

Publisher:

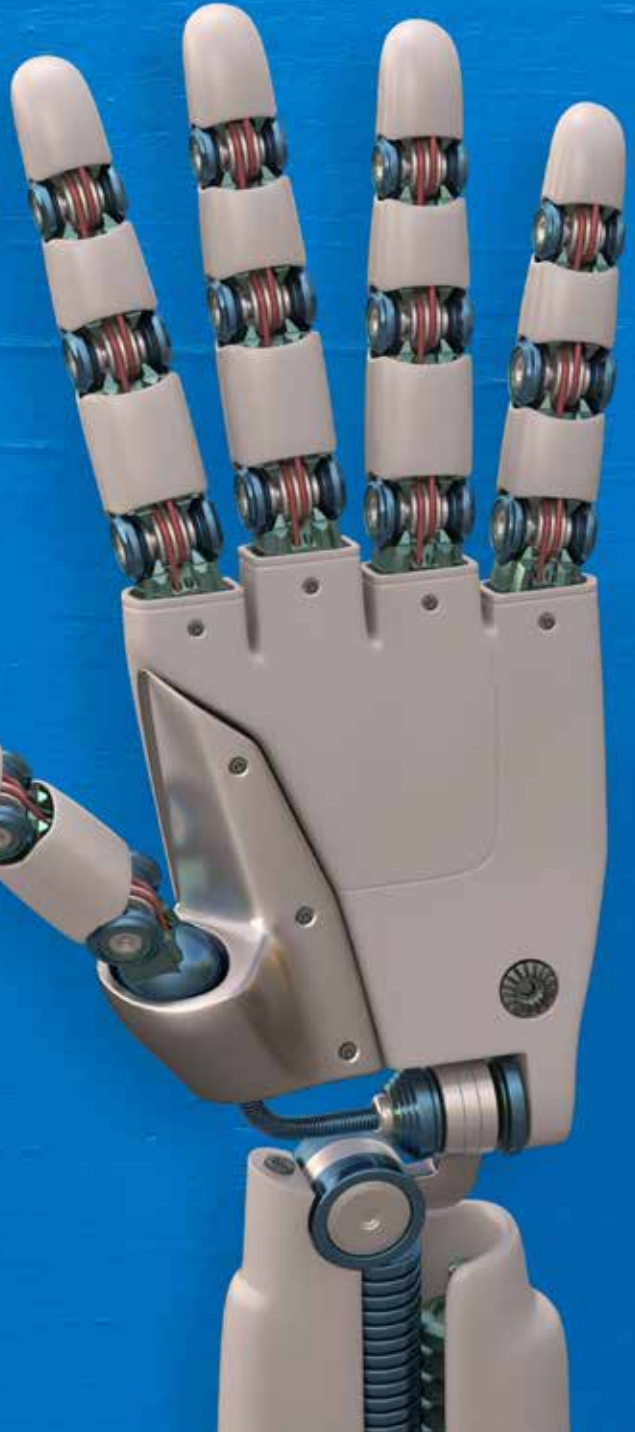
Think Ahead



Knowledge partner:

INSEAD

The Business School
for the World®



Navigating the digital terrain

Five skillsets for CFOs to
lead and thrive in a digital
organisation



Contents

FOREWORD	2
ACKNOWLEDGEMENTS	3
EXECUTIVE SUMMARY	4
INTRODUCTION How can CFOs stay relevant?	7
SCENARIOS & COMPETENCIES Findings Competencies levers and levels Call to action	10
COMPETENCY LEVEL 1: ROLE AS A STRATEGIC LEADER Role in the organisation As a business partner Technology defining their work and teams Call to action	17
COMPETENCY LEVEL 2: VALUE IN THE AGE OF DATA Using analytics and machine learning Tapping into external data Call to action	25
COMPETENCY LEVEL 3: DIGITAL LABOUR; CHANGING FACE OF RESOURCES Leveraging digital labour Managing millennials Call to action	31
COMPETENCY LEVEL 4: POWER OF COLLABORATION Navigating cultures, being a trusted business partner External stakeholders can be beneficial Call to action	37
COMPETENCY LEVEL 5: DIGITAL TRUST; CHANGING FACE OF THREATS Setting the tone from the top Getting the right defences; from insider threats to external threats Call to action	41
CONCLUSION	47

Foreword

Concerns about Digital Darwinism, when technological possibilities evolve faster than societies can adapt, is on the rise. Many organisations and individuals are struggling to adapt to the possibilities and threats brought on by an explosion in technology, underpinned by an age of shifting geo-political uncertainty. It is a fate that threatens most professionals in almost every industry; and CFOs are not spared.

