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Achieve Autonomous Finance With 3 CFO Mindset Shifts



Introduction

Finance technologies are quickly evolving from automated processes to autonomous capabilities. Chief financial officers will not achieve autonomous finance without first shifting their mindsets to experiment broadly, trust the outputs of autonomous capabilities and lead by example in the transition.



Overview

Despite finance's emerging opportunity to move from automated to autonomous, few organizations are making progress in that journey. The hardest barrier to overcome is the CFO mindset, which affects every aspect of the path to autonomous finance — from technology selection and deployment to adoption.

To shift their mindsets and succeed in growing their autonomous finance capabilities, CFOs must embrace broad experimentation with technologies at the outset to get the most value from their investments. They must also build greater trust in those technologies and better understand their decision-making capabilities. And they must lead by example, investing their own time in learning about technologies to inspire their employees to do the same.

Key Findings

- Sixty-four percent of CFOs believe autonomous finance can become a reality within the next six years, but few are making progress toward it.
- Mindset is one of the hardest barriers to overcome in the journey toward autonomous finance, with 60% of CFOs ranking it in the top two.
- CFOs' current mindsets are hard-wired against autonomous finance in three ways:
 - They believe finance should start small to avoid costly failures with technology investments.
 - They believe finance should use technology as a tool but rely on people to make decisions.
 - They believe their teams will embrace technology when they see its benefits.

Recommendations

To shift their own and their teams' mindsets on autonomous finance, CFOs should:









- Embrace broad experimentation with technologies for autonomous finance by using fear-setting exercises to reduce failure phobia.
- Build greater trust in technologies for autonomous finance by exploring with the finance team how the technologies and algorithms make decisions and creating guardrails around them.
- Use personal behavior change to encourage the adoption of technologies for autonomous finance by investing time in learning about the technologies and demonstrating new behaviors that will influence the culture.

CFOs Must Unlock the Future of Autonomous Finance



An autonomous finance function is one in which processes and activities are partly governed and majority-operated by self-learning software agents that optimize front-, middle- and back-office operations. It yields augmented real-time insights, effortless compliance and greater flexibility in financial strategy with little to no human intervention. Technologies for autonomous finance in all parts of the function include blockchain, machine learning, virtual assistants and natural language processing (see Figure 1 for more examples).

Figure 1. Examples of Technology Use Cases in Autonomous Finance

Back Office		AI-enabled process mining algorithms capture all variations and exceptions in P2P and O2C.
		Virtual assistants process transactions with machine customers and vendors.
Middle Office		Blockchain enables an audit-ready continuous close.
		Smart contracts enforce accounting controls and intercompany adjustments.
Front Office		Machine learning identifies new variables to improve cash and investment forecasts.
		Decision intelligence powers financially savvy tactical and operational decisions.
Office of the CFO		DeFi enables innovative options for raising capital and insuring against financial risk.
		Natural language processing enables better understanding of retail investor sentiment.

Source: Gartner

Finance technologies are quickly evolving beyond automation to include capabilities such as self-learning and self-correction. In fact, the technologies that make autonomous finance possible are already operational and undergoing rapid innovation. For instance, Gartner's [Magic Quadrant for Integrated Invoice-to-Cash Applications](#) includes examples of products available today that enable autonomous finance.

While most CFOs surveyed (64%) believe autonomous finance will become a reality within the next six years, few are making progress toward it. For example, only 21% are using machine learning, 19% prescriptive analytics, 12% natural language processing, and 8% blockchain.¹

CFOs must accelerate their functions' journey toward autonomous finance or risk falling behind. The business needs faster, more accurate data to make better decisions about everything from pricing and products to investor and customer sentiment.

