To Rebound from the Downturn, Finance Needs to Accelerate Its Automation Initiatives

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Essential points

- Artificial intelligence (AI) and automation are becoming central to companies' digital transformation efforts. The finance function is particularly poised to improve its productivity and performance through AI.

- In transforming finance operations, technology should be given the "right of first refusal" on the tasks it can take on best, which helps clarify where humans can and should focus their more advanced and strategic contributions. This is at the heart of a "machine-first approach to automation.

- To gain buy-in across the function and end skepticism about the power of advanced technologies like automation and AI, start in areas that can show more immediate benefits. For many CFOs' organizations, these are often order-to-cash, procure-to-pay, and record-to-report.

- As the more manual finance processes become streamlined through automation, CFOs can ask: What higher value work should finance employees focus on once automation is in place?

Economic challenges also yield opportunities

The pandemic-driven global recession has highlighted the resilience of many enterprises and their finance functions. For example, finance people have proven that they can work remotely. The IT infrastructure, networks and applications have held up for the many

finance organizations that continue to operate as a shared service. Overall, firms have been able to close the books at quarter ends and perform other critical activities to keep their businesses running.

Many CFOs continue to rethink and streamline financial processes to preserve cash and reduce costs. But while these measures may have maintained margins and yielded other improvements, CFOs have the opportunity to do much more with automation and AI.

Many aspects of big companies' finance departments are ripe for more profound uses of automation, beyond the low-hanging fruit that's already being addressed. The key is to understand the opportunities and what's required to achieve them: what can be automated given the current state of the business and available technologies, the returns to expect on different investments, and the best ways to capitalize on them. All of this requires CFOs to take a holistic view of their function's business processes and the organization's reservoir of skills.

Artificial intelligence and automation for CFOs

The field of artificial intelligence (AI) includes a wide range of technologies and advances that are becoming nearly synonymous with modern computing in general and, for our purposes here, to the work of digital transformation of companies specifically. For nearly a quarter century, AI has been an umbrella term for such fields as "natural language processing, human-machine interaction, information retrieval, graphics and image processing, data mining and robotics," and many others.[1] Broadly understood, AI employs the "perception, reasoning, learning, communicating and acting in complex environments" of digital agents with the goal of developing "machines that can do these things as well as humans can, or possibly even better."[2] (Automation is generally understood to comprise the "communicating" and "acting" behaviors of these agents.)

In a finance context, AI and automation might involve advanced predictive modeling, whereby understanding payment behaviors or forecasting net working capital and profitability can give the business better insights to inform strategic decisions.
Or it might include pattern analysis to identify maverick spending activity, manage inventories, or speed the settlement of claims and disputes. More broadly, AI and automation should be part of an overall strategy to digitally transform a company, giving it the resilience to meet challenges, the adaptability to exploit opportunities, and even a better understanding of and alignment with its true purpose as an enterprise.

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[1] Nilsson, Nils J., *Artificial Intelligence: A New Synthesis* (Morgan Kaufmann Publishers, 1998), p. xix

[2] Nilsson, p. 1

The potential for AI in finance

In the digital transformation of the economy and its players, we believe automation and AI are particularly poised to improve productivity and performance across business and technology. The finance function is no exception. Companies that have deployed AI and automation in their finance functions have achieved quantum improvements in costs, cycle times and other key finance metrics.

Here are three examples:

- After automating much of its finance function, a U.S. medical equipment manufacturer generated $28 million in direct benefits in the first year, and another $150 million in productivity improvements.

- A U.S. health insurer dramatically improved its financial planning capabilities and reporting-cycle time using robotic process automation (RPA) and cognitive automation controls.

- A Canadian vehicle manufacturer automated its procurement process, yielding $5 million in annualized benefits.

To radically improve finance processes with technology that's already available today, those companies' CFOs faced two core decisions, not unlike some of the decisions they must help make for the company as a whole: Which manual processes can be automated to streamline operations and free up finance employees? And which higher value work should finance employees focus on once automation is in place?

The five elements of the Machine First Delivery Model™

The transformation approach we've seen to be most effective is one we call a Machine First Delivery Model™. This entails automating every process that can be automated, and redeploying employees into roles that require skills and insights of the type that AI can't automate. The default option for CFOs is to, in effect, give AI and automation the right of first refusal for taking on any task, and refashioning the work of the function around that. Any tasks that can't be done better by automation should remain in the hands of people.

