PULSE SURVEY

Finance's Key Role in Building the Data-Driven Enterprise

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If the pandemic has taught us anything, it is that the old ways of working aren't serving us well anymore, and that's especially true in finance. CEOs and boards are looking to the office of the CFO to guide their digital transformation strategies, and finance needs to be up to the task. Never before has finance had the technology, the capabilities, and the opportunity to create so much value for their organizations. Now is the time for us all to challenge the way we have worked in the past and lead the changes that will set up finance and the enterprise for success.

As a CFO, one way I am driving change within my own finance organization is by continuing to advance our use of data and analytics to create a decision-ready organization—one where decision makers across the company have access to the data and insights they need to make the right decisions at the right time. With how quickly the world continues to change, this demand for swift action requires access to different information faster than ever before.

At Workday, we have an intelligent data foundation that enables us to blend high volumes of data from multiple systems—including financial, worker, operational, and third-party data—and look at it from multiple dimensions to help us answer key questions and solve complicated problems. The data is current and secure, giving us confidence in the decisions we are making to drive successful business outcomes.

Our goal in sponsoring research by Harvard Business Review Analytic Services to produce "Finance's Key Role in Building the Data-Driven Enterprise" is to show how finance can accelerate its data and analytics journey and create a data value chain where the enterprise is informed and empowered to make the best decisions. In this report, you'll learn about the gaps and barriers that currently exist between how finance work gets done today and in a data-centric future, and the investments in technology, skills, and cultural changes needed to create a decision-ready organization. I encourage readers to use this report as a guide for assessing your own finance function and building your own data value chain, knowing that we at Workday stand ready to help you at any point along the way.

Robynne Sisco

President and Chief Financial Officer

Workday

Finance's Key Role in Building the Data-Driven Enterprise

For well more than a decade now, business publications, consulting firms, technology vendors, and research firms have issued a steady stream of articles and commentary heralding the arrival of a new era for the finance function. No longer solely occupied with control, compliance, and reporting, finance has become a player in performance management, strategy, operational improvement, and digital transformation. By marshaling ever-increasing masses of data and tapping the power of analytics to glean insights from disparate forms of information, the finance function is poised to lead the organization into the digital future, discovering new forms of value creation along the way.

Or so the commentary has promised. In fact, the digital future is still a long way off at many finance organizations. At those organizations, manual data entry and processes, paper receipts, and spreadsheets are still how most business gets done, and advanced digital tools are unknown or rarely used. In other words, many finance teams fall far short of data and analytics maturity.

"Despite taking an early lead in the use of data and analytics," says Tom Davenport, President's Distinguished Professor of Information Technology and Management at Babson College and author of *The AI Advantage: How to Put the Artificial Intelligence Revolution to Work*, "[finance organizations are] focused on transactional applications and reporting. They've fallen behind on advanced analytics."

HIGHLIGHTS

90% of survey respondents say the **volume of data** collected and used by the finance team **has increased somewhat or significantly** over the past two years.

88% say fostering **a data-driven culture in finance** will be critical to future performance.

55% say that fostering such a culture is a **high priority for finance leadership** today.

A recent Harvard Business Review Analytic Services survey of 162 finance function managers and executives reveals pronounced tensions between finance executives' aspirations and the way they do their day-to-day work. A full 88% of finance executives, for example, say that instilling a culture of data-driven decision making is critical (a 4 or 5 on a 5-point scale) to the finance team's future performance. But just 55% say that fostering such a culture is a high priority for finance teams' leadership today.

Findings like these suggest that while most finance managers and executives anticipate a future in which analytics drives finance's decision making, most finance teams are not prepared for that day's arrival.

This Harvard Business Review Analytic Services report draws on the findings of that finance survey. The survey asked finance professionals about the sorts of data they gathered, to what extent they used digital tools to organize and analyze it, and how they communicated their insights. The results, taken together with insights from finance practitioners and experts, deliver a picture of where finance organizations stand on the path to data and analytics maturity, and what they can do to build data and analytics capabilities to fulfill finance's mandate in the years ahead.