This ACCA and KPMG in Singapore report, supported by our knowledge partner, INSEAD Emerging Markets Institute (EMI), aims to assist CFOs in navigating the increasingly difficult and puzzling digital terrain. It brings the CFO on a tour of the possible scenarios and essential skillsets that are required to do this: spanning the use of digital labour, data, robotics and cybersecurity, balanced with the existing strategic leadership and functional collaboration skills expected of business leaders.

This paper does not prescribe any particular course of action for CFOs but offers a practical guide for CFOs to understand what skillsets they may need as their circumstances evolve. Different scenarios are expected to unfold for different players. Like any scenario planning exercise, both the optimistic and pessimistic scenarios are presented. The “call-to-action” in each section then offers suggestions for CFOs focused on generating concrete outcomes.

In order to thrive in the digital terrain, CFOs must evolve and develop new skillsets. When this armour of skills is developed, the CFO will be in a position to fully utilise and be empowered by technology to lead a digital organisation. This report provides insights on how to develop that armour; distilled from discussions with some of the most successful CFOs in highly regarded organisations.

As CFOs and finance leaders, we hope you find the report useful in planning your own approach to embrace a digital future.

Satya Ramamurthy
Head of Management Consulting
KPMG in Singapore

Chiew Chun Wee
Head of Policy, Asia Pacific
ACCA

Acknowledgements

We would like to thank the following executives for sharing their time and providing their insights:

Alexander Joramsa

CFO, Asia Pacific and China, GE Grid Solutions

Bob Yap

Head of Advisory, KPMG in Singapore

Irving Low

Head of Risk Consulting, KPMG in Singapore

Daryl Pereira

Head of Cybersecurity, KPMG in Singapore

Fabiano Siufi

CFO, Microsoft Singapore

Freddie Koh

Finance Director, Pfizer Asia Manufacturing Pte Ltd

Gabriel Low

CFO, South APAC Weidmuller Pte Ltd

Ivy Lai

CFO, Philips ASEAN Pacific, Country Manager, Philips Singapore

Jamie Lyon

Head of Corporate Sector, ACCA Global

Jean-Philippe Gauvrit

APAC & JAPAN Market CFO, Nokia

John Lo

CFO, Tencent

Johnny Quah

Deputy Group CFO (Shared Services & Research), Singhealth

Lyon Poh

Head of Digital + Innovation, KPMG in Singapore

Rod Jackson

CFO, Westpac International

Ruben Stappers

CFO, Zalora Group

Srinivasan Venkita Padmanabhan

President & Global Head - Corporate Finance, Olam Group

Subramanian Kasi

Financial Director, Tower Transit

Sunil Golecha

Head of Sales Excellence & Strategic Partnerships - ASEAN & North Asia, Thomson Reuters

Vinika D. Rao

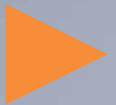
Executive Director, INSEAD EMI

“ We are the CEO's trusted advisors, and we do these three things: we explain the past, we optimise the present and hopefully, we shape the future of the organisation. ”

– Fabiano Siufi, Microsoft Singapore



Executive summary



We are living in an increasingly digital and dynamic environment where traditional tasks are increasingly being automated. How can CFOs thrive in this environment?

Will the traditional concept of what a Chief Financial Officer (CFO) is today still be relevant in 2020 and beyond? Will the skillsets of the current CFO ensure that they remain effective and influential on the Board? This is unclear.

This paper seeks to provide clarity to the state of play, and to identify the drivers/levers that will ensure that the CFO has a voice in the C-suite.

ACCA and KPMG conducted a roundtable discussion with five CFOs and did in-depth interviews of eight CFOs from various organisations. As part of the study we sought opinions from knowledge leaders, including those in cybersecurity and finance transformation. These insights were supplemented with analyses of relevant ACCA and KPMG thought leadership papers.

Through our research and interviews, we have identified five levers that will determine the voice and

sphere of influence of CFOs in digital organisations in 2020 and beyond. These critical levers are leading strategically, creating value from data, leveraging on digital labour, collaborating with internal and external stakeholders, and embedding cybersecurity in the organisation.

