronger confidence in an organization’s risk processes and better value around risk management, which in turn will enable a stronger focus on the drivers of strategic value and business performance.

The benefits of such methods are starting to be appreciated. When asked to rank the most important benefits of using advanced technologies in the financial reporting process, over a quarter (27 percent) of financial executives pointed to real-time insights into areas of heightened risk and internal controls.


© 2019 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved.

The KPMG name and logo are registered trademarks or trademarks of KPMG International. NDPPS 881360
## Extreme automation will enable an improved control environment

<table>
<thead>
<tr>
<th>Data management</th>
<th>Blockchain</th>
<th>Cloud technologies</th>
<th>Robotic process automation</th>
<th>Machine learning</th>
<th>Cognitive</th>
<th>Natural language processing</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="https://example.com/data-management-icon" alt="Image" /></td>
<td><img src="https://example.com/blockchain-icon" alt="Image" /></td>
<td><img src="https://example.com/cloud-technology-icon" alt="Image" /></td>
<td><img src="https://example.com/robotic-process-automation-icon" alt="Image" /></td>
<td><img src="https://example.com/machine-learning-icon" alt="Image" /></td>
<td><img src="https://example.com/cognitive-icon" alt="Image" /></td>
<td><img src="https://example.com/natural-language-processing-icon" alt="Image" /></td>
</tr>
<tr>
<td><strong>The progressive integration and governance of internal and external data which—along with the mining of untapped data sources—will drive predictive and prescriptive insights.</strong></td>
<td><strong>A revolutionary recordkeeping technology that will help increase data security, shorten transaction cycles, and eliminate the need for reconciliations.</strong></td>
<td><strong>As-a-service software for enterprise performance management and enterprise resource planning, which are enabling integrated, real-time data and end-to-end global processes.</strong></td>
<td><strong>This software automates repetitive, rules-based activities that have traditionally been done by humans.</strong></td>
<td><strong>These software algorithms, which power AI, can augment human reasoning, problem-solving, and decision-making.</strong></td>
<td><strong>This class of automation, which encompasses machine learning and AI, refers to electronic brains that will challenge the finance and accounting opinion, provide deep analytics, and enable dynamic insights.</strong></td>
<td><strong>This technology quickly processes large volumes of textual data that previously could be understood only by humans.</strong></td>
</tr>
<tr>
<td><strong>• Reduced risk of human error from manual data entry and manipulation</strong></td>
<td><strong>• Reduced manual execution of complex processes reduces manual reconciliations</strong></td>
<td><strong>• Enables real-time controls monitoring Centralized platform: enables seamless consolidation and enhanced data governance through limited handoffs</strong></td>
<td><strong>• The automation of highly repetitive, transactional tasks enables consistent inputs and outputs, reducing operating and testing costs Simplifies control points by reducing data entry between systems Built-in, audit-able structured steps and decision</strong></td>
<td><strong>• Reduction in mistakes, accidents, regulatory violations, and fraud</strong></td>
<td><strong>• Increased security, controls, and governance with no corresponding work increase Reduced Excel-based efforts for reporting enhances controls and reduces risk</strong></td>
<td><strong>• Automatic information processing reduces human intervention and possibility of error, reducing risks</strong></td>
</tr>
</tbody>
</table>

### Key impacts
- **Overcoming obstacles**
- **Lack of implementation may stem from business leaders being weary of the possible challenges of adopting new technologies—such as process integration, systems compatibility, organizational culture, and data leakage concerns. The possibility of cyber threats may also lead to apprehension; 51 percent of chief executive officers say it is just a matter of time before their organization is hit by a cyberattack,** yet only 25 percent consider themselves very well prepared for such an attack.5

Even those that do have the capability to glean extra insight around risk and the potential for further efficiencies may not be taking advantage of it. A whopping 39 percent of businesses do not leverage data and analytics within their Sarbanes-Oxley Act (SOX) programs in any way.6 This could be due to lack of understanding the potential

---

benefits of these programs. Others may experience a “trust deficit,” or “a lack of trust and confidence that the underlying data, the analysis, and the business interpretation of the outcomes will be able to distinguish between legitimate transactions and fraudulent activity in an efficient and cost-effective manner.”

Despite the limited use of data in the current control environment, it is widely recognized that the automation of controls will be necessary to help reduce cost and risk in the future. An estimated 60 percent to 70 percent of manual controls performed today are expected to be automated in the next five to ten years. This will result in both more efficient governance and lower labor requirements, leading to more value for the organization.

A new scope for internal audit
Internal controls must keep up with the speed of disruption, at a minimum, or surpass it for value creation, while a continuous process must be established to assess the potential impacts of technological advancements on existing processes, systems, and controls. This means supporting innovation, automation, and organizational changes to help businesses establish and monitor their risk positions to promote agility.

The internal audit function will play a pivotal role in helping organizations make the changes that are required to manage risk more effectively. Internal audit professionals need to be involved from the very start of any change process, helping to shape new processes, systems, and wider organizational changes and reporting to audit committees and CFOs.

Internal audit will need to transform into a “value lens” for the business, shifting away from its traditional role focused on monitoring financial activities, testing controls to prevent misstatements, and ensuring compliance. It will need to become more of an analytical and consultative function, capable of identifying, assessing, and proactively mitigating broader operational and strategic risks—including those related to the company’s brand and reputation, as well as cybersecurity and emerging technology concerns. Internal audit will also be tasked with providing an integrated, data-driven view of assurance and business performance to senior management, the board, and the audit committee.