After gaining a detailed understanding of their function's people, processes and organization, CFOs should analyze each process in five ways:

1. **Sense the world through data**. What data can be used to understand a particular business process? As much as possible, the company should automate the collection, organization and management of this data, and prepare it for analysis. Many finance functions already do a great deal of data collection, yet there are numerous types of data that can further improve finance activities, including syndicated market research, images, documents (including contracts and email), budget policies and procedures, interactive material (such as voice, email, phone calls and online chats), publicly available client data, and credit risk and audit information. All of this data must of course be standardized, stored and securely accessible in order to do anything with it — but these are other areas where intelligent automation has made itself essential in IT operations, particularly.

2. **Analyze the information collected and add meaning and insights through data analytics**. While many supply chain and marketing departments have already deployed advanced data analytics capabilities — which may have enabled some companies to pivot and survive the early months of the pandemic better than their competition — only the more advanced finance departments have embraced the qualitative difference that data analytics can make in their operations. But by turning the analysis work over to the machines, the humans become better equipped to interpret the analysis and make better-informed plans.

3. **Finalize actions based on the analysis**. The analysis points to necessary actions. Which of those actions, if they were automated, would let humans make the important decisions and leave the tactical, routine decisions to the technology? This is when the human-machine hybrid workforce is most in evidence, when decision trees bring humans' judgments into the loop — based on their expertise and their interpretations.

4. **Follow through on the action**. This is about translating an automated process into work performed. This is the implementation phase when AI is more about automation, the "doing" rather than the "thinking" — even if thinking (intelligence) is also very much central to how the process is performed.

5. **Learn from experience to improve performance**. Here finance should measure the quality, consistency and accuracy of all that has gone on – sensing, understanding, deciding and responding – based on real-world outcomes. Additionally, the data and outcomes of the previous steps become part of the overall information set that the system uses to teach itself (i.e., machine learning) as part of its "on the job" training to improve its relevance and value.

An intelligent, automated system should offer many benefits, the bottom line — always dear to financial professionals — first among them. Take a finance department that receives invoices via email, fax and mail, and then has accounts payable staff manually log, evaluate, file, record and reconcile them – all before producing checks or electronic

payments. (According to a 2019 survey by the Association of Financial Professionals, 42% of B2B payments are still made by check, rather than ACH or other methods.[3] Such traditional check processing work could cost a business between $4 and $20 for each check, another study found.[4]) In these finance functions, there are many human touches and frequent handoffs. It creates inefficiencies and increases the possibility of errors and opportunities for fraud.

In contrast, AI, analytics and automation can handle all of these steps seamlessly, with a minimum of manual work. This enables a lean, centralized system that eliminates redundancies. Automated systems also reduce mistakes and the risk of fraud. They have error control processes and tend to be more accurate than humans. Employees who previously handled the minutia of processes — often considered the "copy-paste work" — are freed up to better manage more complex flagged exceptions and make the harder decisions.

Ultimately, with a fully automated finance function, the many systems and processes that previously required substantial manual work – such as P&L generation, inter-company consolidation, revenue recognition, expense booking, and period-end closing activities – can be handled in far less time.

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[3] "2019 AFP Electronic Payments Survey Report: Key Highlights," September 9, 2019, accessed at:
https://www.afponline.org/docs/default-source/registered/2019epaymentsreport-highlights-final.pdf

[4] Wall Street Journal, "U.S. Companies Cling to Writing Paper Checks," March 10, 2014, accessed at:
https://www.wsj.com/articles/SB10001424052702304732804579425233344430424

How to approach

In driving digital transformation for large companies around the world, we have found three management issues to be paramount. First, leaders must understand the organizational context, the target operating model, and what can and should be automated based on the emerging IT landscape. Second, leaders need to factor in people dynamics, including how to manage changes in people's tasks and roles, upgrade skills and define new career paths. Finally, leaders must demonstrate early benefits in digital transformation initiatives. A common way to do this is by using digital technologies to improve marketing and sales, i.e., to help the organization get better at demand generation.

With AI and automation, particularly, achieving initial buy-in across a finance organization is also easier when the results are more quickly visible and if they enable the same kind of efficiency and productivity the function advocates for throughout the company. Getting early returns will likely end any skepticism about the power of advanced and emerging technologies like analytics, automation and AI, and may increase the internal demand for even more strategic transformation across the enterprise.

For CFOs, helping the finance organization move from thinking of technology as a bottom-line enhancer to a top-line enabler — both in and outside the function — will help position its work and employees as key contributors to the future success of the business.