The paper presents three scenarios that will materialise based on the levers that are maximised and minimised. In Scenario 1, CFO roles cease to exist and they are replaced by robots or other CxOs. In Scenario 2, CFOs exist as a service and in Scenario 3, CFOs are even more relevant than before, using technologies to enhance their work.

Whilst the paper serves as a practical guide and as a roadmap for CFOs, it does not categorically predict any scenario. It is simply describing what may happen depending on the mix of the levers.

The model presented in this paper was derived from interviews and discussions with CFOs from multi-national companies. However, its application is just as relevant to CFOs in small and medium enterprises (SMEs) and even start-ups.

FINDINGS

Most of the CFOs spoken to, believe that by 2025, the CFO is likely to be even more influential, and his/her role will be augmented by artificial intelligence (AI). The third scenario is the most likely eventuality, in their views.

CFOs do not believe that the finance function will cease to exist. In fact, with the increasing complexity of doing business, the CFO's soft and hard skills will be even more valuable to the CEOs; helping CEOs to decipher weak signals, new trends and even emerging risks.

However, this depends on how they deploy the competency levers. If a CFO does not exercise strategic leadership, collaborate cross-functionally and is not digitally proficient, he/she cannot lead a digital organisation of the future and will end up with Scenario 1, being replaced by others. If a CFO has those skillsets, on the other hand, he/she will end up in Scenario 3 (where the CFO leads in the organisation).

The second scenario – CFO-as-a-service – is highly relevant in the gig economy and it cannot be ruled out – it epitomises the uberisation of the role of CFOs – nothing really unimaginable for anyone who has seen digital disruption taking place in so many other industries and professions. In fact one of the CFOs interviewed believed strongly that this would happen.

Which scenario a CFO ends up in depends on what he/she does now – that is the call-to-action in this paper. CFOs should take stock of their skillsets using these levers to steer themselves into their target scenarios.





Introduction



In recent years, the emergence of transformative technologies such as blockchain, robotic process automation, artificial intelligence (AI), and machine and deep learning have disrupted many industries. While some of these technologies are still in their embryonic stage and applications are unevenly distributed, many experts believe that their growth will be exponential in coming years. Already, we are seeing new business models emerging, and as smart technologies continue to converge, many industries and business models to be radically transformed.

We are at the cusp of the Fourth Industrial Revolution, a term coined by Professor Klaus Schwab, Founder and Executive Chairman of the World Economic Forum, and its impact is expected to be profound. Unlike previous industrial revolutions, the rate of change is exponentially faster than before and has far-reaching implications, impacting all disciplines, economies, governments and industries. It is widely expected to completely reshape the workforce and the way society operates.

Among other drivers, as the business world becomes increasingly complex, leading CFOs are gradually expanding their roles from the traditional role of a financial gatekeeper who is solely focused on costs and controls, to becoming a digitally sophisticated strategic advisor to their CEOs. Besides financial stewardship, they are increasingly assuming additional responsibilities relating to risk management, business model innovation, and corporate strategy.

It is not surprising since CFOs typically have access

to all organisational data and are best-positioned to identify data correlations, operational drivers and cost efficiencies. In addition, they have the best understanding of the financial impact of key decisions. Yet, with the business landscape changing so rapidly, are CFOs adapting to stay relevant and successful?

HOW CAN CFOs STAY RELEVANT?

Indeed, CFOs see the importance of being at the forefront of these changes. This is more so as technologies converge, and new business models are developed.

“ The current ecosystem is different from 5 years ago. A lot of CFOs are well aware of that. 5 years back, every industry and vertical had their own characteristics, but now the internet is connecting everyone (customers and merchants) together. We're seeing more companies in different industries going digital. ”

– John Lo, Tencent

Freddie Koh, Finance Director of Pfizer noted that CFOs who are only good at accounting standards, and who do not adapt to new technology, run the risk of being replaced. It would be challenging for these CFOs to re-establish themselves once left behind in the global digital transformation.

Moreover, with increasingly intelligent automation, CFOs should expect to be relieved of more mundane tasks, freeing them to have more time and energy to look into higher value-add work. Digitalisation, especially RPA and AI, in the finance function allows lower level roles to be replaced and hence shifting the responsibilities upward in an organisation. However, this will take time and the adoption of new ways of working as well as new skillsets and mind-sets.

CFOs say that they need to proactively demonstrate an understanding of the business the company is in. They are often tasked with identifying new business opportunities and ensuring that plans are aligned and executed in line with business strategy. They now need to look beyond traditional measures such as return on capital, return on investment, and payback period, which may not be generating the insights they need.

