IBM **Institute for Business Value**

C-suite Series: The CFO Study

Strategic Intelligence

CFOs as architects of action
and champions of change

IBM

The IBM Institute for Business Value (IBV) surveyed 2,000 C-suite finance leaders. A select group of executives were contacted for in-depth qualitative interviews, revealing insights about their on-the-ground experiences. Discussion topics included the role of the CFO in strategy, the finance function's capabilities in supporting enterprise decision making, and enablement of finance through technology, intelligent workflows, talent, and data.

With respondents spanning 28 industries and 43 locations worldwide, this study is our most exhaustive examination of CFOs in more than 18 years of IBV research.

For more details, see "Research and analysis methodology" on page 48.

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Introduction

Guardians of stability and transformation

When change is at its most intense, people long for certainty. For enterprises, this traditionally has meant turning to an officer charged with maintaining stability, fiscal soundness, and adherence to standards: the Chief Financial Officer (CFO).

In this role, the CFO brings calm, perspective, and a comprehensive understanding of the big picture by being grounded in specific details and tangible realities. CFOs are equipped with a toolbox of levers that they can use to deliver outcomes. And reliable outcomes are exactly what executives want in a time of change.

In the modern tech-fueled economy, a premium has been placed on organizational agility and transformation. Both these capabilities took on heightened importance as the pandemic swept the globe and disrupted systems—not just for weeks and months, but for the foreseeable future.

CFOs have again been thrust into the spotlight to help here, turned to by Chief Executive Officers (CEOs), boards, and investors more than any other C-suite role for guidance, insight, and action. According to our most recent CEO Study, CEOs view the CFO as playing the most crucial role in their organizations over the next 2 to 3 years.[1]

The expectation to be both the guardian of stability and agent of transformation has elevated the stakes and the opportunity for the CFO and the finance function. To tackle this paradox of responsibilities and drive value through the organization, CFOs need to optimize their own potential and that of their teams. To excel will require new approaches, new tools, new perspective, new organizational constructs, and skills—especially related to data—as well as discipline in using them.

That's the unmistakable message from this IBM 2021 Global CFO study. It's based on exhaustive new quantitative research, in-depth analyses of more than 18 years of data, and direct qualitative engagement. "Finance provides a different lens than a CEO to look clearly across the business to see risks, opportunities, and their financial impact," says the CFO of a Canadian diversified company.

"The CFO's scope of duty has been expanding," says Yasuhiro Iseyama, Board Member, Executive Vice President and CFO, Director, Corporate Accounting and Finance Division of Japan-based manufacturer Nitto Denko. CFO Richard Lyon of South Africa-based information and communication tech conglomerate Alviva Holdings says, "COVID-19 has shown how adaptive finance can be."

"COVID-19 has shown how adaptive finance can be."

Richard Lyon, CFO, Alviva Holdings

Chapter 1

Instrumental in enterprise leadership

After the uncertainty of 2020, the future, while murkier than ever, presents both new opportunities and new risks. To succeed in this environment requires purposeful agility, rapid innovation, and the right kinds of platforms and ecosystems. CFOs are instrumental in providing the leadership and insights to help steer and iterate the strategic direction of the enterprise.

“The major role of the CFO is to make sure that our business is on the right track to increase corporate value,” says Senior Managing Executive Officer (CFO) Hideki Hanazawa of Tokyo-based Kioxia, a multinational computer memory manufacturer. “It is about planning what business strategies we should pursue, how we should optimize our portfolio, and evaluating progress and achievement.”

But the things that define business strategy and value have changed, both externally and internally. Also, whether assessing investments in new areas or re-examining existing initiatives, the pace has increased while predictability has evaporated. Organizations need CFOs to provide both the means and the discipline to navigate this new territory.

Align on enterprise priorities

The pandemic underscored the CFO role as more essential than ever. In fact, CEOs cite the CFO and the Chief Operating Officer (COO) as their most crucial C-suite partners over the next 3 years, according to the IBV 2021 CEO Study (see Figure 1). CFOs concur, with the COO role selected first and the CFO role selected second.

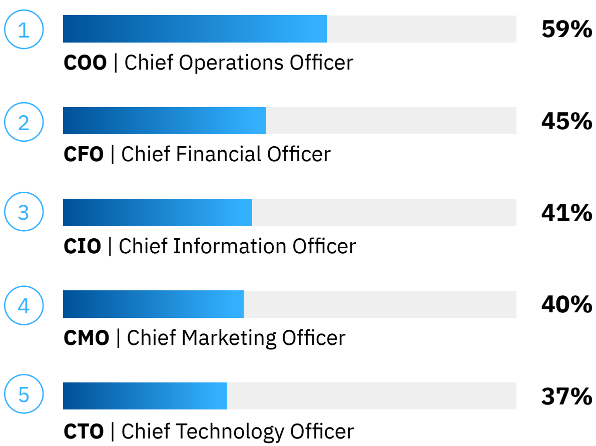
What's more, CEOs and CFOs are aligned on the top priorities for the organization, both ranking improved efficiency and improved customer experience at the top of their to-do lists, followed closely by improved business-model innovation. These priorities match well with the decision-support areas that CFOs told us their finance organizations were most effective in: identifying enterprise cost reduction opportunities, managing enterprise risk, evaluating organic growth opportunities, optimizing pricing, and responding to changes in strategy/business model.

Figure 1

An essential role

CEOs and CFOs agree on the critical nature of the CFO role

Most crucial role for the organization over the next 3 years according to CFOs



Q. Beyond the CEO, which of the following executives will play the most crucial role for your organization over the next 3 years?

CEOs view of the most crucial role

1. CFO	57%
2. COO	56%
3. CIO/CTO	39%

Source: The 2021 CEO Study. Find your essential: How to thrive in a post-pandemic reality

Perspective

CEOs and CFOs– the value of different points of view

The bond between CEO and CFO is statistically the closest among any other members of the C-suite, each ranking the other as the first or second most crucial member of the team. They also align on the very top organizational priorities (efficiency and customer experience). But there are also a handful of key differences in their outlook which helps the organization optimize ambition, capability, and discipline:

- CEOs rate strong customer relationships more highly than CFOs, who are more intent on reducing customer acquisition costs than CEOs. With their financial mindset, CFOs focus on the bottom line associated with the cost perspective rather than the intangible benefit of customer relationships.
- CFOs rate product and service innovation more highly than CEOs. Long-term innovation and transformation align with the CFO view because CFOs know that failing to improve products and services can put an enterprise at risk of losing customers and weakening relationships. Customers will value product and service innovation, translating into more sales.
- Sustainability is a top-5 priority among CEOs, while it falls below the top-10 for CFOs. This could indicate that CFOs currently view sustainability as an operational or compliance issue. It is hard to measure and track sustainability progress and executives have told us that it is difficult to define the ROI associated with sustainability initiatives. This will likely change as the reporting requirements for CFOs increase over the coming years with new legislation and regulatory requirements being passed. The impact on the quadruple bottom line—profit, people, planet, purpose—will undoubtedly become more relevant to CFOs.

These discrepancies underscore the importance of communication between these two top leaders in guiding the enterprise. No two executives will ever agree on everything, but maintaining and enhancing trust is critical to any effective partnership.

Embrace a role in strategy

A CFO in the headlines is usually not good news, so it's no surprise the finance function is rarely attention-grabbing. An effective CFO, in fact, is the unsung force in providing the necessary discipline to conceive and execute strategy. But unsung can, at times, mean unrecognized.

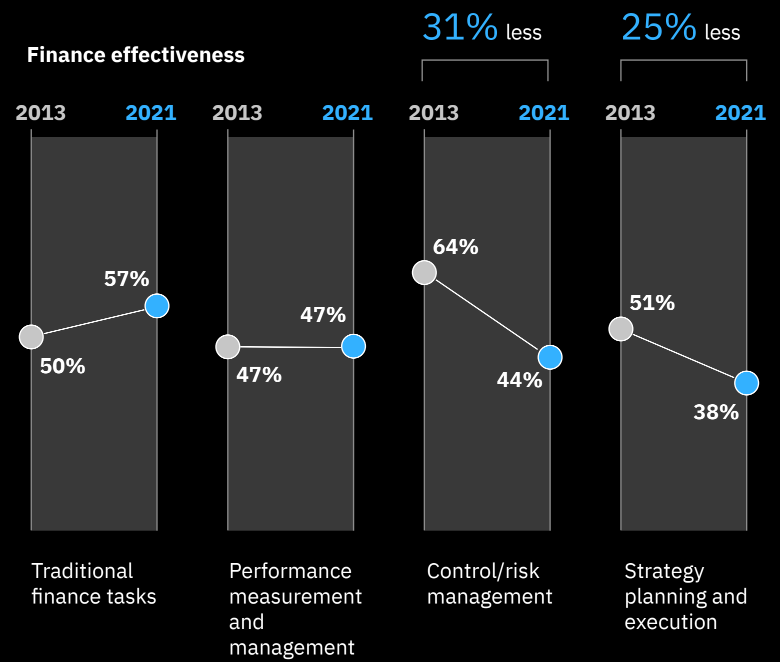
"Our finance organization is shifting from being viewed as a controller to a value advisor who partners with business leaders to shape, influence, and realize strategic objectives," says Sean Berrington, Chief Value Officer, Engineering and CFO of Technology and Digital Innovation for South Africa's Standard Bank Group. "This is a hard journey. We are moving from being stuck in day-to-day journal entry to actively engaged in running the business."

The CFOs in our study recognize the finance function must be more effective in helping their enterprises with strategy. "The challenge is balancing traditional metrics like ROI with those associated with new business models," says CFO Ricardo Forni at Banco do Brasil.