Ecosystem as enabler

While outside the scope of this paper, the digital ecosystem enabling business transformation comprises a growing array of capabilities that both leverage and enable AI. Any truly game-changing "automation solution" deployed today in finance or any other function uses one, two or many more of these technologies and approaches to invent whatever new is needed for differentiation without reinventing what is already proven and available. For example, the major public cloud providers — **Google, Amazon Web Services**, and **Microsoft Azure** — all provide machine learning platforms with developer tools and libraries to scale operations and speed deployment. **Business Process-as-a-Service** platforms combine domain knowledge of an industry (such as integrated data management in pharmaceuticals or operating and business support systems in telecom providers) or function (such as HR or accounts payable) with people and pre-built automation features to help a company simplify its own operations and focus its investments on its strategic purpose. Similarly, subscription-based **advanced cybersecurity** capabilities get built into most large-scale AI scenarios so they can leverage the latest best practices to address emerging threats to enterprise data. Regardless of the particular components ultimately deployed as part of an intelligent automation-based transformation, it is the digital ecosystem (and the partners and providers that support it) that has become the true enabler of resilience, adaptability and purpose-driven outcomes for business today.

Where to start

In our experience, certain areas in finance can provide the best and earliest returns on transforming the finance function through AI and automation implementations.

Order-to-cash — including order management, the raising of invoices, cash application, collections, and disputes — will involve more exceptions for employees to resolve as the business becomes more complex to maintain current revenue streams while pursuing new opportunities and competitive advantages. In addition to handling internal handoffs and inputs with greater efficiency, AI and automation solutions can extract data from the interfaces that customers use to review prices, process deductions, pay invoices and more. This makes the overall flow from receiving orders to receiving cash far more seamless than in more traditional, spreadsheet-based operations.

Procure-to-pay — purchasing, accounts payable, invoice processing, payments, and queries — for many companies often involves processes and governance across a variety of departments and legacy platforms. Once automated, the entire process can be transparent to everyone involved. This results in manifold efficiency increases for both the company and its vendors, while also reducing the risk of fraud for accounts payable operations.

Record-to-report (or record-to-analyze) — journal entry, reconciliations, closing and reporting — often involves many hours of manual work, given the scope of inputs and the high-level visibility of the outputs. When algorithms and automation capabilities are given the right of first refusal in record-to-report processes, reconciliations can take a fraction of the time and effort. AI-enabled systems can compare data across general ledger and subledger accounts, note discrepancies, and suggest adjustments to entries. By standardizing data formats and implementing automation across a finance operation, other activities that rely on the record-to-report processes – such as preparing trial balances and creating cost-center budgets – can happen more quickly and with fewer errors.

Expanding finance opportunities with AI

While the three areas above can provide early wins, the five areas below can deliver longer-term returns from automation.

- **Fixed assets**, also called property, plant, and equipment (PP&E), involves a high

volume of paperwork for the purchase, use and disposition of fixed assets, which often demand extended hours of clerical work from staff who could have more strategic responsibilities. Document automation can reduce the entry, copying, filing and research that many fixed asset operations still handle manually. In addition, a fixed-asset lifecycle-management process using automation and analytics provides both a more comprehensive view and a granular item-level view. This can show how assets get used, where cost savings or efficiencies might be found, and whether and when to replace assets as they lose value or as an enterprise evolves.

- **Financial planning and analysis (FP&A)** — with its view into the current landscape and its mission to forecast the future — has been given a workout in 2020. While running scenarios and helping to plan for contingencies has long been a part of their job, the global disruptions to sales, distribution, service, and supply have required FP&A leaders to rethink operations, priorities, data sources, cost centers and revenue streams. In more digitally advanced firms, automation and advanced analytics are becoming vital to supporting the systems that track and evaluate assumptions and decisions. Digital processes can be used to collect and store raw field data, which is superior to relying solely on aggregated data. Then, cloud-based machine learning capabilities can be leveraged for the analysis process. Advanced algorithms can model forecasts for an expanded array of inputs. The algorithms also can track and evaluate a company's assumptions and decisions. Over time, machine learning can also be leveraged to determine how those assumptions and decisions need to be adjusted.

- The **Tax** area has seen a new urgency for transformation with the scope and frequency of changes to global tax and trade regulations. By automating reconciliation and transaction processes, tax professionals can focus on higher-value work such as tax planning and scenario analysis.

- **Treasury**, in managing the company's financial risk while ensuring the business has the money it needs for its obligations through daily cash monitoring and reconciliation, has been focused on maintaining liquidity and margins during the current downturn. But Treasury staff can also improve a company's interest income and expense positions by more accurately predicting profit and loss. Such predictions make use of advanced analytics and machine learning to improve cash flow forecasting and risk management, whereby algorithms adapt the system to circumstances rather than being programmed in advance for every exigency.