“ Business models are changing and CFOs need to stay relevant. Financial data and resources are still very important, and that is under the domain of the CFO. You have an obligation to play that role of making sure that the business doesn't venture into a particular area where it is a dead end. ”

– Johnny Quah, Singhealth

In today's digital age, CFOs should be technology advocates, if not technology evangelists. Technology as an enabler can expand finance's reach and efficiency. CFOs should proactively seek out new tools that augment their jobs.

Ruben Stappers, CFO of Zalora spoke about how when he first started as a CFO, he had to use static excel spreadsheets to analyse his business. Now, he and his business teams are able to utilise new tools and technologies to analyse the business real-time, across multiple dimensions and in several visualisations. CFOs and their finance teams will need to reassess the way they work and the technology they use, and drive the transformation of their finance systems to deliver value to their organisations.

New CFOs have to be prepared to take on many roles in addition to the scope of finance – this includes legal, business development, strategic planning and risk management. They have to be dynamic as the business landscape is constantly changing.

“ [A new) CFO is expected to be] a strong strategic leader and thinker, along with strong commercial acumen, good engagement skills and good leadership skills. These are big challenging asks of a CFO these days but in my mind, what's expected. ”

– Rod Jackson, Westpac

A white drone remote controller is shown from a top-down perspective, resting on a dark, textured wooden surface. A smartphone is mounted on the controller's top deck. The controller features two joysticks, a central touchpad, and several buttons, including a power button. The text "Scenarios & competencies" is overlaid in white on the right side of the image, with an orange triangle pointing to the right below it.

Scenarios & competencies



With today's technological revolution being so different from the previous industrial revolutions, no one can predict with any degree of certainty how events will play out in the future. To prepare themselves for the future, most organisations make assumptions about what the possible future scenarios, and make long-term plans to steer themselves into their preferred scenario.

Taking the current technological changes into consideration, radical scenarios can be deduced and described. Scenarios take users into possible futures that might be shaped by previously inconceivable or imperceptible developments. They provide users with a deeper foundation of knowledge and self-awareness in approaching the future.¹

This paper does not categorically predict any scenario. It is meant to be a practical guide and a roadmap for CFOs. If a CFO does not exercise strategic leadership, collaborate cross-functionally and is not digitally proficient (some of the competency levers we have identified), he/she cannot lead a digital organisation of the future. It is possible he/she will end up with Scenario 1, being replaced by others. If he/she has those skillsets, on the other hand, he/she will end up in Scenario 3 (where he/she is influential and leads the organisation to greater heights).

The second scenario – CFO-as-a-service – is highly

relevant in today's gig economy and represents the uberisation of the role of CFOs. This type of service is already provided by some CFOs in the United Kingdom and in Singapore.²

The actions taken by CFOs today will determine which scenarios play out for them. CFOs can plan and adapt nimbly in order to steer themselves towards a more desirable scenario.

Figure 1: Three possible scenarios by 2025



SCENARIO 1

CFO roles cease to exist; replaced by CxOs or Robots



SCENARIO 2

CFO-as-a-service



SCENARIO 3

CFOs are relevant and influential, using augmented intelligence

1 *Living in the Futures*. Harvard Business Review. 2013. Retrieved from: <https://hbr.org/2013/05/living-in-the-futures>

2 The CFO Centre was launched in Singapore in 2014 and is a subsidiary of The FD Centre, which is based in Britain. The local CFO Centre now has six consultants

Ranging from CFOs being completely replaced to CFOs being at the centre of influence, the impact of technological advancements is considered. We asked our CFOs what they thought their roles will be like going forward.

Scenario 1: CFO roles ceased to exist; replaced by Chief Innovation, Digital, Data, Technology or Information Officers (CxOs) or by robots powered by AI.

In this scenario, CFOs become less important compared to CxOs. The role is being replaced by Chief Innovation, Digital, Data, Technology or Information Officers who are able to provide CFO-related services using bots. Alternatively, AI has developed to such an extent that the role of CFOs are replaced completely. AI becomes the valued business partners to CEOs and even takes a seat on the Board.

Stanford University academic Jerry Kaplan said, “The new coming wave of automation is blind to the colour of your collar.”³ Whether one is a factory worker, a financial advisor or a surgeon, jobs are at risk of being automated and completely replaced by robots.