Managing the Data Explosion

Effective data processes have never been more critical to finance teams struggling to keep up with the ever-increasing volume of information flowing through their organizations. Ninety percent of respondents to the survey say the volume of data collected and used by the finance team has increased somewhat or significantly over the past two years.

Wrangling so much data has posed a challenge to many. "We have tons of information, tons of data," says Sanjay Seghal, advisory head of markets at New York-based KPMG. "How do we clean it up? How do we get it right? How do we harmonize data?" Those are questions besetting many finance organizations. Executives responding to the survey say their top three challenges brought on by this rapid data proliferation include accurately preparing, reconciling, accessing, and formatting high volumes of information (68%); integrating recent or real-time data into analyses (55%); and analyzing data and forming and communicating recommendations (52%).

These challenges grow ever more daunting when data from other areas of the organization is added to the mix, as occurs regularly at 64% of respondents' organizations. "Our biggest challenge—and I think this happens to everybody—is data definitions," says Amy Cavasos, assistant vice president, finance and information systems, at Florida Atlantic University (FAU) in Boca Raton, Florida. For example, "We've spent a lot of time trying to come up with a consistent definition for head

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count that meets everybody's needs across the university, whether it's paying for software licenses or analyzing our salary and benefit expenditures."

KPMG's Seghal, too, stresses the importance of consistent names and definitions. "A lot of the data-cleaning undertaking centers around getting the right names for different types of items and different types of transactions," he says. "What's holding up a lot of organizations is that, depending on the data source, there are maybe five different names for the same darn thing."

Consistent definitions will grow in importance as organizations start to feed operational data from elsewhere in the organization and from outside it into their data and analytics systems. At present, 83% of finance organizations regularly use people data and 77% use sales data to supplement the financial accounting data that 93% of finance teams use in their everyday work. Half the financial organizations use external data (such as census data, or industry benchmark data), 47% use supplier data, 44% use other operational data, and 39% use marketing data, such as net promoter scores and social media campaigns. In the next two to three years, an additional 12% of survey respondents plan to make regular use of people data, 14% plan to make regular use of sales data, 34% plan to use external data, 30% plan to use marketing data, 34% plan to use other operational data, and 35% plan to use supplier data.

Those plans won't come to fruition, however, without powerful new technology. "These modern cloud systems have the ability to import data from multiple systems," says Matt McGoldrick, chief of staff to the CFO at Omaha, Neb.-based TD Ameritrade. "We have leveraged our data hub to combine external data with ERP data. That's huge."
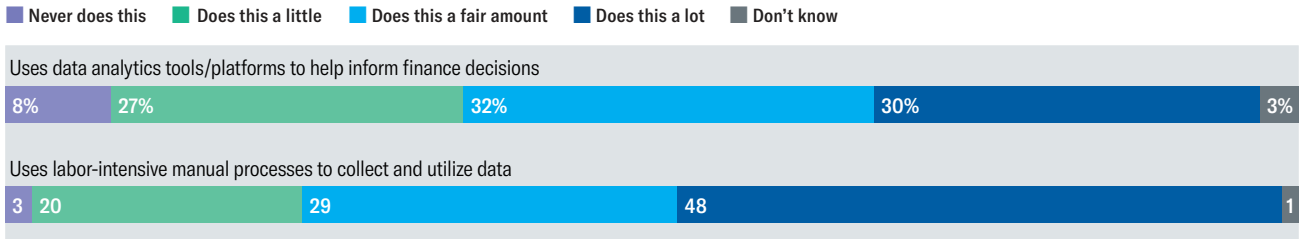
McGoldrick adds that a data hub that can handle disparate forms of data is "definitely helpful at getting at a single source of truth." And that's a key concern, considering many finance

FIGURE 1

Manual Processes in a Digital Age

Manual processes are more common than digital tools and platforms among finance teams

Rate the extent to which your finance/accounting team performs the following tasks today.