Figure 2

Finance effectiveness shifting

A decline in strategy and control effectiveness over time



Q. How effective is your organization's finance function at the following?

Fewer than 40% of CFO respondents say finance is effective at strategy planning and execution—a dramatic 25% drop since 2013 (see Figure 2). Control/risk management effectiveness has declined even more: 31% over the same period.

This decline in effectiveness may reflect weaknesses exposed amid pandemic stresses and the unanticipated control/risk management requirements. But it also reveals the acceleration of new priorities, as technological advancements and amplified competitiveness drive virtualization throughout the value chain. Choosing the right course of action with speed—fed by having the right data at the right time—enables execution decisions to proceed unencumbered. The right amount of time and effort gets spent on decision making, increasing efficiency without compromising quality.

CFOs see that a sophisticated finance function helps the enterprise with its most difficult choices in setting and implementing strategy. The role deemed most important by CFOs is that of the disciplined innovator: redeploying capital from underperforming projects to those with greater promise. The next 3 most often cited strategic roles are closely related: measuring the performance of critical processes, recommending specific actions to close gaps, and modeling scenarios, associated outcomes, and impact on enterprise strategy.

"The CFO uses regular projections to judge whether specific strategies will work to the company's overall advantage and affect the business across timeframes," says Director and Managing Executive Officer Hiroshi Shoji of Dai-ichi Life Holdings, a leading Japanese life insurer.

"The need for agility has been magnified and requires shifting from a pivot-and-react perspective to one that is more proactive," says the CFO of a Canadian diversified company. With faster decision making and implementation required, finance must create an ongoing palette of multiple scenarios, with detailed action plans describing how they'd drive top-line growth and new business opportunities in each case.

CFO responsibilities extend beyond budget and finance. More than 4 in 10 say they are tasked with nurturing a corporate culture that embraces all things digital.

Case study

Volkswagen Sachsen

Volkswagen Sachsen, a subsidiary of Volkswagen Group, wanted to fine tune its sustainable manufacturing. To guide the transition to more eco-friendly e-mobility, the organization needed new and better information. It turned to the finance function to provide deeper manufacturing analysis, to better guide efficiency improvements and the minimizing of environmental impact.

To meet these goals, Volkswagen Sachsen implemented new, standardized financial processes using an enterprise resource planning (ERP) system. The upgrade brought a 20% improvement in decision-making efficiency, as well as deeper insights. Staff involvement in order-input processes was reduced by 50%, freeing up time for higher-value tasks like business development.

Influence digital transformation

According to our recent IBV "Digital acceleration" report, enterprises recognize the necessity and opportunity to transform—both to address their priorities and make the right strategic choices. In fact, 60 percent of executives plan to accelerate their enterprises' digital transformations to reinvent and improve business.[2]

The CFO is uniquely situated to influence the organization's digital transformation: setting the financial baseline, building the business case, helping to determine the value of each initiative, and tracking benefit realization. Nearly three-quarters of CFOs we surveyed confirm that they play a key role in transformation across the enterprise.

Not surprisingly, CFOs identify their top responsibilities for enterprise digital transformation as financial-related: managing the budget and obtaining financing. Yet, CFO responsibilities extend beyond budget and finance. More than 4 in 10 say they are tasked with nurturing a corporate culture that embraces all things digital.

Chapter 1.

3 essential questions for CFOs

How can finance alter its ways of working to enhance agility and innovation in the enterprise?

What strategic decisions would most benefit from data-driven insights?

In what new ways can finance measure the value of opportunities emerging from digital transformation?

Chapter 2

Indispensable business partner

For CFOs to meet the ambition of this moment and satisfy rising expectations across the enterprise, the finance function must become an indispensable business partner. That means supporting effective decision making across the organization.

"Finance is involved in many parts of the decision-making process, by offering appropriate advice to decision makers to guide them in making the right decision," says Nitto Denko's Yasuhiro Iseyama.

Yet, nearly half of finance's time is still spent on transactional activities, which has remained relatively consistent for 18 years of research. Fewer than 10% of activities are dedicated to analysis and action in support of decision making. Freeing up the time to work on strategic challenges is an issue for finance organizations—especially if finance doesn't have the right tools and systems needed to automate traditional work: making payments, closing the books, and the like.

Nearly half of finance's time is still spent on transactional activities—relatively consistent over 18 years of research.

Figure 3

Better decisions

5 factors that contribute to enhanced decision making

Make better decisions

To do this, finance leaders need to think differently and enhance their decision-making capabilities in a strategic, structured, and efficient manner. Consider 5 factors that amplify and improve decision making (see Figure 3):

- Strategic focus
- Organizational agility
- Data centricity
- Redefined talent
- Intelligent workflows

In combination, these 5 factors can dramatically extend the reach and impact of finance for both efficiency and effectiveness outcomes. Based on our survey data, finance leaders tapping these factors report an 8% lower cost of finance as a percent of revenues and are 3 to 4 times more effective at developing and executing strategy.

With a strategic focus, finance can use historical and real-time data to augment strategic decision making and optimize process performance to improve results. In addition, finance can surface powerful insights in real time to guide decision management based on careful predictions of outcomes and estimates of risk.

Organizational agility provides flexible operating models to respond quickly to opportunity and market changes.

Data centricity is underpinned by strong data management and governance to support a culture around data. This helps to make decisions more accurate, reliable, and fact-based.

Redefined talent requires finance organizations to seamlessly interweave exponential technologies with the staff who will use and benefit from them. Decision-support insights cannot be delivered through technology alone—investments in developing analytical skills and adding data-minded talent are needed.

Intelligent workflows change the way work gets done to drive business outcomes. Enabled by analytics, AI, and automation, these workflows connect the front of the enterprise to the back, create more effective end-to-end experiences, and learn from data, then improve themselves based on feedback.

Finance leaders tapping 5 key decision-making factors report they are 3 to 4 times more effective at developing and executing strategy.

Characteristics of the CFO archetypes from this research

To measure progress of finance organizations against the 5 factors that amplify decision making, we grouped those organizations based on their effectiveness in 4 core decision-making dimensions:

Efficiency—Devoting effort that is appropriate to the stakes

Speed—Deciding faster than the competition

Bias-to-action—Converting decisions to concrete steps

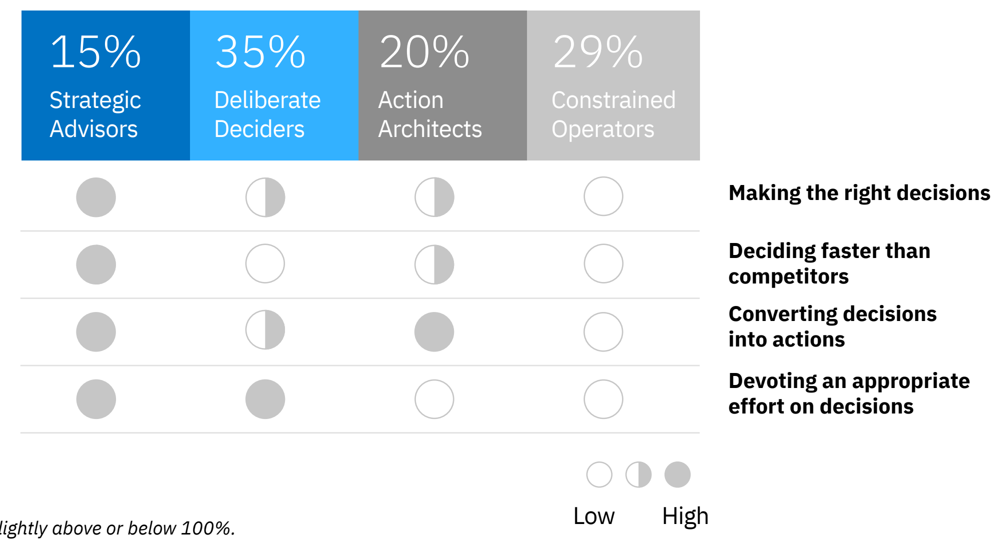
Accuracy—Generating positive outcomes from the decisions made.

Four discrete CFO archetypes emerged, each with unique strengths and challenges: Strategic Advisors, Deliberate Deciders, Action Architects, and Constrained Operators (see Figure 4).

Figure 4

Decision making archetypes

The pandemic brings differing approaches into high relief



Note: Due to rounding, percentages may total slightly above or below 100%.
Q. How effective is your finance function in supporting the following aspects of enterprise decision making?