While it seems impossible that CFOs will be replaced completely, technological advancements in AI have been rapid in the last few years, causing some to hail it as the next big thing or even a big threat to humanity. For example, the legal profession is on the verge of being radically transformed by AI platforms that dramatically affect how legal work gets done.⁴ In 2016, a bot carried out fully autonomous surgeries on live test subjects. This Smart Tissue Autonomous Robot (STAR) used its own vision, tools, and intelligence to carry out the procedure on live pigs and did a better job on the operation than the human surgeons who were given the same task.⁵

AI bots have already been even given a seat on the Board.⁶ By 2025, will we see bots representing CFOs, using cognitive technologies to provide Boards with a summary of financial data and other trends?

Scenario 2: “CFO-as-a-service”

In this scenario, CFOs are not needed on a full time basis. Instead, firms will hire CFOs on a gig basis.

This is already taking place in our gig economy and it

3 *Will artificial intelligence overtake humans in the workplace?* CBS News. 2015 Retrieved from:<http://www.cbsnews.com/news/will-a-i-overtake-humans-in-the-workplace/>

4 *Lawyers could be the next profession to be replaced by computers.* CNBC. 2017. Retrieved from:<https://www.cnbc.com/2017/02/17/lawyers-could-be-replaced-by-artificial-intelligence.html>

5 *Autonomous Robot Surgeon Bests Humans in World First.* IEEE Spectrum, 2016. Retrieved from:<http://spectrum.ieee.org/the-human-os/robotics/medical-robots/autonomous-robot-surgeon-bests-human-surgeons-in-world-first>

6 In 2014, Hong Kong venture capital firm Deep Knowledge appointed an AI robot, VITAL (Validating Investment Tool for Advancing Life Sciences) to its board of directors. Retrieved from: <http://www.businessinsider.com/vital-named-to-board-2014-5/?IR=T&r=SG>

makes sense especially for SMEs as they see it as a cost-effective solution.

Scenario 3: CFOs are relevant and influential, using augmented intelligence, and working well with the C-suite

In scenario 3, digitalisation is very advanced, and complements human intelligence. CFOs work hand-in-hand with robots or software bots, who are treated as equals to humans. Instead of a threat, bots are now aides to CFOs and will help them exert an even stronger influence, by providing them with real-time visibility across all functions of the organisation.

FINDINGS

Most of the CFOs spoken to believe that by 2025, the CFO is likely to be even more influential, and his/her role will be augmented by AI. The third scenario is the most likely eventuality.

CFOs do not believe that the finance function will cease to exist. In fact, with the increasing complexity of doing business, CFO's soft and hard skills will be even more critical to the CEOs; helping CEOs to decipher weak signals, new trends, and even emerging risks.

“ A function ceases to exist when there is no need for their competencies anymore. But I do not see this happening in the next 10 years for the finance function. At some point in time, it might happen when technology and artificial intelligence become so advanced that they are capable of more than just rule-based judgments. Today's advanced robotics with trend analysis and big data analysis can give you recommendations but not identify the strategic fit for you. That's where the CFO comes in.”

– Ivy Lai, Philips Electronics

However, AI and automation would have an overwhelming impact on CFOs.

“ I think [Scenario 1] is a high threat because you can be replaced by a Chief Data Officer collecting data and using software to provide the same kind of services. This is similar to CFO-as-a-service. ”

– Gabriel Low, Weidmuller

This view is not uncommon and witnesses the automation anxiety that has been weighing down on society in the last few years. Cognitive technologies are in the midst of reshaping the general workforce, and as we enter into the Fourth Industrial Revolution, some say

- Between now and 2025, up to two-thirds of the US\$9 trillion knowledge worker marketplace may be affected.⁷
- University of Oxford and Yale University predicts that by 2062, there is a 50 percent chance that AI will be better than humans at every single task humans now perform. In 120 years, AI will perform all human jobs.⁸
- The same study also predicts that AI will outperform humans in translating languages (by 2024), driving a truck (by 2027), working in retail (by 2031), writing a bestselling book (by 2049), and working as a surgeon (by 2053).
- Forrester predicts that by 2027, technologies such as AI, machine learning (ML), and robotic automation will erase 17 percent of jobs in the US economy while creating 10 percent of new jobs over the same period.⁹

Freddie Koh, Finance Director of Pfizer, hypothesised that “CFO-as-a-service” will exist in pockets of the business community in 2025. It is likely that start-ups and SMEs will find these part-time interim CFO services attractive, given that the costs of hiring a full-time CFO may not be justifiable for their scale of business operations. Such structures will provide start-ups and SMEs with much needed executive-level financial expertise.