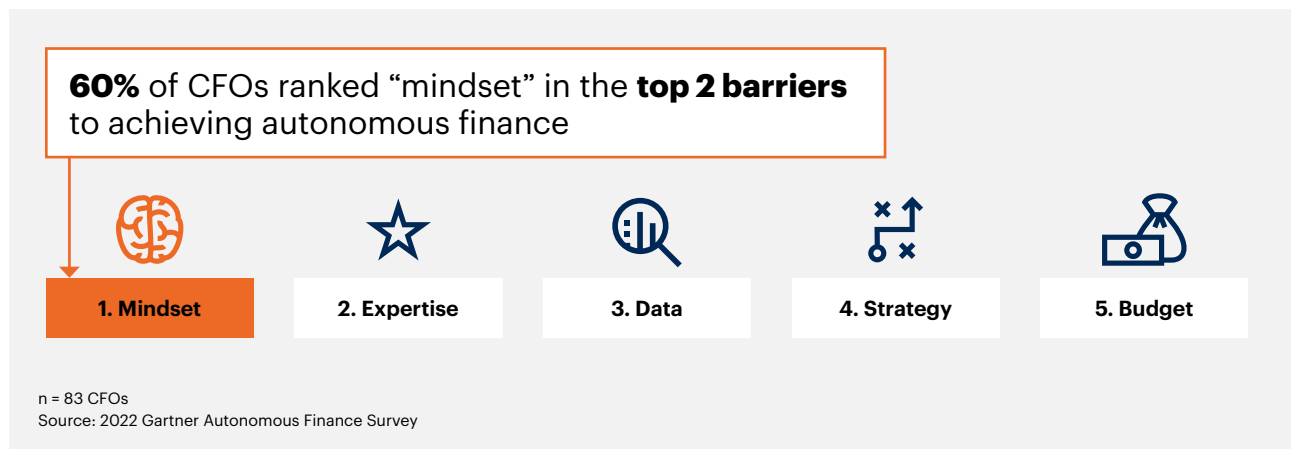
For example, in an autonomous finance function, technology embedded in the close process learns how to handle errors and self-corrects throughout a continuous, real-time close. Similarly, an autonomous forecasting system could tell the ERP in real time to raise target inventory levels when it sees an opportunity to capture market share.

Autonomous Finance Requires a CFO Mindset Shift



CFO rankings show that mindset is the hardest barrier to overcome in achieving autonomous finance — followed by talent (or expertise), data, strategy, and finally, cost (or budget). Sixty percent of CFOs rank mindset in the top two barriers to achieving autonomous finance (see Figure 2).²

Figure 2. Barriers to Autonomous Finance Ranked by CFOs



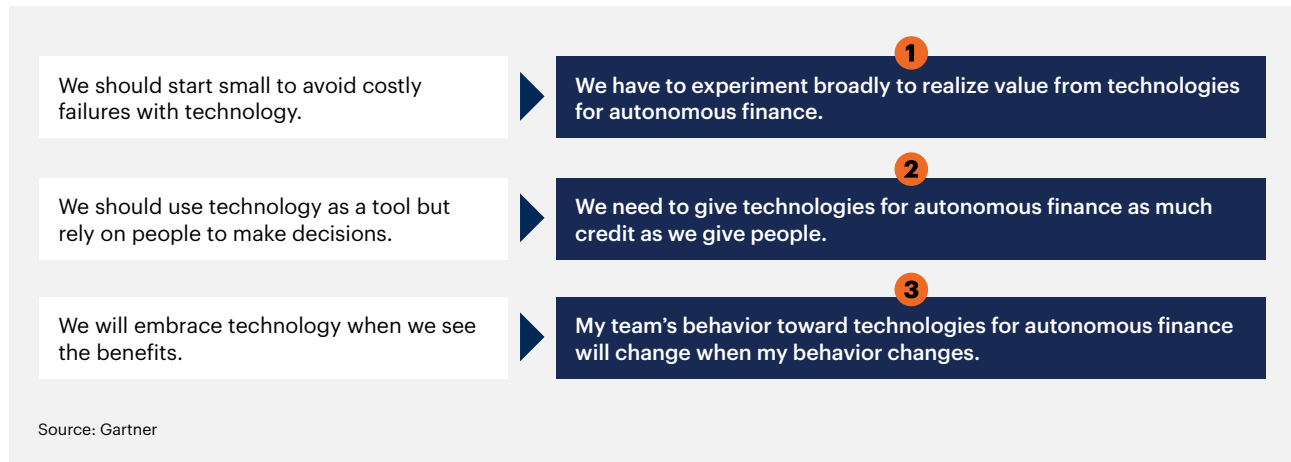
Mindset is a critical barrier to overcome in any transformation, and autonomous finance is no exception. But while the mindset of the finance team is important, an often overlooked barrier is the CFO’s mindset. A CFO’s mindset affects every aspect of the path to autonomous finance — from which technologies are chosen to how they are deployed, what they are used for and whether people adopt them.