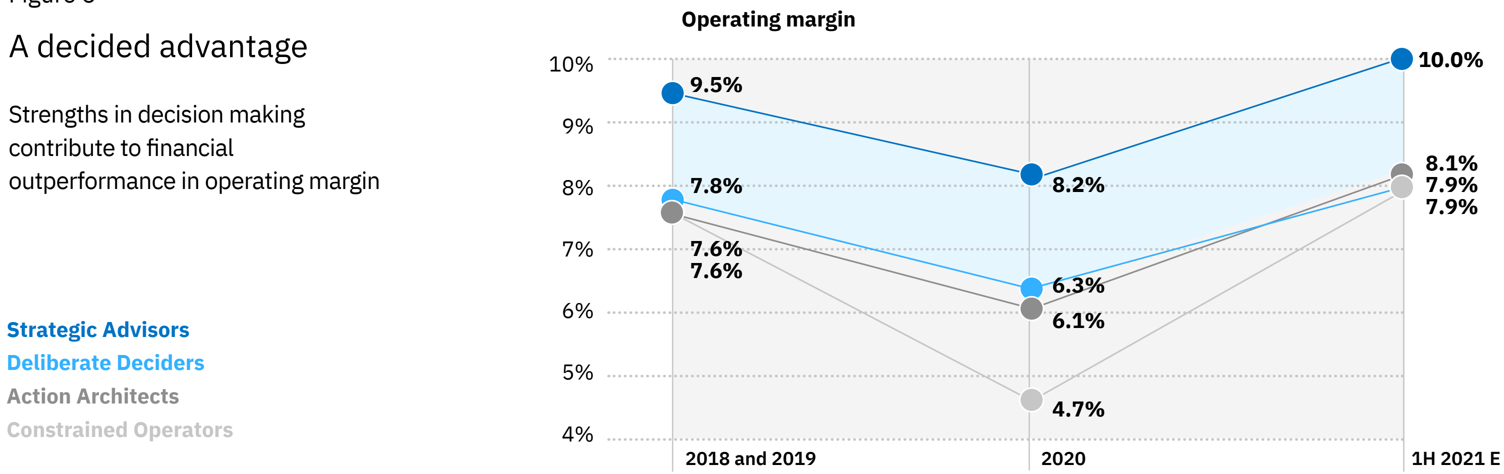
Strategic Advisors

- High ratings across the 4 decision-making dimensions
- Financial outperformance (see Figure 5) and effectiveness at decision support reflective of their strengths.

Figure 5

A decided advantage

Strengths in decision making contribute to financial outperformance in operating margin



D. What was your organization's average operating margin in 2018 and 2019 and 2020 and expectation in 1H 2021?

Deliberate Deciders

- Excellent at matching the appropriate effort to the decision at hand
- Lag at speedy decision making, hurting this group during the pandemic year of 2020 in terms of revenue growth (see Figure 6)
- Moderate at decision accuracy and converting decisions into actions.

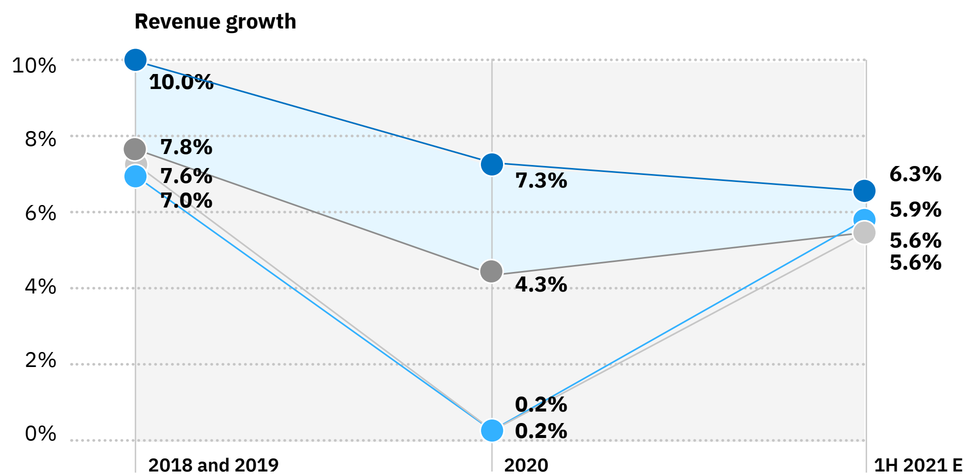
Action Architects

- Strong at converting decisions into actions
- Action taking helped them in 2020 as indicated by revenue growth outperformance
- Weak at appropriate decision-making effort
- Moderate at decision accuracy and speed.

Figure 6

The action advantage

Converting decisions into actions helped revenue growth outperformance during the pandemic year of 2020



Strategic Advisors
Deliberate Deciders
Action Architects
Constrained Operators

Q. What was your organization's average annual revenue [budget for Government, Higher Ed] growth in 2018 and 2019 and 2020 and expectation in 1H2021?

Constrained Operators

- Low ratings in the 4 dimensions
- Poorer performance in both efficiency and effectiveness.

These groupings are defined by the structure of each enterprise and the positioning of finance within it. The differences among these archetypes were made more evident by the challenges presented during the global pandemic, and the speed and scale at which it hit businesses.

In the next 5 chapters, we further examine each of the success factors and highlight the varying performance of our CFO archetypes. Based on their relative performance, we conclude this report with recommended actions tailored for each archetype.

The challenges of the global pandemic, and the speed and scale at which it hit businesses, made differences among the four CFO archetypes far more evident.

Chapter 2.

3 essential questions for CFOs

How can finance apply data and AI to dramatically improve enterprise decision making?

How can finance help shift the organization from deploying agile practices to being an agile organization?

How could data-minded talent in our finance function change the perception of our role in the organization?

Chapter 3

Success factor #1: Strategic focus

CFOs and finance provide the means and discipline to help their enterprises with strategy. This includes embracing and implementing new technologies and advanced analytics; using ecosystems and open innovation to drive new business models; and collaborating within the C-suite and across partners to develop metrics and tactics and align on them as they evolve.

"The CFO's role has been shifting from financial stewardship to the strategic partner of the CEO," says CFO Dharmender Tuteja of India's Dalmia Cement. "Finance facilitates decision making, [and] finance is a key link between strategy and execution, monitoring implementation and controlling risks," says Ai Ying Wang, General Manager of Finance, of China's Yili Dairy.

"The CFO's role has been shifting from financial stewardship to the strategic partner of the CEO."

Dharmender Tuteja, CFO, Dalmia Cement

Don’t own—influence

Success requires laser-like focus on developing and executing enterprise strategy supported by C-suite collaboration and AI-identified key performance indicators (KPIs). This means disentangling CFOs from competing priorities, such as primary or shared ownership of enterprise digital transformation efforts.

The best outcomes—emphasizing decision making and translating decisions into actions—emerge when finance leaders support and influence transformation, rather than own it.

Both Strategic Advisors and Action Architects have a lower rate of owning or sharing ownership of enterprise digital transformation efforts (22% of respondents in both groups), compared to 35% for Deliberate Deciders and 38% for Constrained Operators.

This intense focus on strategy is key for Strategic Advisors: 83% say finance plays a role in redeploying capital to meet strategy and 74% develop a detailed view of business drivers for the enterprise. More than two-thirds are continually scanning for possible opportunities (and threats), measuring the performance of critical processes, and forecasting business environment shifts.

These Strategic Advisors’ figures in their roles in strategy are 25%-50% higher than those noted by the other 3 archetypes. The group is also more effective in supporting platforms and ecosystems, from establishing goals and measuring performance to improving margins and developing new products, services, and experiences.

Success requires laser-like focus—this means disentangling CFOs from competing priorities, such as ownership of enterprise digital transformation efforts.

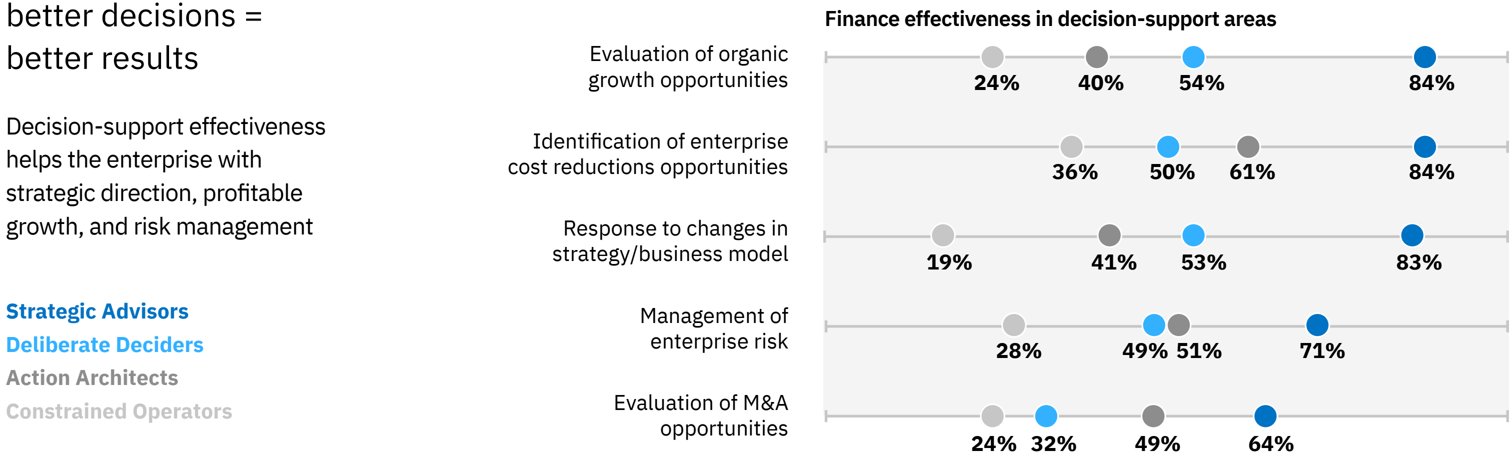
CFO insights accelerate cost containment, guide capital investment in new opportunities, unlock new revenue streams, and iteratively steer the enterprise's strategic direction. The 4 archetypes differ in their effectiveness at decision-support activities (see Figure 7).

Our data strongly implies that the varying levels of effectiveness can be associated with higher implementation levels of AI in these decision-support areas. 30% more Strategic Advisors have implemented AI for evaluating organic growth opportunities than the next highest archetype.