■ Never does this ■ Does this a little ■ Does this a fair amount ■ Does this a lot ■ Don't know

Uses data analytics tools/platforms to help inform finance decisions

| 8% | 27% | 32% | 30% | 3% |

Uses labor-intensive manual processes to collect and utilize data

| 3 | 20 | 29 | 48 | 1 |

Percentages may not add up to 100% due to rounding.

Source: Harvard Business Review Analytic Services Survey, March 2021

organizations today aren't fully confident in the integrity of their data. The survey found that while 59% of respondents rate their confidence in their data a 4 or 5 on a 5-point scale, only 14% rate their confidence a 5.

Compounding the challenge of settling on a single source of truth are the cumbersome tools and processes in use in many finance organizations. Today, the share of finance teams that lean on manual processes regularly to analyze their data is greater than those that regularly use data analytics tools to help inform their decisions. More than three-quarters (77%) of respondents report relying a lot or a fair amount on labor-intensive manual processes to collect and utilize data, while 62% use data analytics tools or platforms a lot or a fair amount to help inform finance decisions. **FIGURE 1**

Most finance organizations have yet to invest in the tools that could make the analysis of disparate data more efficient and effective. Only 37% of respondents say their teams assign a high or very high priority to leveraging a flexible data hub that can accommodate multiple data types, including data from different departments, and only 16% marked it as a very high priority. And about half (49%) of respondents rate investing in technology and tools to support analysis and data management as a high or very high priority for their teams, with 20% marking it as a very high priority.

Those technologies are at least on the drawing board at most organizations. Nearly six in 10 (58%) survey respondents say they plan to adopt or increase their use of integrated planning, analytics, and forecasting systems in the next two years. And 53% say they plan to adopt or increase their use of a data analytics hub that consolidates financial and operational data during the same time period.

The organizations that don't prioritize a data hub are missing out on opportunities to add value to their businesses. For example, "It's pretty rare that finance is heavily involved in pricing issues," Babson's Davenport says. "That's more likely to be in the marketing function. But if I were the CFO, I'd be very interested in pricing." By analyzing high, low, and average prices and plotting that information against a customer's purchase history, he explains, finance teams can arrive at the optimum price the customer is willing to pay. "You can really increase your profit margins quite dramatically that way," Davenport says.

He also sees opportunities to pull together data from finance and other parts of the organization to generate financial insights. In his experience, finance teams "rarely use analytics to understand the relationship between non-financial and financial performance," he says. "You'd like to know, is customer satisfaction really that important for my financial performance?"

Other opportunities finance organizations risk missing out on include improved communication and user convenience. FAU's platform incorporates a workflow tool that "has allowed us to provide reporting right within the same application where folks are transacting," Cavasos says. "Now we have people going in there, even if it's just to look at their pay stub. We have engagement from all our users across the university, and we can push information out to them using our system because we know they're connected, and they're engaged." She says the data management and analytics platform has raised the profile of finance's analytics and improved the organization's analytical capabilities just by making it easier and more intuitive for people to find information.

Making Full Use of Disparate Data

Despite the headwinds that finance organizations encounter, they are making progress toward expanding the remit of the finance function. "I think we are in probably the mid-early to

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middle stages of seeing companies and finance organizations transform," says KPMG's Seghal. Just as many observers predicted, nearly all (97%) survey respondents say their finance organizations are drawing information from across the enterprise, such as operational, HR, and marketing data, and the external environment. **FIGURE 2**

Finance teams are processing that information to extract data-derived insights and recommendations and sharing them with senior executives and other departments within the organization. More than eight in 10 (82%) survey respondents say their finance teams use the data they collect to generate insights to inform executive leadership's decision making a lot or a fair amount, and 73% say they provide data-based insights to other departments within their organizations to inform those teams' decision making a lot or a fair amount.