It is understandable that CFOs’ mindsets may impede autonomous finance. Becoming an autonomous finance function will be different than being just a highly automated finance function. The technology will be able to execute more complex tasks without human involvement and, in many cases, will tell humans what they should do. This new relationship between humans and technology will require a fundamental change in thinking, and it brings with it significant changes to the workflows, perceived risks and perceived threats to finance roles.

CFOs must acknowledge and overcome the three ways in which their mindsets are wired against the technologies that will enable autonomous finance (see Figure 3):

- Believing finance should start small to avoid costly failures with technology investments
- Believing finance should use technology as a tool but rely on people to make decisions
- Believing their teams will embrace technology only when they see its benefits

Figure 3. Three CFO Mindset Shifts for Achieving Autonomous Finance



Experiment Broadly With Technologies for Autonomous Finance



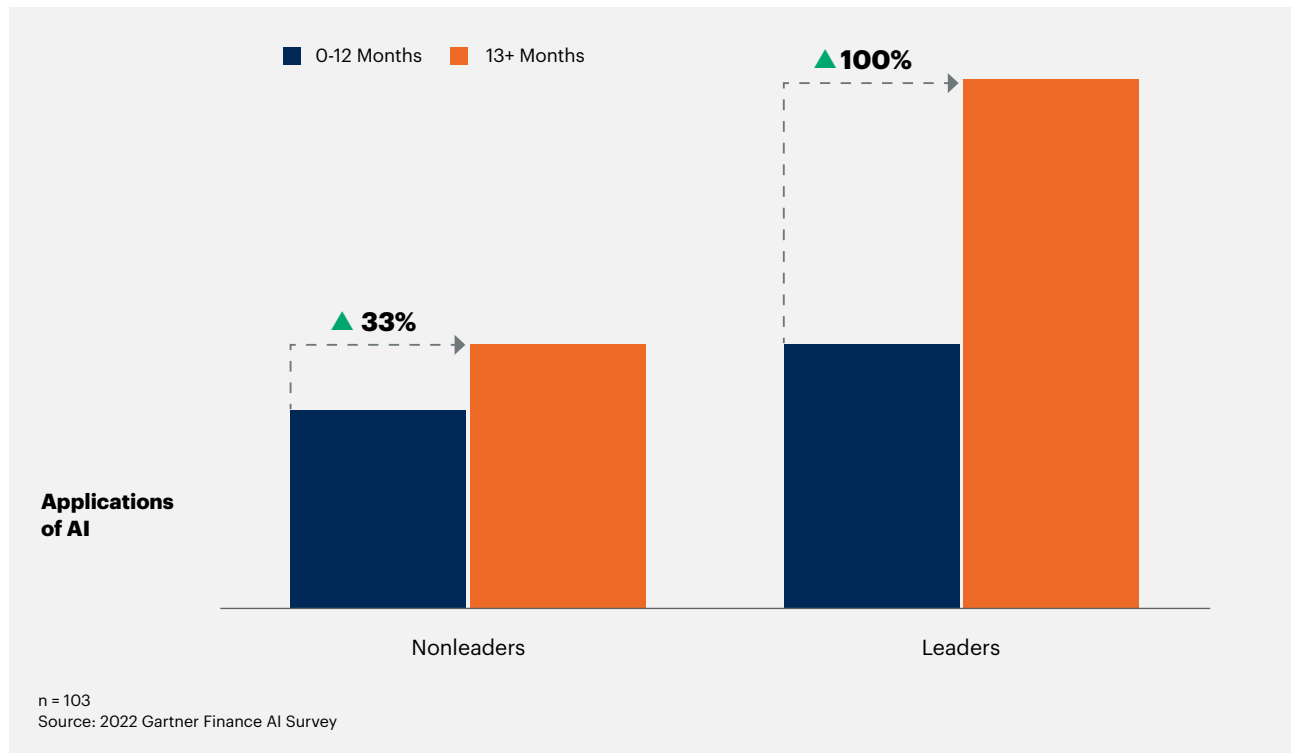
CFOs believe starting small will help their functions avoid costly failures with technology investments. Costly failures are considered unacceptable for an overhead function such as finance, which acts as the gatekeeper for responsible spending. CFOs believe responsible spending means narrow experimentation with technology and waiting to scale until the application is proven.