Figure 7

Better support for better decisions = better results

Decision-support effectiveness helps the enterprise with strategic direction, profitable growth, and risk management



Collaboration in the C-suite

Finance works in partnership with the C-suite to create a competitive advantage and drive adaptability. As strategic plays are implemented and investments yield returns, the CFO works with other members of the C-suite to evaluate if and how the expected returns are being achieved, interpret the nuances, and adjust appropriately. Open and ongoing collaboration with C-suite peers is required to adjust quickly. CFO collaboration must straddle both IT and the business.

The CFOs who best support decision making, Strategic Advisors, report particularly higher levels of close collaboration across the C-suite than their peers, with particular emphasis on the CEO, the COO and the Chief Risk Officer (CRO) (see Figure 8).

Figure 8

The collaboration advantage

How much and who with makes a difference

Large extent of collaboration

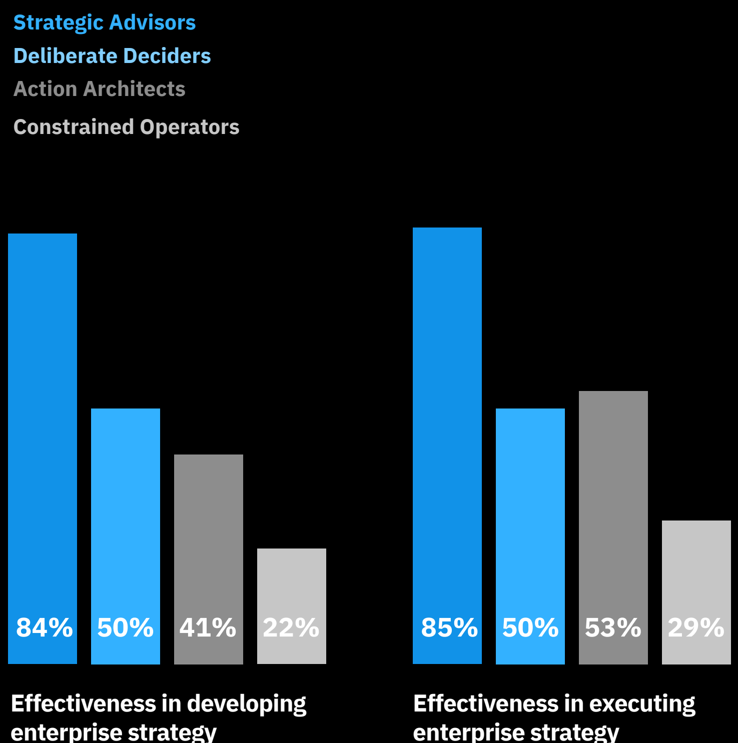
C-suite member	Strategic advisors	Deliberate Deciders	Action Architects	Constrained Operators
Chief Executive Officer	81%	63%	65%	54%
Chief Operations Officer	80%	71%	67%	57%
Chief Risk Officer	78%	65%	66%	45%
Chief Digital Officer	71%	58%	66%	54%
Chief Strategy Officer	69%	65%	65%	47%
Chief Data Officer	66%	63%	55%	44%
Chief Technology Officer	63%	56%	60%	47%
Chief Sustainability Officer	61%	54%	59%	44%
Chief Marketing Officer	60%	45%	60%	48%
Chief Information Officer	60%	54%	60%	51%
Chief Innovation Officer	59%	40%	51%	39%
Chief Human Resources Officer	58%	47%	46%	36%
Chief Transformation Officer	51%	48%	48%	40%
Chief Supply Chain Officer	47%	45%	54%	40%

Q. To what extent does your finance function collaborate with the following members of the C-suite on enterprise strategy development and execution?

Figure 9

Setting and executing strategy

Decision making capabilities help Strategic Advisors set enterprise direction



For the other 3 archetypes, surprisingly, the highest level of collaboration is with the COO and not the CEO. Constrained Operators have a much lower extent of collaboration with CROs than their peers, which hinders their understanding of the full scope of risks associated with their enterprise strategy.

Data, AI and KPIs

Finance can help the enterprise make the difficult choices required to set and execute strategy, including supporting AI-influenced KPIs. A company's strategy execution is guided by its KPIs. AI can help determine the outcomes that need to be measured, measurement of the outcomes, and prioritization of the outcomes.

These KPIs create accountability for the execution of enterprise strategy. Strategic KPIs optimized through AI provide analytically enhanced oversight.[3] More than 80% of Strategic Advisors have adopted AI for this purpose, as opposed to 61% for Deliberate Deciders, 57% for Action Architects, and 33% for Constrained Operators.

Strategic focus builds to impact. Compared to Constrained Operators, Strategic Advisors are nearly 4 times more effective in developing enterprise strategy and nearly 3 times more in executing enterprise strategy (see Figure 9). Being highly competent at making good decisions corresponds with moderate effectiveness in developing and executing strategy for Deliberate Deciders and Action Architects.

By providing data-led insights, measurement of value creation, and performance management both internally and externally—including partnerships, networks, and ecosystems—CFOs and their finance teams can be at the core of enabling enterprise strategy.

More than 80% of Strategic Advisors have adopted AI to optimize KPIs for analytically enhanced oversight.

Chapter 3.

3 essential questions for CFOs

What key actions should finance prioritize to best support the development and execution of our enterprise strategy?

How can finance most meaningfully influence our organization’s digital transformation without owning it?

How can finance manage data differently to better drive predictive performance?

Chapter 4

Success factor #2: Organizational agility

Organizational agility enables finance to be the true guardians of stability and transformation by managing resources, providing governance for decisions, and managing performance. It is about flatter, faster, and more flexible structures with decision-making accountabilities and economies of scale.

“We want to move away from our historical silos and work in a more collaborative way in an agile environment,” says CFO Forni of Banco do Brasil. “We desire greater speed in allocating resources to drive initiatives forward.”

Such an agile environment prioritizes collaboration over hierarchy, promotes nimbleness, and enables effective real-time decision making. Finance staff can move among initiatives and priorities with a substitutable workforce.

While about half of Deliberate Deciders and Action Architects have created cross-functional teams dedicated to decision-support, 7 out of 10 Strategic Advisors have done so—compared to only 38% of Constrained Operators. In conjunction, Strategic Advisors have adopted agile techniques at a 65% higher rate than the average CFO to speed up insight generation. And they invest in agile and design-thinking skills for the workforce at a 58% higher rate than the other archetypes. Deliberate Deciders, Action Architects and Constrained Operators tend to miss out on agile capabilities that deliver performance against cost, quality, and cycle time.

Agile decision-making for clarity, speed, and accountability

Applying agile techniques to specific finance areas enhances clarity and speed in decision making (see Figure 10). More work can be automated. Hand-offs are eliminated. And time spent on analysis and action is increased.

“We run our month end finance processes in agile ways,” explains CFO Berrington of Standard Bank Group, “and have formulated teams that focus on planning and analysis. We treat every day as a month-end, and our objectives are to reduce complexity and simplify, creating opportunities for work to be directed to value-add activities.”

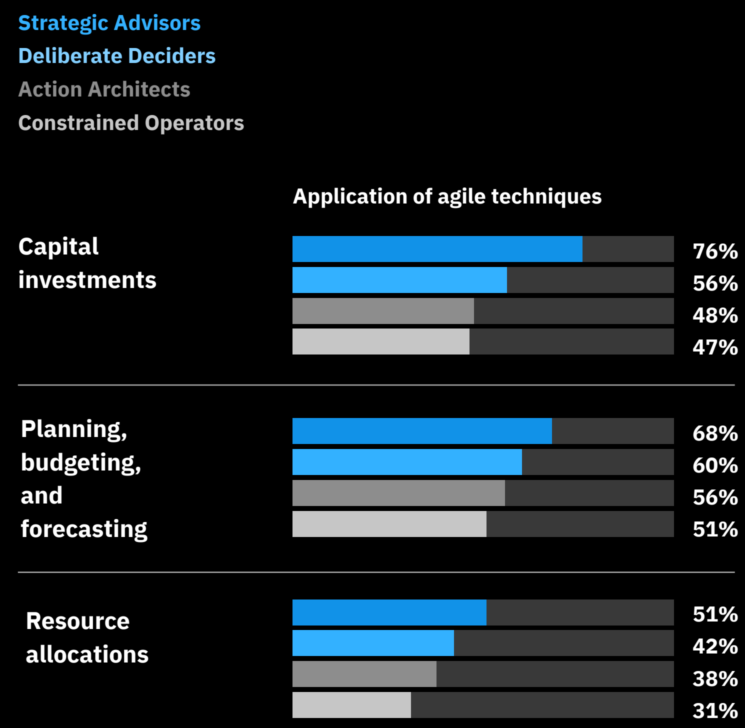
Decision-making governance supports velocity and speed. “During the pandemic, our organization’s speed of decision making improved very significantly,” says CFO Tuteja of Dalmia Cement. “We shortened feedback loops with scenario-building and forecasting to drive course corrections.”

Three-quarters of Strategic Advisors have a set of criteria for decision justifications, compared with 65% of Action Architects, 58% of Deliberate Deciders, and 48% of Constrained Operators. Increased decision-making accountability empowers staff to address opportunities and risks as soon as they arise. 74% of Strategic Advisors have implemented greater accountability over the past 2 years, versus only half to two-thirds of their CFO peers.

Figure 10

Agile in action

Applying agile techniques in finance



Q. Where in your finance organization have agile techniques been applied?

Service scalability is created by aggregating skills for select areas (through shared services or centers of excellence, for example). These “economies of skills”—economies of scales made possible by people working together in shared services aided by AI and other technologies—identify business drivers and key metrics, provide consistent planning, facilitate new ideas, and support collaboration across an organization. Nearly two-thirds of Strategic Advisors have created centers of excellence for AI, analytics, and automation, a rate more than 50% above that of the other groups.