But many finance teams aren't just using last century's technologies and processes to analyze their data; they're also sharing their insights with the rest of the organization using decidedly old-fashioned methods. Distributing slides or spreadsheets via email is the preferred method of 84% of survey respondents. At 65%, regular meetings are the next most-used delivery medium. Half (51%) share data via dashboards, and roughly a quarter (28%) use collaboration software/platforms other than dashboards.

The reluctance to embrace newer information-sharing tools stems in part from simple habit and inertia. At FAU, Cavasos and her team faced resistance to adopting the integrated data management and analytics platform that the school implemented about five years ago. "Everyone gets very, very connected to the technology that they're accustomed to," she observes. "When you try to come up with a unified solution and get everybody looking at the same data in the same place, you're fighting against that comfort level they have with accessing their data."

But four years ago, a new CFO stepped in at FAU, Cavasos says. With a mindset that was "very focused on data and analytics that originate with finance but incorporate so much

FIGURE 2

An Appetite for Disparate Data

Most finance organizations are incorporating nonfinancial data into their analyses

To what extent does your finance team utilize data from other departments within the organization (e.g., HR, operations, marketing) to generate insights today?
ON A SCALE OF 1 TO 5, WHERE 1 = NOT AT ALL AND 5 = TO A GREAT EXTENT.
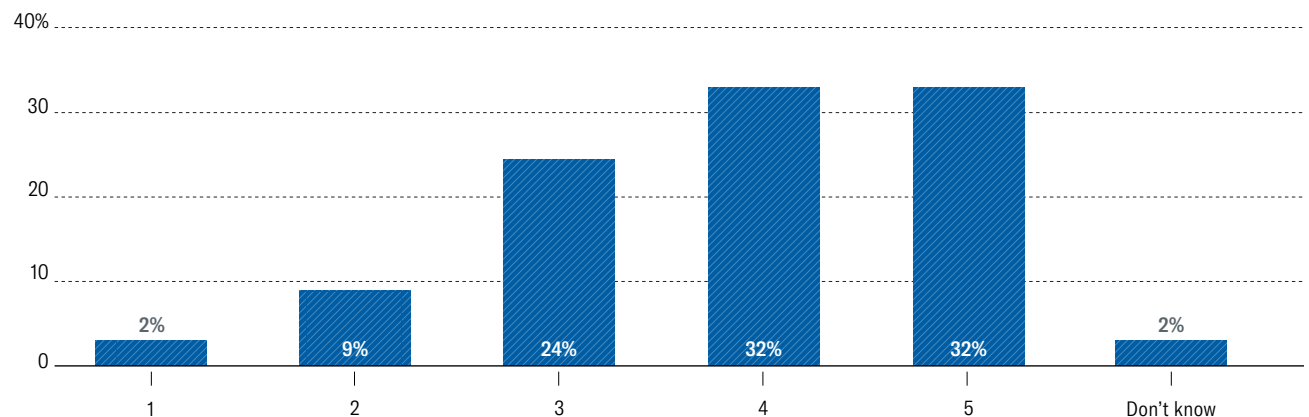
Source: Harvard Business Review Analytic Services Survey, March 2021

77%

of respondents report relying a lot or a fair amount on labor-intensive manual processes to collect and utilize data.

other institutional data that helps tell a better story," he threw his weight behind promoting adoption of the new technology and integrating data and analytics into the finance team's everyday work. "Under his leadership," Cavasos says, "I've seen a shift in FAU in the quantity and the nature of the data that we're asked to provide."

As at FAU, other finance organizations are beginning to explore the value-creation potential of combining financial and nonfinancial data from across the enterprise. "When we moved to the cloud," says TD Ameritrade's McGoldrick, "it was a gift across the board because we were able to get data in and out very quickly. These modern cloud systems have the ability to import data from multiple systems. That's extremely helpful for cross-system communication."