“Finance is not given the same permission to fail. We have to be purer. We’re giving everyone else a hard time about the numbers.”

CFO, nonprofit organization

However, broad experimentation from the outset with technologies that enable autonomous finance is the best way to realize value from finance’s investments. Gartner analyzed survey data on finance functions’ use of AI. We found that organizations that pilot AI broadly in the first 12 months identify twice as many applications of AI over the next several years than their peers. And this is despite no meaningful difference in spending compared to organizations that don’t pilot AI broadly (see Figure 4).³

Figure 4. Applications of AI From Organizations Broadly Piloting AI



The journey toward autonomous finance will involve many new technologies, so finance must experiment broadly from the outset. Starting small, with a limited number of pilots, increases the likelihood that finance teams will view technological experiments as isolated occurrences in pockets of the function. On the other hand, broad experimentation signals a larger shift in the way finance operates in all areas of the function. Each experiment may be small, but the collective impact is transformational.

Rather than starting with a small number of pilots, CFOs must encourage running several pilots simultaneously across finance subfunctions.

Action Steps to Experiment More Broadly

Fear of failure and of wasting resources holds finance functions back from broad experimentation in the early stages. But demystifying failure reduces this failure phobia. To demystify failure, CFOs can run a fear-setting exercise (see Figure 5). The objective is to explore fears that could hold a team or individual back from pursuing a bold innovation.

Figure 5. Fear-Setting Exercise Template

Checklist for Naming Your Fears

1 Define worst things: 1. _____ 2. _____ 3. _____	2 Prevent worst things: 1. _____ 2. _____ 3. _____
3 Repair worst things: 1. _____ 2. _____ 3. _____	4 Benefits of taking action: 1. _____ 2. _____ 3. _____
5 Cost of inaction at six months: 1. _____ 2. _____ 3. _____	6 Cost of inaction at 18 months: 1. _____ 2. _____ 3. _____

Source: Gartner

Follow these steps to complete a fear-setting exercise:

1. Start by defining the worst things that could happen if you were to pursue the innovation. Try to get beyond an intellectual analysis by visualizing what would happen if the worst occurred.
2. Determine how to prevent the worst from happening.
3. Identify how to lessen the consequences if the worst really did occur.
4. Write down all the benefits of pursuing the innovation. (Presumably, the innovation is worth pursuing because of the possible future benefit.) Provide as much detail as you can about the benefits.
5. Most importantly, write down the cost of inaction — the cost of not pursuing the innovation in the short term (such as after six months).
6. Finally, expand on Step 5 by writing the cost of inaction in the longer term (such as after 18 months).