Chapter 4.

3 essential questions for CFOs

What are the most important things finance can do to create a more flexible workforce?

How might an evolved decision-making governance promote speed without compromising quality?

Where might a squad-based approach or other system support better, quicker decisions?

Chapter 5

Success factor #3: Data-centricity

Making it easier to access, integrate, and evaluate data helps decision making by clarifying where and how to advance value creation. “We need to analyze data to make swift judgments and perform scenario-specific simulations under tight timeframes,” says Dai-Ichi Life’s Shoji.

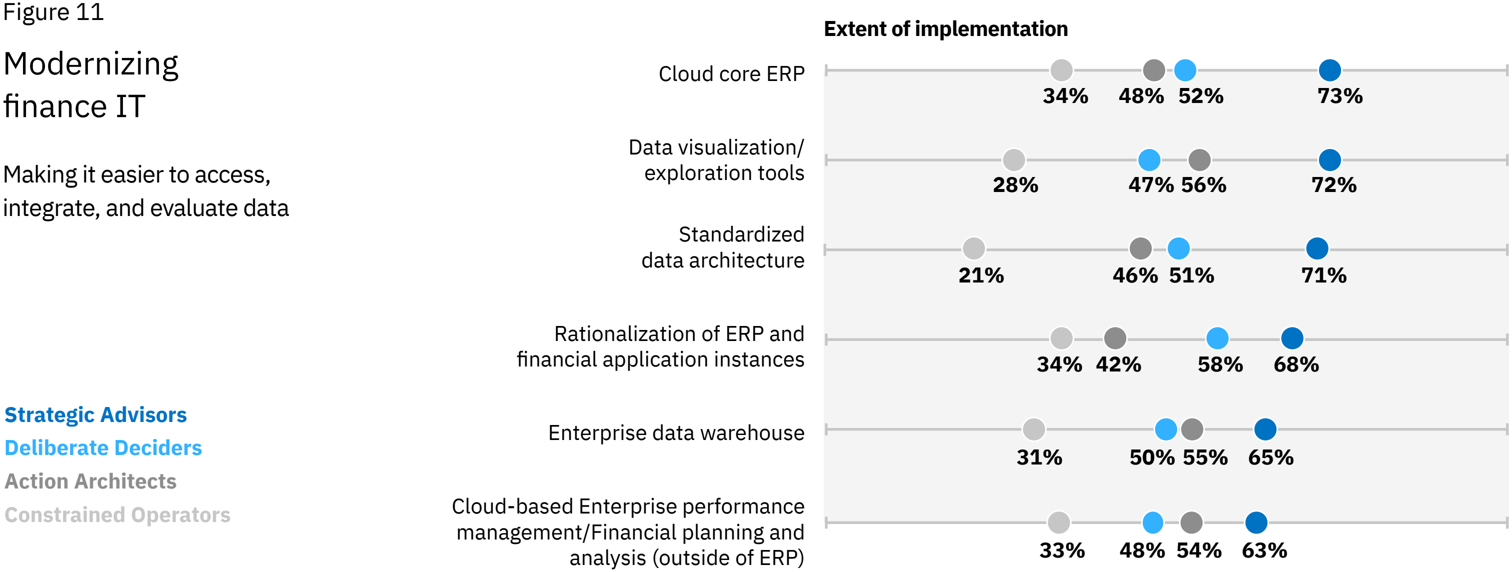
73% of Strategic Advisors report implementing cloud core ERP, a rate more than 40% higher than the 52% of the next-closest archetype.

Modernizing finance IT and data capabilities makes achieving those objectives possible (see Figure 11). Cloud core enterprise resource planning (ERP) allows finance to access data remotely and store large amounts of data. 73% of Strategic Advisors report implementing cloud core ERP, a rate more than 40% higher than the 52% of Deliberate Deciders, the next-closest archetype. Empowered finance staffs can use data visualization tools to dive into data, process information faster, and take advantage of insights to improve performance.

Figure 11

Modernizing finance IT

Making it easier to access, integrate, and evaluate data



Q. To what extent have you implemented the following initiatives? (Percentages show responses of 4 and 5 on a 5-point scale where 1=not at all and 5=to a very large extent).

A standardized data architecture provides transparency surrounding data and makes it a lot easier to apply AI to a data set at scale. Rather than discussing whether data is correct, finance can, instead, make decisions using that data.

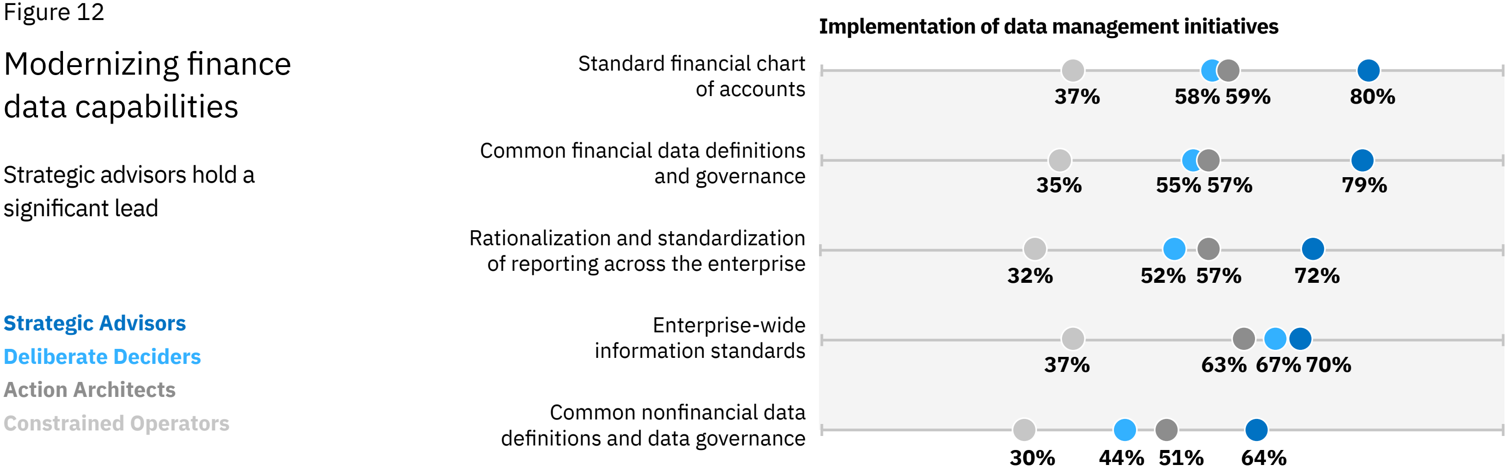
Fragmented systems show conflicting data and create rework for decision-support teams. Rationalization of ERP and financial application instances often translates to streamlined processes, lowered cost, and most important, enhanced efficiency and effectiveness. An enterprise data warehouse permits finance to turn data from disparate sources into analytical insights, apply curated data to decisions, and generate new connections from familiar data sets to create new intelligence.

These initiatives coincide with a range of data management efforts (see Figure 12).

Figure 12

Modernizing finance data capabilities

Strategic advisors hold a significant lead



Q. To what extent has finance implemented the following data management initiatives? (Percentages show responses of 4 and 5 on a 5-point scale where 1=not at all and 5=to a very large extent).

Case study

Generali Hong Kong

Generali Hong Kong is the Hong Kong branch of Italy-based financial firm Assicurazioni Generali, providing life, commercial, health, and other insurance products for private and commercial clients. As change sweeps the financial services industry, Generali Hong Kong has undertaken its own transformation journey.

For the finance function, the goals were to drive real-time data flow with automated control; shift the focus from reporting and reconciliation to analysis; and reinforce robustness in reporting and business insights.

To address the challenge, Generali Hong Kong adopted a hosted cloud ERP solution, which allowed the organization to conduct instant data mining and access intelligent robotic process automation tools.

As a result, Generali Hong Kong now has a single, trusted source of truth for its financial data. The new automation has eased critical financial processes, such as vendor payment and bank reconciliation. It has also freed up staff time from administrative activities to focus on analytics-based roles, enhancing insight capabilities.

Earning trust with data

Timely, effective decision making is predicated on the ability of finance to create trust from data. Data commonality is essential to gain trust in analytical insights. Common definitions are important for both financial and nonfinancial data. Enterprise-wide information standards and a standard financial chart of accounts provide a shared foundation for using data and connecting different data sets without having to reformat the information. This reduces the time needed to prepare, validate, and cleanse data. Constrained Operators, with low implementation of data commonality, will not be able to spend enough time on insights.

"We are creating a data-driven culture," says the CFO of a Canadian diversified company, "using data to make decisions with real-time availability and formatted in a way that staff can use."

This data can provide a wide range of potential insight. According to the CFO of a Taiwan consumer company, the finance function "provides future insight on brand loyalty, supply chain adjustments, factory production management, and the impact of environmental, social and corporate governance criteria on the organization." As a result, CFOs and the finance function can lead their organizations to more effective, efficient decision making that unlocks value across the enterprise.

Chapter 5.

3 essential questions for CFOs

Are we modernizing our finance and IT data capabilities as aggressively as we should?

Where can we reduce data complexity?

What rules and governance need to be in place to support intelligent workflows?

Chapter 6

Success factor #4: Redefined talent

Talent is the key to finance's decision-making success. We've already seen that executives have invested in agility-focused skills. But talent initiatives go even further. They continuously assess employee performance and reward employees who possess high-value skills. They also use AI to identify new leaders and create personalized learning experiences.