The ability to handle multiple forms of data is vital to finance's evolution, Seghal says, because it enables finance professionals to apply artificial intelligence (AI) to discover hidden patterns in their data. "You can take years of sales history and pool it with external data like housing starts and weather patterns, and your AI engine starts to see correlations and provide information and insights," he says. "That's exactly where we'll head in the future." As Seghal suggests, most respondents (91%) think finance will employ AI, machine learning, and/or predictive analytics to some extent in the next three years. **FIGURE 3**

Seghal envisions a future in which AI is as ubiquitous as the internet itself and as easy to use as a digital assistant. "We are really about to be on the cutting edge of leveraging emerging tools like artificial intelligence," he says. "Imagine you're the
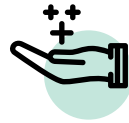
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CFO: when you're driving to the office, you should be able to engage via phone and say, 'Hey, Alexa, how did my store sales do last quarter? What was my margin this quarter?'" Proceeding from those answers, the CFO can apply analytics that can support "a hypothesis that I can validate by using internal and external data and tying it together," he explains.

Some of the opportunities created by AI may not even be apparent when the technology is first implemented. When McGoldrick was in the early stages of exploring how to apply AI to automate some of finance's processes, "we literally could not come up with the use cases with the positive ROI to justify the investment," he says. "But as people warmed up to the technology, they started proactively coming up

FIGURE 3

Aspiring to Artificial Intelligence

Finance teams expect AI to play a role in their future work

To what extent do you think your organization's finance team will employ artificial intelligence, machine learning, and/or predictive analytics in the next three years?
ON A SCALE OF 1 TO 5, WHERE 1 = NOT AT ALL AND 5 = TO A GREAT EXTENT.

1	2	3	4	5	Don't know
6%	20%	33%	23%	15%	3%
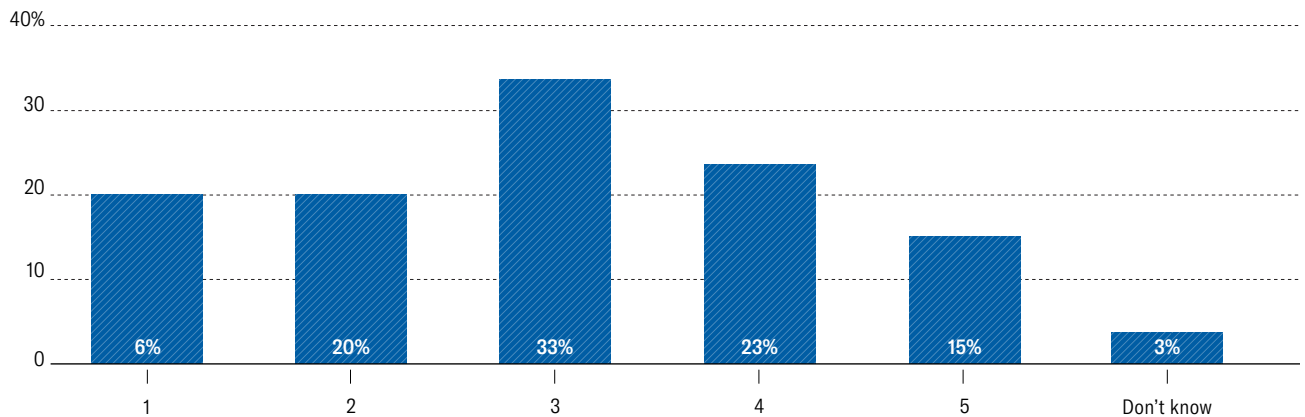
Source: Harvard Business Review Analytic Services Survey, March 2021

with ideas. Now every year, we're getting exponentially more automation opportunities in the pipeline."