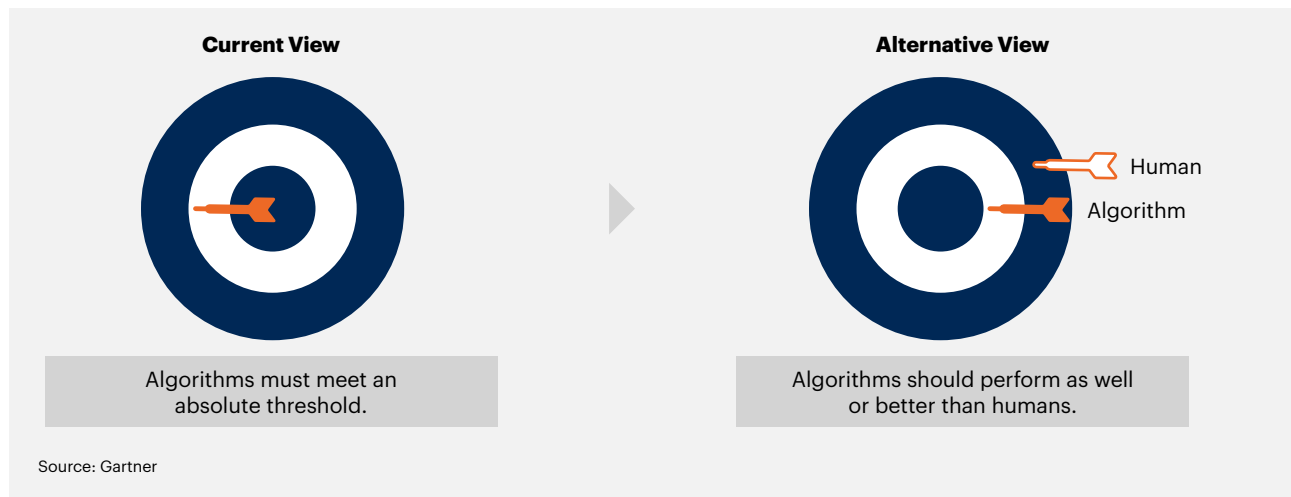
Give Technologies for Autonomous Finance as Much Credit as People

CFOs believe finance should use technology as a tool but rely on people to make decisions. Even when there is evidence that technology is better or more accurate than humans, people are reluctant to trust it. This is a phenomenon referred to as “algorithm aversion.” When given a choice between human judgment and algorithms, humans prefer what they’re familiar with: other humans.⁴

Algorithm aversion often manifests as holding technology to a higher standard than humans. For example, in our survey, CFOs report the maximum acceptable variance for a traditional financial statement forecast generated by humans as 10%. However, they hold algorithms to a higher standard: The maximum acceptable variance for a technology-generated forecast is 5%.²

This discrepancy likely results from finance comparing algorithm performance to a specific target, often an overly lofty goal — or even perfection. Instead, finance should compare an algorithm’s performance to human judgment (see Figure 6).

Figure 6. Algorithm Performance Compared to Human Judgment



Going forward, CFOs and their teams need to give technologies for autonomous finance as much credit as they give people.

Action Steps to Increase Trust in Technology

CFOs can become more comfortable giving credit to technologies that enable autonomous finance by understanding how the technology makes decisions and putting guardrails around it.

Build trust in technologies for autonomous finance by:

1. Understanding and addressing common ingrained perceptions about technologies for autonomous finance — Ask stakeholders what they've heard to address their specific concerns.
2. Showing a comparison of human and technology error rates in forecasting — Conduct an exercise in which the team compares its own forecast predictions to an algorithm's and discusses the results.
3. Diving deep into how the tool works — After a new tool is introduced, explain the model's logic and how it was built to the larger team, and allow employees to pressure-test it before launch.
4. Shrinking the risk space — Match the technology's complexity to the operations it needs to perform. For example, choose the least sophisticated AI technology capable of achieving the objective.
5. Assigning "grandmaster" designers who monitor technologies' performance and take responsibility for it — Designers should anticipate what behaviors the technologies could develop after their initial launch, seek out unanticipated consequences and address them.
6. Investigating the feasibility of building a "conscience" for technology — Devote budget to building a parallel system in sophisticated technologies that checks the behavior of the primary algorithms.