"In the past our talent structure was a triangle, with transaction processing at the bottom, experts in the middle, and decision making at the top," says General Manager of Finance Wang of Yili Dairy. "In the future, we will become diamond-shaped, with the repeatable simple tasks at the bottom replaced by machines. More experts will develop digital solutions and conduct business analysis."

"We have to make sure [individual finance team members] clearly understand the problems our business units face with a broad perspective."

Hideki Hanazawa, Senior Managing Executive Officer, Kioxia

Rallying employees with understanding

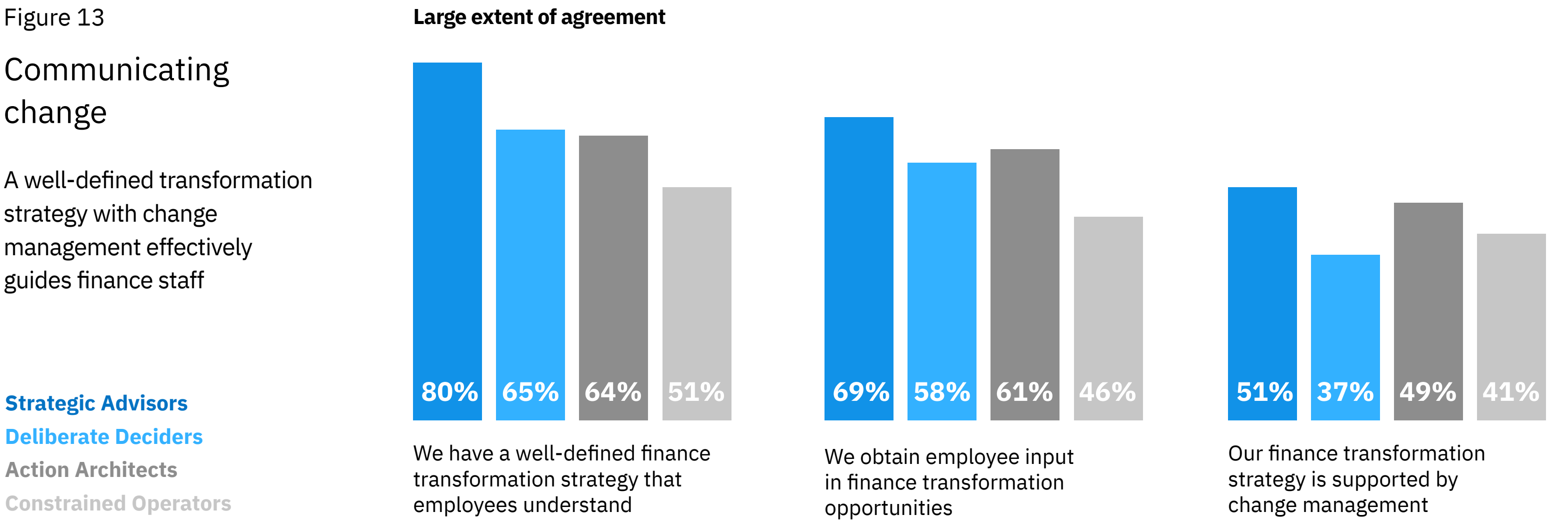
Within the finance function specifically, communication of evolving goals, priorities, and practices must be robust (see Figure 13). A well-defined finance transformation strategy sets the blueprint for employees. This strategy includes investing in digital technologies to support more intelligent processes, extracting value from data, and constructing deep business partner relationships.

Change management provides transparency into expectations for finance transformation, human-machine interactions, and ways of working. Employee input into transformation efforts promotes buy-in. Both Strategic Advisors and Action Architects stand out from their peers in these last 2 areas.

Figure 13

Communicating change

A well-defined transformation strategy with change management effectively guides finance staff



Q. To what extent do you agree with the following statements about your finance organization?
(Percentages show responses of 4 and 5 on a 5-point scale where 1=strongly disagree and 5=strongly agree).

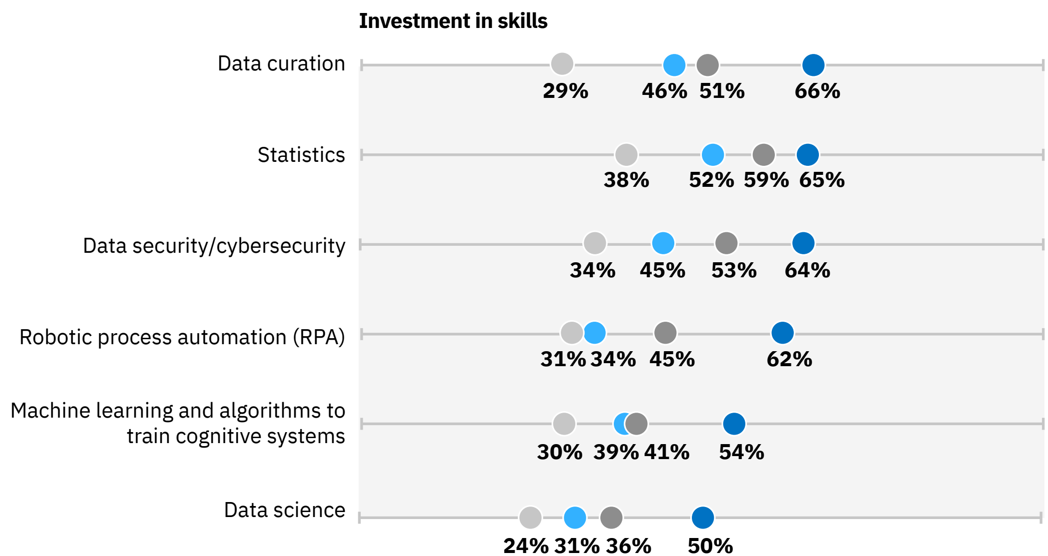
"It is essential that individual finance staff members understand what role they play in the organization," says Senior Managing Executive Officer Hanazawa of Kioxia. "We have to make sure they clearly understand the problems our business units face with a broad perspective."

Backing all of this is future-focused skill-building in evolving areas: data management, cybersecurity, machine learning, robotic process automation, and others (see Figure 14). Around two-thirds of Strategic Advisors invested in data curation and statistics skills that increase data usefulness. Constrained Operators lag in these investments which may be reflective of their lack of data commonality—it makes little sense to add skills to analyze bad data.

Figure 14

Where to build skills

Investing in the right areas for better decisions and execution



Strategic Advisors
Deliberate Deciders
Action Architects
Constrained Operators

Q. To what extent has finance invested in the following skills? (Percentages show responses of 4 and 5 on a 5-point scale where 1=not at all and 5=to a very large extent).

CFOs are finding ways to cast a wide net for new skills. “In the past few years, we have actively introduced talent from other industries,” says the CFO of a Taiwan consumer company, “including from electronics, financial services, and consulting, to bring in different thinking and ways of working.”

“Demand will rise for finance staff who can judge how data should be interpreted and what uses it will have,” says Nitto Denko’s Iseyama. “Skills will include not only a strong knowledge of accounting but also the ability to clearly express and explain information.” That creates an environment where adopting new practices becomes possible, such as deploying intelligent workflows.

“Demand will rise for finance staff who can judge how data should be interpreted [and can] clearly express and explain information.”

Yasuhiro Iseyama, Executive Vice President and CFO, Nitto Denko

Chapter 6.

3 essential questions for CFOs

How can we better focus our teams on uniquely human decisions and activities?

What steps are we taking to grow skills and attract top talent?

How can technology enhance the transparency and flexibility of C-suite collaboration?

Chapter 7

Success factor #5: Intelligent workflows

Intelligent workflows help build new value and enable new processes to operate smoothly. To enhance decision making, both investing in and building out intelligent workflows are priorities. These span process mining, advanced analytics and, of course, AI—all of which allow greater monitoring and reporting in real time, and thus better, faster, real-time decision making.

In fact, 60% of Strategic Advisors and 53% of Deliberate Deciders already report using real-time tracking of standardized performance metrics, compared to only a third of Action Architects and a quarter of Constrained Operators. An up-to-date picture of the enterprise's position shows progress on strategy execution and shifts in supply, demand, materials, and products.

Benchmarks can showcase gaps in financial and operational performance that can be adjusted quickly. While the Deliberate Deciders have this real-time data, they don't appear to be taking advantage of it with their lower effectiveness at speedy decision making. By contrast, the lack of real-time data doesn't stop Action Architects from making decisions and taking actions.

Partnering with AI to free up time to advise

The “record-to-analyze” intelligent workflow provides the ability to make decisions quickly with confidence in the underlying systems, data and controls, and transparency in transactions. AI-powered workflow and data models would include a reconciliation module that aggregates sub-ledger transactions and performs risk-based reconciliations and cognitive forecasting.

“My goal is to have financial reporting automated and ‘lights out,’ so instead we are helping and advising the business,” says CFO Lyon of Alviva Holdings. “Our emphasis is to combine ERP to manage transactions with workflow programs to interface and make it easier to extract meaningful data and deliver insights.” More Strategic Advisors have implemented AI and analytics in record-to-analyze, compared with their peers (see Figure 15).