As finance teams add to their data and analytics capabilities, they need ways to measure their progress. At present, there appears to be little consensus about what metrics are most valuable to finance managers—and close to a fifth of finance teams have no metrics at all (18%). **FIGURE 4** "What are those metrics that can help you start to better understand if you have achieved what you wanted to achieve?" Seghal asks. "They could be standard metrics, like your finance costs as a percent of revenue. It could be head count. But we could start to look at subprocess areas like forecast accuracy. We're all trying to figure this out together as organizations."

At FAU, key metrics include the frequency of use of self-service reporting features, transaction volume, and time to completion of those transactions. TD Ameritrade looks at throughput—the number of projects completed—and the new capabilities finance is building. It also measures "how many hours we can give back to the team so they can be more strategic," McGoldrick says. Davenport recommends tracking cash savings. "Ultimately, nobody respects dollars saved or earned more than finance," he says. "So ultimately, you would want that to be the chief metric."

Voices of Experience

Veterans of finance transformations have some advice to offer their counterparts in other organizations who are just setting out on their journeys. The first requirement, they agree, is visible, sustained support from the organization's senior executives. "Your leadership team needs to be a bit visionary," McGoldrick says. "You need your executive team to think not just about the dollars and cents of today but about the future and the scale and the ability to do things after you get that cloud system that interacts with other data systems. The possibilities are endless."

But new technology also requires a new organization, new metrics, and new incentives to maximize the return on technology investments. "You need to set up an organization to be data focused," McGoldrick says, "and you need to incentivize people the right way. You need to look again at all of your metrics, your KPIs, and align goals." Those metrics and incentives help establish and reinforce the expectation that data and analytics should be integrated into everyday business decision making.
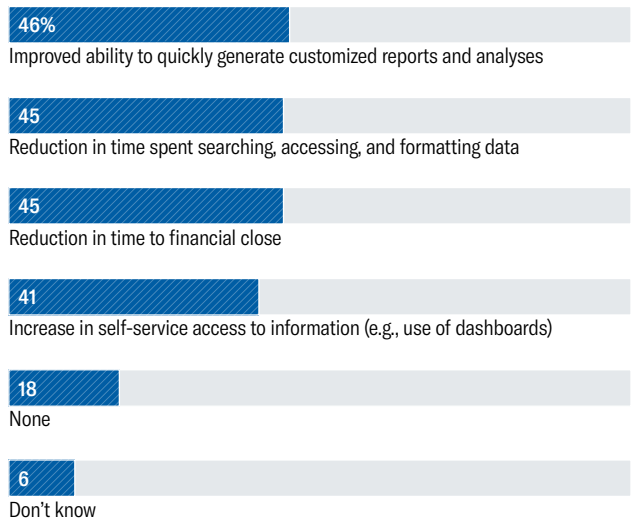
The new, data-driven organization will inevitably find itself in conflict with other parts of the organization that take a proprietary view of their data. "There's always some nervousness from the groups who have traditionally owned that data," Cavasos says. "They wonder if there's a fox in the henhouse. It's important to not give [those parts of the organization] the sense that you are taking over but that

FIGURE 4

No Consensus on Measuring Return on Digital Investment

Finance teams use various measures to track their return on digital investment

What outcomes does your organization's finance team track to measure the return on its digital data investments? [SELECT ALL THAT APPLY]

46%
Improved ability to quickly generate customized reports and analyses

45
Reduction in time spent searching, accessing, and formatting data

45
Reduction in time to financial close

41
Increase in self-service access to information (e.g., use of dashboards)

18
None

6
Don't know

Source: Harvard Business Review Analytic Services Survey, March 2021

you are partnering with them to understand how they view their data."

Cavasos also warns against thinking that technology alone will be sufficient to bring about transformation. By definition, transformation implies change, including updating processes and the ways in which organizations operate. "The inclination is always going to be to just automate what we do today," she says. "But you also need to evaluate [the potential automation use case] and figure out what the strengths and weaknesses are. What's the opportunity here?"