One benefit he identified is that these CFOs are likely able to “...cross-pollinate good ideas given that they do not serve only one company. The varied experiences and exposures that this type of CFOs have may help SMEs to grow.”

CFO-as-a-service may also appeal to millennials aspiring to be CFOs. Studies have shown that millennials often do not desire to be like their predecessors, having to climb up the corporate ladder in a linear fashion. Millennials are known to prefer lattice career paths that move them laterally, diagonally, and down, as well as up. They want a broader understanding of the company, see how their role relates and connects to others and how they can collaborate to improve results.¹⁰ Thus, CFO-as-a-service allows them career mobility and have myriad experiences.

7 *Disruptive technologies: Advances that will transform life, business and the global economy.* McKinsey Global Institute. May 2013

8 *When Will AI Exceed Human Performance?* University of Oxford and Yale University. May 2017

9 *The Future of White-Collar Work: Sharing Your Cubicle with Robots.* Forrester. June 2016

10 *Professional Accountants - The Future: Generation Next.* ACCA. November 2016. Retrieved from: http://www.accaglobal.com/content/dam/ACCA_Global/Technical/Future/generation-next-full-report.PDF

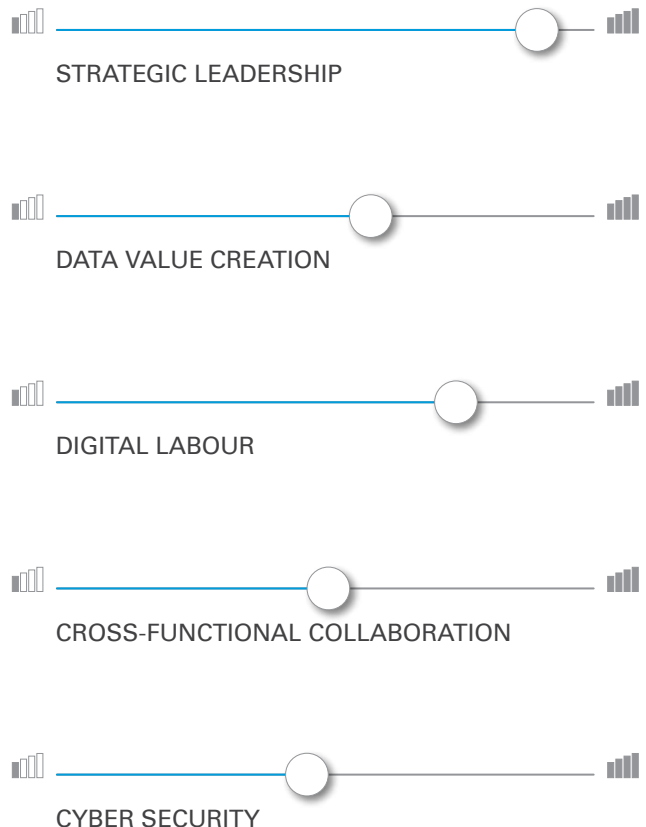
COMPETENCY LEVERS AND LEVELS

To steer themselves into the right future, we propose five possible competency levers that CFOs should possess in order to shape their roles within their organisations.

1. Strategic Leadership: How can they be better at being strategic leaders?
2. Data-value Creation: How can CFOs create value from data?
3. Digital Labour as a resource: How to use digital labour effectively?
4. Collaboration: How should they collaborate productively with different stakeholders?
5. Cybersecurity: How can trust be enhanced through cybersecurity?

Figure 2 illustrates competency levels that a CFO in a multinational corporation may need in future. CFOs do not have to excel in every aspect, and should instead augment these levers by hiring the right team. For example, CFOs we interviewed spoke about how they would need to have some knowledge of the types of cybersecurity risks that their businesses are exposed to. However, CFOs are not expected to be domain experts in cybersecurity – that would be the purview of the Chief Information Security Officer or equivalent. Rather, a sufficient amount of knowledge is required, enough to know when expert advice has to be sought.

Figure 2: Illustrative competency levels of the Digital CFO



CALL TO ACTION

The level of competency relating to each lever will determine which scenario CFOs (and their teams) find themselves in. For example, in Scenario 3, CFOs will require high levels of competency pertaining to all levers. On the other hand, some companies may only require CFO-as-a-service (Scenario 2). This may mean that as CFOs in these companies, they may only need to know how to use data effectively in the finance function and how to leverage digital labour. CFOs who lag behind in technology and all levers may find themselves in Scenario 1, where they are replaced completely.