Figure 15

The AI advantage: speed

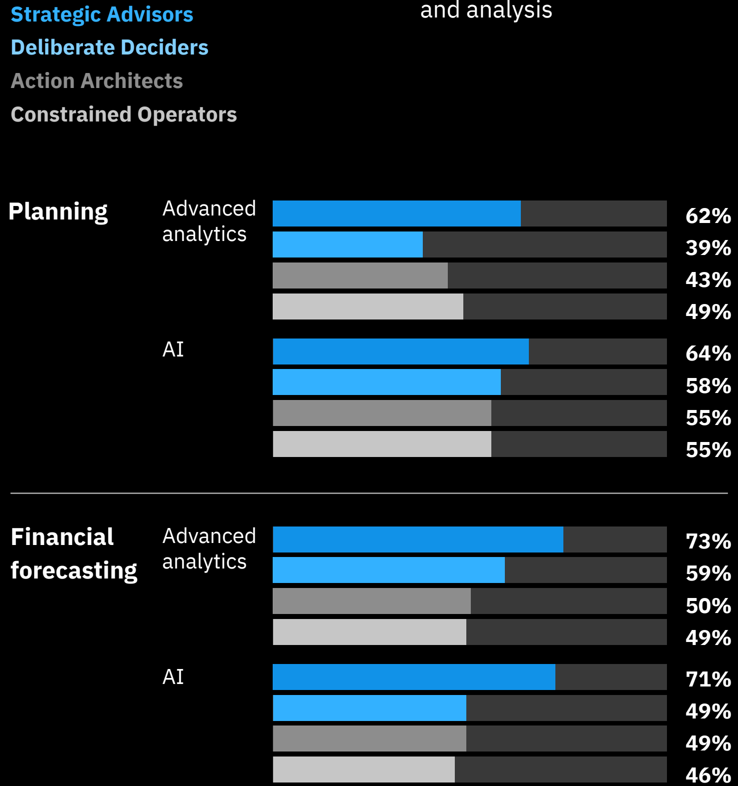
Advanced analytics and AI drive decision making in record-to-analyze

Q. Which of the following technologies are you implementing in the finance process areas today?

Figure 16

The AI advantage: accuracy

Advanced analytics and AI improve decision making in financial planning and analysis



Q. Which of the following technologies are you implementing in the finance process areas today?

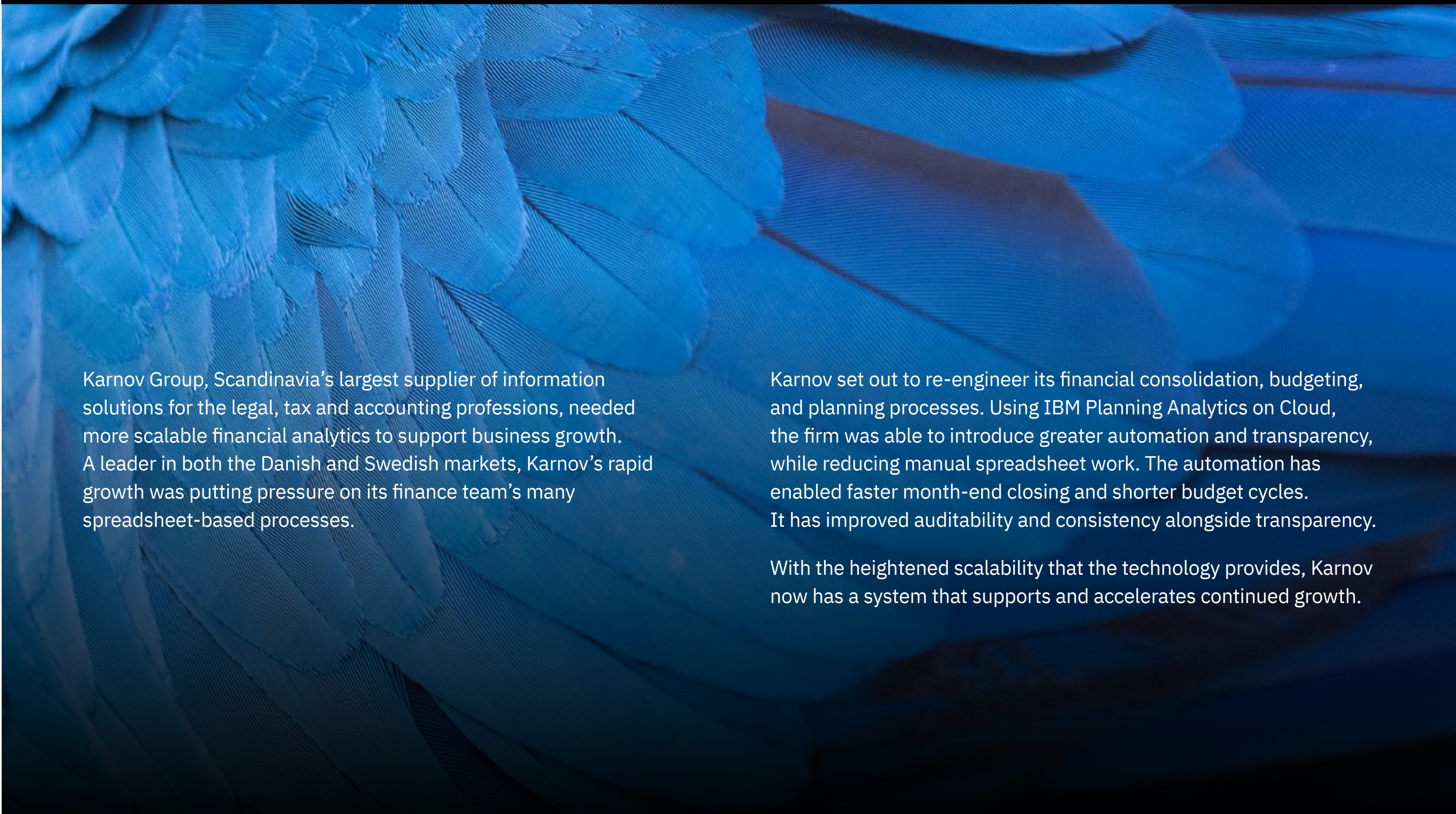
AI and advanced analytics are key components of the financial planning and analysis intelligent workflow, galvanizing and orchestrating planning and performance management. By combining predictive analytics and artificial intelligence with data, new autonomous processes can perform more routine tasks with very little intervention, elevating the workforce to handle higher-value activities. This permits planning decisions to be reviewed, reconsidered, and readjusted quickly as needed.

More Strategic Advisors have implemented these technologies in financial planning and analysis (see Figure 16). Without the finance "blocking and tackling" of process and data commonality, and a simplified technology environment, AI and analytics investments by Constrained Operators appear questionable—it would be difficult to truly take advantage of these technologies.

"It is necessary to use AI-assisted scenario analysis that responds to drastic changes in the business environment," says Kioxia Senior Managing Executive Officer Hanazawa. "We want to expand investment in technology and data in finance to enhance management of our company's performance through information and insights," says Chief Financial Officer Zhong Qiang Geng of Hangzhou-based property developer Greentown China Holdings.

Case study

Karnov Group



Karnov Group, Scandinavia's largest supplier of information solutions for the legal, tax and accounting professions, needed more scalable financial analytics to support business growth. A leader in both the Danish and Swedish markets, Karnov's rapid growth was putting pressure on its finance team's many spreadsheet-based processes.

Karnov set out to re-engineer its financial consolidation, budgeting, and planning processes. Using IBM Planning Analytics on Cloud, the firm was able to introduce greater automation and transparency, while reducing manual spreadsheet work. The automation has enabled faster month-end closing and shorter budget cycles. It has improved auditability and consistency alongside transparency.

With the heightened scalability that the technology provides, Karnov now has a system that supports and accelerates continued growth.

The impacts from linking this heightened decision-making capability through an intelligent workflow are neither hypothetical nor negligible. Benefits included an 8-day reduction in days-to-close for record-to-analyze and a 3-percentage point increase in forecasting accuracy in financial planning and analysis.

All factors needed

In this report, we've focused on the 5 factors to enhance decision making. CFOs need to address all 5 factors, as opposed to only 1 or 2. Today's CFOs must think strategically, deploying agile and intelligent workflows to promote nimbleness. They encourage and develop this flexibility in both their staff and, through their cross-organizational reach, the full enterprise. And those in this role rely on data science and data management to create and deliver ongoing strategic and operational insights.

Chapter 7.

3 essential questions for CFOs

How do we unify processes across user experiences and traditional process silos?

How can we access and apply historical and real-time data to predict the future, and make real-time changes in the workflow?

How do we address high degrees of variability within and across processes to go beyond standardization?

Action guide

CFOs as architects of action and champions of change

CFOs play an instrumental role in leading their enterprises and are increasingly central to developing and executing enterprise strategy. Other C-suite roles are looking to CFOs for guidance, perspective, maturity, and discipline. However, not all finance leaders have the tools and system—methods, governance, and the like—to fully embrace the opportunity.

To match a CFO's ambitions with the enterprise's expectations, becoming an indispensable business partner is critical. Effectiveness at supporting decision making is finance's most important means to be an essential partner. 5 factors enable success: strategic focus, organizational agility, data-centricity, redefined talent, and intelligent workflows. The moment has never been so ripe with potential to approach the future differently.

Other C-suite roles are looking to CFOs for guidance, perspective, maturity, and discipline. However, not all finance leaders have the tools to fully embrace the opportunity.

Recommendations for all CFOs

Focus on strategy and elevate support for decision making:

- Identify where your organization’s unique advantages provide value to partners
- Access open innovation through ecosystems to tap into broader ideas, talent, and opportunity
- Catalyze collaboration across the C-suite to facilitate transformation, innovation, and customer centricity.

Champion a more agile finance function:

- Embrace flatter structures that enable more fluid decision capability
- Empower teams to use experimental approaches and be allowed to fail
- Implement self-service tools for nonfinancial staff to free up finance team members to focus on more complex tasks.