Working closely with the CFO and the broader business, internal audit professionals will need to determine the extent to which they wish to automate areas such as strategy monitoring, operational monitoring, finance and information technology (IT), and develop a controls structure appropriate to the level of automation required.

This will, in part, depend on the agreed level of risk the business is prepared to take on, but generally, the more automated a company is, the more automated the control environment tends to be. A business which automatically backs up its IT systems, for instance, would be able to monitor that back-up...
through an automated control, rather than having to rely on a manual process with the potential for human error.

**New skills for internal audit**

The changing role and responsibilities of internal audit will translate to new skill requirements. Internal audit will need to take a more consultative approach towards working with other parts of the business than may have been the case in the past. According to research by KPMG International, 67 percent of CFOs and audit committee chairs rank communication skills in the top five attributes needed by the modern internal audit professional—a higher score than any other skill— with 52 percent pointing to critical thinking and judgement and 27 percent citing the ability to work across silos—skills that differ from the more traditional finance-based requirements.9

Knowledge of the risk environment is essential, and individuals need to be able to incorporate this knowledge into their approach to controls design. Internal audit needs to be able to test, review, and audit risks and understand what a strong control environment looks like, particularly while that environment is rapidly changing. To improve effectiveness, internal auditors can even think as if they are hackers themselves.

Internal audit professionals will also need to be equipped with the right skill set to properly utilize the technology that is available. Some 62 percent of CFOs and audit committee chairs put technology skills in their top five list for internal audit capabilities, while 39 percent highlight the need to be able to command and understand data analytics.10

Finally, internal audit will require the critical thinking needed to make sense of the information at their disposal. This includes integrating governance, risk, and controls considerations throughout the automation program life cycle, identifying opportunities to embed automation-enabled control activities within the business, and capitalizing on intelligent automation to increase the efficiency and effectiveness of its own activities.

The new role of internal audit will allow CFOs, risk management teams, and businesses in general to better understand and anticipate shifts in risk profile as well as predict and identify control failures.

**Beginning the journey**

Business process owners, risk management functions, and internal audit all have an important role to play in helping to create the framework around which organizations can assess, control, and, ultimately, reduce risk to the business.

“Every organization is different in how they approach this,” says Dr. Jon Danielsson, director of the Systemic Risk Centre at the London School of Economics’ Department of Finance. “Most finance organizations will have a chief risk officer, but in organizations without one, the CFO might have that role. Often it can be individual business units that report to the CFO or the board.”

To succeed in the future, organizations will need to maintain an agile control environment. They will have to build “auditability” into their applications of extreme automation and scan signals of change to anticipate and prepare for changes in the external audit, such as leveraging cognitive technology to deliver higher-quality audits.

However organizations choose to prepare for impending disruption, effective risk management will be at the center of any strategy, helping those tasked with understanding risk operate in a more efficient and reliable manner. In the longer-term, knowing the issue of risk is properly monitored and managed means the wider finance function can focus on its primary objectives: delivering value, generating returns, and shaping broader business strategy.
How KPMG can help

KPMG’s Finance Transformation practice supports the growing agenda and increased responsibilities of the CFO. We work with our clients with passion and purpose, integrating innovative approaches and deep knowledge to deliver real results. Our approach, methodologies, and tools are time-tested across various industries and have consistently demonstrated enhanced strategic value to the finance function. KPMG’s global network of Finance Transformation professionals helps clients align their finance organizations with the strategies and needs of their businesses to realize and sustain value over the long term.

About KPMG

KPMG LLP, the audit, tax and advisory firm, is the U.S. member firm of KPMG International Cooperative (“KPMG International”). KPMG is a global network of professional services firms providing Audit, Tax and Advisory services. We operate in 153 countries and have 207,000 people working in member firms around the world.
Contact us

Ron Walker
Finance Transformation
Service Network Lead
T: 858-750-7057
E: rwalker@kpmg.com

Sanjay Sehgal
Principal, Advisory
Finance Transformation
T: 216-875-8113
E: sanjaysehgal@kpmg.com

Richard Beacham
Principal, Advisory
Finance Transformation
T: 214-840-2858
E: rbeacham@kpmg.com

Sanjay Sehgal
Principal, Advisory
Finance Transformation
T: 216-875-8113
E: sanjaysehgal@kpmg.com

Colleen Drummond
Partner, Head of
KPMG Innovation Labs
T: 804-399-3858
E: colleendrummond@kpmg.com

Deon Minnaar
Partner, Advisory
Internal Audit & Enterprise Risk
T: 212-872-5634
E: deonminnaar@kpmg.com

David Brown
Managed Services Operations Lead
Principal, Advisory
T: 314-803-5369
E: dbrown@kpmg.com

Mark Glaid
Managing Director, Advisory
Finance Transformation
T: 312-665-2619
E: mglaid@kpmg.com

Claudia Saran
Chief Culture Officer
T: 312-952-5550
E: csaran@kpmg.com

Susan Burkom
Managing Director, Advisory
Internal Audit & Enterprise Risk
T: 410-949-8771
E: sburkom@kpmg.com

Michelle Kent
Principal, Advisory
People & Change
T: 303-382-7971
E: mlkent@kpmg.com

Anshul Varma
Managing Director, Shared
Services & Outsourcing Advisory
T: 713-319-3739
E: anshulvarma@kpmg.com