In many cases, the greatest opportunities can be found in finance's bread-and-butter tasks, such as expenses, invoices, and collections, according to HR consulting company Robert Half.[1] As finance systems are trained with increasing amounts of data, they can, for example, quickly spot anomalies that call for further investigation, identify and prioritize aged receivables, and rapidly process and pay expense claims. The benefits of AI in such cases include improved fraud detection and prevention, enhanced cash flow, and greater employee satisfaction and retention.

Finance functions can reap those benefits in short order, enabling them to score the quick, early wins that generate funds for additional investments and gain buy-in from

As automation and AI take hold across the finance organization and assume its routine tasks, finance professionals gain additional time to focus on strategic questions.

both senior management and the rank and file. Finally, as automation and AI take hold across the finance organization and assume its routine tasks, finance professionals gain additional time to focus on strategic decisions, such as expansion into new markets or territories, the siting of new manufacturing facilities, or additions to head count.[2] A function that measures itself by its cost as a percentage of revenue is transformed into a function that measures itself by the value it creates.

To reap those benefits, however, the finance culture must adopt an entrepreneurial mindset. "You need to make it okay to fail sometimes," McGoldrick says, "and you want people to be able to raise issues." In that permissive environment, innovation is free to flower. "One of the things that we may not have anticipated when we moved to the cloud was the increased ability for users to innovate," he adds. "Once they got a little bit of their time back, we started to see more of an innovative culture. It really outpaced our expectations."

On the Verge of a New Era
In the end, what finance teams need to track is their progress toward future readiness. And that future is coming up fast. Data management and analytics tools are growing ever more powerful, AI use cases are proliferating, and senior management is ever more insistent on achieving results in

the form of return on technology investments, including the improved business outcomes enabled by the effective use of digital tools.

A clearer picture of the future will enable many of those improved outcomes. As data and analytics hubs draw in greater volumes and diversity of data, their ability to sense changes in the operating environment will grow more acute. Organizations that historically used trailing data to react to past events will gain the ability to anticipate events before they occur and respond proactively. Risks can be mitigated; opportunities can be explored. "You never know when a shift of the masses is going to happen," McGoldrick says, "so, you always need to be prepared."

With new capabilities enabled by advanced data hubs, AI, and analytics, today's finance function has an opportunity to reclaim its role as steward of enterprise data and the go-to authority on analytics. But to do so, finance teams will need to refresh their talent bases to include data scientists, coders, analytics experts, and other people who are as adept at extrapolating and predicting as reporting. "Business has changed," Seghal says. "Business models have changed. Our customers are different. Go-to-market models are different. Finance has to change, too, just to keep up." Better yet, by building its data capabilities and promoting analytics-first decision processes, finance has a rare opportunity to propel the business into the lead and leave the competition behind.

Endnotes

1   Robert Half, "Identifying AI Use Cases for the Finance Function," June 18, 2019. https://www.roberthalf.com/blog/the-future-of-work/identifying-ai-use-cases-for-the-finance-function.

2   Association of Chartered Certified Accountants, "Artificial Intelligence in Finance," December 4, 2017. https://www.accaglobal.com/in/en/professional-insights/technology/Artificial-intelligence-in-Finance.html.

A total of 162 respondents completed an executive survey by Harvard Business Review Analytic Services.

Size of Organization	**Seniority**	**Key Industry Sectors**	**Regions**
39% 10,000 or more employees	**29%** Executive management/ board members	**18%** Manufacturing	**38%** North America
15% 5,000 – 9,999 employees	**47%** Senior management	**18%** Financial services	**24%** Europe
34% 1,000 – 4,999 employees	**25%** Middle management	**10%** Energy/utilities	**21%** Asia/Pacific
12% 500 – 999 employees		All other sectors less than 8% each	**9%** Latin America
			8% Middle East/Africa

Figures may not add up to 100% due to rounding.

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ANALYTIC SERVICES

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