In a changing business world, CFOs have to think beyond numbers. They need to be strategic leaders, clearly articulating the function's vision and strategy. Beyond just being tech-savvy, the digital CFO can use the levers – strategic leadership, data-driven value creation, digital labour, cross-functional collaboration and cybersecurity – to navigate themselves into their desired scenarios.





Competency Level 1:
Role as a
strategic leader



CFOs and their finance team play a critical role in helping the company make the right strategic decisions that are aimed at profitable, long-term, and sustainable growth. These typically involve portfolio analysis and optimal resource allocation. CFOs also determine, together with business units, which new initiatives or projects should receive funding in favour of others. Given that capital is often limited, it is critical that the company makes the right choices, including what to stop funding.

Business environments are becoming more complex. CEOs are increasingly expecting their CFOs to assume the role of a strategic leader, and take greater responsibility for company performance and direction. They want their CFOs to be cognisant of the changes ahead and help steer the business in the right direction. CFOs are expected to have cross-organisational perspectives, from overseeing mergers and acquisitions to even technology-related areas such as digitisation and cybersecurity.

“Innovations and disruption in today's world imply that traditional definitions of the boundary of the firm are no longer valid. The implications of these for CFOs leading digital organisations are clear - successful leaders will be those who combine the capabilities of

deep financial and accounting expertise with the perceptual acuity to understand the implications of these changes for all aspects of the organisation, its people and its stakeholders.”

– Prof. V. “Paddy” Padmanabhan, INSEAD Emerging Markets Institute

That is not surprising, given that CFOs are now organisational lynchpins, and the nexus of business activities. Without functional biases, he/she can provide hard data to counter the inherent cognitive biases of the other C-level executives. Therefore, they play a crucial role in the decision-making process.

“CFOs are now at the centre point for all the connectivity. Some have become very powerful, and are the ones next to the bosses, influencing the way forward for the organisation.”

– Jean-Philippe Gauthier, Nokia

ROLE IN THE ORGANISATION

As Rod Jackson from Westpac puts it, CFOs are the number two in their organisations and have a bigger

role to fill as their CEOs engage more actively with external stakeholders such as regulators or clients.

“ You become a go-to person in the company as a trouble-shooter, as a decision maker, because the CEO is not around. ”

– Rod Jackson, Westpac

Put simply, the role of the CFO can be described as both defensive and offensive.

CFOs in a defensive play oversee areas related to statutory compliance and risk mitigation. In organisations which do not have a risk officer, CFOs are also de-facto chief risk officers, considering not just financial risks but even operational risks.

The ability to seize business opportunities is often intricately linked to the ability of the CFO and C-suite members to identify, assess and manage risks. CFOs are no strangers to that, with risk management being a key responsibility. Some of the risks they have been managing include currency risk, liquidity risk and credit risk. With the advent of new and smart technologies, CFOs now need to also take technological risks into consideration.

As they support their organisation's growth strategies, CFOs need to be attuned to their organisation's

values and ethics when discharging their fiduciary duties. A recent ACCA study¹¹ of professional accountants and senior C-suite executives found that 77 percent of over 7,600 respondents cited ethical quotient as 'very important' in the digital age. Given the rapid pace of technological and digital advance, ethics would be an area that becomes increasingly important in the near future.

CFOs would always need to be mindful of ethical frameworks that they operate within. They are not just making pure financial or business decisions, but are making decisions and giving recommendations based on values and standards. As automation increases, sound ethical judgement will ensure that innovation is supported without compromising proper behaviour.

In an offensive role, CFOs, with their deep understanding of the market their businesses are in, the value proposition, competitive landscape, and their appreciation of the financial fundamentals, can provide deep insights into their organisation's growth strategies.

CFOs have the experience needed to evaluate business decisions and can value add by asking the right questions. While big data and analytics provide insights and help drive decisions for future organisational growth, the business is at risk if financial fundamentals are not taken care of. This is where the CFO's role is critical. CFOs can play the devil's

11 *Ethics and trust in a digital age*. ACCA. August 2017. Retrieved from: http://www.accaglobal.com/content/dam/ACCA_Global/Technical/Future/pi-ethics-trust-digital-age.pdf

advocate by highlighting risks and raising questions about the business growth strategy. They become an invaluable member on the team as they plan the company's next growth trajectory with the other C-suites members.