- **Audit and compliance** departments may find that task and process compliance automation – through process mining and real-time monitoring – can be relatively easy to achieve. In contrast, automating regulatory compliance and internal control functions may be more challenging. Some tasks and specific controls can be easily automated. Others, such as soft controls, often cannot.

AI and automation in action

We have worked with the finance functions in many large companies to implement AI-led transformations for specific outcomes. Among them:

Preventing credit leakages and establishing real-time order-to-cash monitoring. A U.S. manufacturer of diagnostic imaging equipment with more than $75 billion in revenue achieved real benefits by implementing over 160 automations in its shared-services finance organization over two years. In the company's record-to-report process, automation helped it spot credit leakage, alleviating its impact on cash. The company also implemented real-time tracking across its order-to-cash process. With much greater visibility into the process, the company quickly identified key bottlenecks and made big efficiency improvements. Further, after automating and streamlining accounts payable, the company developed an information system that identifies when customers fall behind on payments and recommends how to collect the money.

The initiative produced $28 million worth of direct benefits in the first year, in addition to $150 million from increased productivity.

Transforming the procure-to-pay process. A major U.S.-based health insurer transformed its procure-to-pay process using both RPA and cognitive automation controls (which extract information from various unstructured sources). This enabled the development of a global finance services center, with centralized procurement processes and modernized end-to-end expense controls, and led to more robust financial insights.

Benefits included a 50% increase in financial planning capabilities and a 50% reduction in the reporting-cycle time.

Improving accounts reconciliation accuracy. A Canadian multinational vehicle manufacturer automated its procure-to-pay process and tax department, including value-added tax reimbursements. This enabled the company to let automation process 250,000 records per year and produced $5 million in annualized benefits. It also improved the accuracy of accounts reconciliation, now at 95% accuracy.

Next steps to harnessing intelligent automation for finance

To get such benefits, CFOs need to keep three lessons learned by the companies mentioned above in mind.

Transformation calls for a culture reset. A key first step is to change the organization's mindset and culture. This is particularly true in the finance function. Yet CFOs are frequently not supportive of such changes. According to TCS' 2020 CIO Study of 1,010 companies across 11 industries, only 10% of CFO functions currently play any role whatsoever in the ideation and strategy of company digital transformation projects. Fewer than 1% – the least of any function – drive those efforts at their companies today.[5]

It won't happen without detailed planning. Success requires rethinking processes, data sources and workflows. It also demands identifying where finance staff – liberated of manual tasks and lower-value analysis – can contribute the most value in a finance function.

Training people how to master technology and their higher-order jobs. Modernizing the finance function through technology cannot happen without bringing the workforce up to speed. Many finance functions are a digital generation or two behind their more sophisticated competitors'. Training and recruiting specifically for advanced analytics, AI and automation should target the areas that can benefit the most immediately from automation – e.g., order-to-cash, procure-to-pay, and record-to-report. Employees who are trained well for their new jobs in these areas will be far more supportive of the initiative. They'll be far more confident in their ability to handle new ways of working.

Digital transformation of finance functions has gained so much momentum in recent years that it must now be seen as a competitive imperative, rather than an advantage. Companies that automate finance with a solid foundation of culture change, planning and training will dramatically improve the odds that they won't be left behind.

Leadership can't be automated

Even with the best plans and projects, capitalizing on the rapid advancements in artificial intelligence and other automation technologies is not always easy. Wins may and should come early, but they may be hard-won. Beyond being unsure of how to automate key finance processes, four shifts in focus for finance executives seen to be particularly challenging:

- From hoarding data to facilitating decision making

- From reporting results to generating insights

- From ensuring predictability to predicting developments

- From enforcing restrictions to changing culture

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[5] TCS 2020 CIO Study, accessed at: https://on.tcs.com/ciostudy

Yet many of these executives understand that they are expected to rise to the challenge of making it more likely, rather than less, that their companies' management teams are equipped to tackle the future. In fact, a TCS study of more than 500 CFOs conducted just before the pandemic found that some 44% of CFOs expected to take the lead in driving technology-enabled business model transformation within the next five years.[6]

The door to success is wide open for CFOs who can leverage AI, advanced analytics and automation to help their companies make the digital transition to differentiation and competitive advantage — and the work begins in their own departments and processes.

[6] TCS 2020 CFO Study, "The Four Pillars of the Futurist CFO," accessed at:
https://www.tcs.com/perspectives/articles/the-future-cfo-now-the-industry-view

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