Put data at the center of the enterprise:

- Standardize financial and nonfinancial data definitions and establish an enterprise-wide data governance framework
- Create central repositories to aggregate financial, operational, and externally curated data
- Modernize your ERP.

Invest in your workforce:

- Prioritize training, promotion, and talent management, with an eye on future-focused capabilities
- Communicate mission and purpose, to support transformation and change management
- Re-skill the existing finance team to strengthen data and analytics expertise, and business-partnering acumen.

Increase intelligence through technology:

- Deploy tools and capabilities that enhance digital maturity across the enterprise
- Foster openness to new exponential technologies that drive value creation and improve decision making
- Nurture your organization’s capacity to embrace new technologies effectively and at speed.

Customized actions by archetype

It would be impractical to assert that an executive matching a single CFO archetype should directly follow the activities recommended for another of the 4 discrete CFO groups. What's more, the unique structure of each enterprise dictates the possibilities, resources, and tools available to its CFO and finance team.

That said, certain considerations might improve effectiveness for each archetype. "Our corporate culture, which is conservative toward risk, poses a challenge," says the CFO of a Japanese Bank, echoing a sentiment expressed broadly among CFOs. "We are now undertaking a culture shift to reconsider our attitude, breaking out of a defensive mindset."

We've constructed an impact-focused game plan for each of the 4 archetypes based on their strengths and weaknesses. Some CFOs might choose to focus more on reducing analysis paralysis or improving the path from decision to action. Whatever environment you operate in, the following game plans offer an array of immediate, near-term, and long-term options to consider.

Game plan for Strategic Advisors

While the Strategic Advisors may be the most effective group today, with strengths across the 4 decision-making dimensions, they still have opportunities for improvement. They can better craft scenarios using data to improve customer engagement and enhance operations; continue building a truly agile finance organization; deepen data-sharing with ecosystems and partners; and expand horizons on data usage within increasingly intelligent workflows.

The emphasis in their game plan can be summed up as "don't slow down." Instead, continue to accelerate investments and ambitions.

Strategic Advisor game plan

Factor	Immediate		Near term		Longer term	
Strategic focus	Continue to build modeling and scenario building capabilities		Enhance decision support around workforce, supply chain, marketing, customer analysis supported by AI and collaboration with CMO, CHRO, CSCO		Leverage data cultivation with ecosystems and partnerships to identify opportunities for growth	
Organizational agility	Enhance agile training		Evaluate decision making rights to fewer people Implement COEs for FP&A and lead to cash		Continue to enhance resource allocation process and creation of substitutable workforce	
Data-centricity	Build rules for data sharing with ecosystems and partnerships		Further link operational and financial data for decision making		Drive real-time data availability and access for reporting	
Redefined talent	Solicit input from finance staff on finance transformation opportunities Add agile, ML, data science skills		Incorporate AI on talent identification, retention and development		Continue to cultivate data-driven culture Manage change associated with finance transformation, digital technologies	
Intelligent workflows	Add process mining for lead to cash, FP&A, source to pay		Evaluate opportunities to implement AI, RPA for lead to cash and source to pay		Drive real-time data availability and access for planning	

Right decisions   Speed of decisions   Decisions into actions   Appropriate effort in decision making

Game plan for Deliberate Deciders

The priorities for Deliberate Deciders begin with improved focus—removing distractions (such as passing off or sharing ownership of enterprise-wide digital transformation). Their game plan emphasizes accelerating adoption and use of analytics skills, which can also support better collaborative engagement with business units.

Applying agile techniques and an agile mindset and deploying more advanced technology is critical to drive faster speed to decisions. The Deliberate Deciders must learn to leverage the real-time data feeds that many of them already have so they can better match the pace of the evolving business landscape.

Deliberate Decider game plan

Factor	Immediate		Near term		Longer term	
Strategic focus	Shift ownership of enterprise digital transformation from CFO	○○○●	Enhance collaboration with Chief Risk Officer and Chief Digital Officer around strategy	●○●○	Build M&A decision support capabilities Provide nonfinancial staff access to performance data	●○○○ ○●○○
Organizational agility	Establish experimentation approach in finance transformation execution Set decision making governance	○●●○ ○●○●	Implement COE in AI Add agile techniques to speed insight in capital investments, resource allocations Add external talent to enhance digital skills	●●○● ○●●○ ●○○○	Set up cross-functional teams for decision support	●●●○
Data-centricity	Modernize finance IT and data capabilities	○○○●	Put in place data commonality for nonfinancial data	●●○○	Develop rules to collect, use and share data	○●○○
Redefined talent	Add RPA, ML, data science skills	●●○○	Increase employee involvement in finance transformation ideas Establish talent rewards for key skills	○○●○ ○○○●	Implement AI for HR processes (learning, talent identification)	●●○○
Intelligent workflows	Add process mining for lead to cash, FP&A, source to pay	○○○●	Implement advanced analytics and AI in FP&A, record to analyze Move to data-driven planning	●●○○ ●○○●	Implement advanced analytics and AI in source to pay	●●○○

Right decisions · Speed of decisions · Decisions into actions · Appropriate effort in decision making

Game plan for Action Architects

The priorities for Action Architects revolve around reducing noise that may be complicating decision analysis and enabling quicker, quality decisions by having more data readily available. That means better using cloud ERP to provide a single version of financial truth. Putting proper analytics technologies in place and integrating financial and nonfinancial data through a common layer.

And defining a performance management framework that better conveys the true drivers of business performance. These actions must be executed while not hindering the existing speed of action and decision making.

Action Architect game plan

Factor	Immediate		Near term		Longer term	
Strategic focus	Enhance collaboration with Chief Risk Officer and Chief Operating Officer around strategy		Improve capabilities to support growth and respond to business model changes		Add real-time access to performance data Provide nonfinancial staff access to performance data	
Organizational agility	Set up cross-functional teams for decision support		Implement COE in AI, FP&A Apply agile techniques to speed insight in planning, budgeting and forecasting		Enhance resource allocations and create substitutable workforce Add external talent to enhance digital	
Data-centricity	Rationalize ERP instances		Move to cloud core ERP Set rules to collect use and share data		Standardize data architecture	
Redefined talent	Add data science skills		Establish talent rewards for key skills		Implement AI for HR processes (learning, talent identification)	
Intelligent workflows	Add process mining for lead to cash, FP&A, source to pay		Implement advanced analytics and AI in FP&A, record to analyze Add RPA in lead to cash, AI in dispute management		Implement advanced analytics and AI in source to pay	

Right decisions   Speed of decisions   Decisions into actions   Appropriate effort in decision making

Game plan for Constrained Operators

The Constrained Operators are playing catch-up across multiple fronts. While it can be tempting to try to leapfrog to the head of the pack, avoid the considerable risk of getting caught up in distractions. As tempting as "shiny-toy" new technologies may be, first focus on fundamentals. Before implementation, invest in the people skills, processes and culture needed to take full advantage of those technologies.

The roadmap for Constrained Operators starts with heightened strategic focus. Any enterprise-wide digital transformation responsibility should be collaboratively shared—influence in this area will be more practical than ownership. But a clear, well-defined transformation strategy for the finance function should be a priority.

Other fundamentals: establish process and systems commonality; deploy shared services and outsource, where possible, to piggyback on ongoing developments without having to orchestrate them; and standardize and automate financial data.

Constrained Operator game plan

Factor	Immediate	Near term	Longer term
Strategic focus	Shift ownership of enterprise digital transformation from CFO	Enhance collaboration with Chief Risk Officer and Chief Operating Officer around strategy	Add real-time access to performance data Provide nonfinancial staff access to performance data Implement AI to track strategy execution
Organizational agility	Establish decision making governance Look at delivery models for transaction processing	Implement COE in AI, FP&A Apply agile techniques to speed insight in PBF Establish experimentation approach in finance transformation execution	Set up cross-functional teams for decision support Enhance resource allocations and create substitutable workforce Add external talent to enhance digital skills
Data-centricity	Establish data commonality	Set rules to collect use and share data Rationalize ERP instances	Standardize data architecture
Redefined talent	Establish well-defined finance transformation strategy with change management	Add skills in data curation	Implement talent initiatives
Intelligent workflows	Drive process commonality, global process ownership	Add process mining for lead to cash, FP&A, source to pay Move to data-driven planning	Implement advanced analytics and AI in FP&A, source to pay, lead to cash, record to analyze

Right decisions · Speed of decisions · Decisions into actions · Appropriate effort in decision making

Research and analysis methodology

In Q2 and Q3 2021, the IBM Institute for Business Value (IBV), in cooperation with Oxford Economics, interviewed 2,000 Chief Financial Officers (CFOs) from 28 industries and 43 locations. These interviews were conducted virtually.

The IBV supplemented data collection with in-depth conversations with a dozen select CFOs from North America, Latin America, Africa, and Asia Pacific. These quantitative and qualitative interviews focused on current business trends and finance function challenges and strategies. Topics included the role of the CFO in enterprise digital transformation and ecosystems/platforms, finance function's capabilities in supporting enterprise decision making and generation of forward-looking insights, and enablement of finance through technology, intelligent workflows, talent, and data. Interviews were conducted from September to October 2021.

We designed data collection by country, industry, and organizational size. To better understand pre-pandemic and post-pandemic impacts, we captured operational and financial data for the period 2018–2021.

In terms of data analysis, we clustered finance organizations based on their effectiveness in 4 core dimensions of decision making:

Efficiency—Devoting effort that is appropriate to the stakes

Speed—Deciding faster than the competition

Bias-to-action—Converting decisions to concrete steps

Accuracy—Generating positive outcomes from the decisions made.

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