To read more, see:

- [Illuminating the Black Box: 3 Ways to Build Trust in AI-Driven Insights](#)
- [How Mastercard's AI-Driven Forecast Launch Led to 100% Adoption](#)
- [4 Steps to Reduce the Risks of AI's 'God Problem'](#)

Change Your Own Behavior Toward Technologies for Autonomous Finance



CFOs believe their teams will embrace technologies when they see the benefits. But while CFOs announce exciting new technology investments and tout their transformational potential, finance employees see them displaying little practical knowledge about the applications of these technologies and keeping an arm's length from their use. Only 29% of CFOs say they invest significant personal time in learning about technologies for autonomous finance and their applications.²

Changing their personal behavior toward technologies for autonomous finance is a superior way for CFOs to achieve employee behavior change. What leaders say has much less impact on employee behavior than what they do. Employees don't change because leaders ask them to; they change because of how leaders behave (see Figure 7).⁵ It is not enough for leaders to espouse the culture. They must also create an environment that enables everyone to live the culture.⁶

Figure 7. Impact of CFO Behavior and Communication on Employees



CFOs must set an example rather than expecting their teams' behavior toward technologies for autonomous finance to change on its own or through a bottom-up approach.

Action Steps to Change Personal Behaviors

CFOs should demonstrate new behaviors with “culture hacks.” A culture hack is a small change that exploits a single area where your culture is vulnerable to change. Hacks are small, emotional, immediate changes that have big impacts.⁷

Examples of culture hacks include:

- Setting a minimum failure rate for innovators, signaling that if the team isn't failing a minimum amount, it's not innovating properly
- Asking people to draw a concept (for example, “transformation”) in under one minute using no words, and then having everyone describe what they drew
- Including an examination of what the team should stop doing (including behaviors, projects, assumptions and habits) in every conversation about embarking on something new
- Asking the team, “What would this look like if it were easy?” when presented with a new initiative that appears time-consuming, complicated or difficult

To read more, see [Toolkit: 2019 Collection of 85 Culture Hacks From the Real World](#).

Conclusion

Confronting the way CFOs' mindsets are wired against technology is the hardest barrier to overcome in the journey toward autonomous finance. Successful CFOs will embrace broad experimentation with technologies from the outset, build credibility in technologies and recognize that personal behavior change is the best way to encourage employee behavior change toward technologies for autonomous finance.

About This Research

This research is based on data from Gartner's 2022 Autonomous Finance Survey (n = 83 CFOs) and extensive qualitative interviews with more than 35 CFOs and finance leaders. The organization profiled in this research is provided for illustrative purposes only and does not constitute an exhaustive list of examples in this field nor an endorsement by Gartner of the organization or its offerings.

Endnotes

¹2021 Gartner Finance Technology Trends Survey. Data from finance executives was gathered between October and December 2021 from over 400 responding organizations headquartered across the globe. Respondents represent key industries with 65% of organizations reporting more than \$1 billion in revenue. This survey was conducted to assess finance leaders' use of 58 finance technologies.

²2022 Gartner Autonomous Finance Survey. Data from 83 CFOs was gathered in February and March 2022. Respondents included organizations reporting more than \$250 million in revenue and headquartered in the U.S., Canada, the U.K., India and Australia. This survey was conducted to help CFOs understand how they currently view and implement technologies for autonomous finance.

³2022 Gartner Finance AI Survey, which included 103 international finance leaders. This survey was conducted to help finance leaders to understand how the finance practice is currently implementing AI. We also sought to understand what actions lead to early success in AI deployment.

⁴Why We Prefer Human Judgment to Algorithms, Chicago Booth Review.

⁵To learn more, see Culture Change Succeeds or Fails in Leadership Moments.

⁶To learn more, see Creating a Culture That Performs.

⁷To learn more, see The Art of Culture Hacking.

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