“ CFOs can make valuable contribution to strategy and decision making by generating information insights from big data analytics. However, if the company's financial reporting or internal controls are not well-managed; the company can run into serious issues very quickly as all basic criteria to operate are not met. To be successful, CFO must be able to tap into the new insights from big data analytics and assess opportunities against their company's financial position. Strong understanding of the company's financial position is a pre-requisite. ”

– Freddie Koh, Pfizer

In his article, Irving Low, Head of Risk Consulting, KPMG in Singapore, said that it might be useful

to have CFOs on the board so that they are held directly accountable for the accounts that they are responsible for producing.¹² Having CFOs on the Board also means that they can engage the board more productively on strategy. The hard data and empirical mentality that the CFO brings to the table can be instrumental in setting and effecting the company's game plan, especially when it comes to emerging trends.

AI and bots could provide recommendations, but they do not have “human” experience, which is currently not codified or recorded systematically. CFOs will still be counted on to help manage investors and market reactions when corporate decisions are announced.

“ The digitalisation age brings immense insights, but someone has to action those. And who is in the best position to do that, to take those insights and execute them successfully for the company for the customers and for all the other stakeholders that you represent? That's why I'm clear the CFO stays relevant [in the future]. ”

– Rod Jackson, Westpac

¹² *Should CFOs have a seat on the board?* KPMG. June 2017. Retrieved from: <https://home.kpmg.com/sg/en/home/media/press-contributions/2017/06/should-cfos-have-a-seat-on-the-board.html>

AS A BUSINESS PARTNER

Often, CFOs are not the first C-suite member that come to mind in revenue generation discussions, given that this is often under the purview of sales, marketing and even product development functions. Yet, finance can be a key enabler as one CFO demonstrated.

Alexander Joramsa, CFO at GE Grid Solutions recounted the time when one of the business units (BU) was unable to get the client to commit due to funding issues. By understanding the client's problem, he was able to advise the BU on a different pricing model and helped the company to clinch the deal.

“Commercial finance is becoming more and more critical. How can we work with the customers in terms of structuring, in terms of financing, and in terms of getting the value out beyond just the technology or the product?”

– Alexander Joramsa, GE Grid Solutions

CFOs are also increasingly tasked to help the BUs understand customer interactions down to the most granular level. John Lo from Tencent cited an example of how he reduced the settlement cycle for small application developers (because he understood

their need for on-time cash payments) instead of the standard practice of 90 days for bigger-sized suppliers.¹³

CFOs can take a leading role in managing the planning and execution of the business strategy. CFOs can combine various sets of data and provide the organisation with deeper, more valuable and more strategic reports.

TECHNOLOGY DEFINING THEIR WORK AND TEAMS

All too often, CFOs and other members of the finance function find themselves caught up in low-value tasks such as updating spreadsheets and compiling weekly or end-of-month reports, instead of focusing time and energy on high-value work such as fraud detection, compliance and analysing and deriving insights from data analytics.

As companies undergo digital transformation efforts and technology becomes the foundation for new business models, CFOs are expected to be technology advocates and not shy away from new technologies. For instance, John Lo, CFO of Tencent said that they are experimenting with utilising facial-recognition technology within their organisation for access control (on test pilot basis). The intention is to make their organisation's product better.

¹³ *How Tencent's John Lo is changing the world through digital technology.* InTheBlack. February 2016. Retrieved from: <https://www.intheblack.com/articles/2016/02/01/how-tencents-john-lo-is-changing-the-world-through-digital-technology>

Another notable development is the promotion of CIOs into larger corporate leadership roles. For example, R. Martin Chavez, CIO at Goldman Sachs Group Inc. was promoted to CFO in 2016.¹⁴ Norfolk Southern Corp. named Cynthia Earhart its CIO as the railroad's next finance chief in August 2017.¹⁵ These developments are an indication of the increasingly strategic and vital role technology plays in many industries, even traditional ones.

CALL TO ACTION

CFOs need to develop their Vision Quotient, one of the 7 quotients identified by ACCA to be essential to the modern finance professional.¹⁶ This refers to CFO's ability to anticipate future trends accurately by extrapolating existing trends and facts, and filling the gaps by thinking innovatively. What is the CFO's vision for the organisation's future and how does his/her function fit into that?

To better align the function with the organisations' strategic goals, especially as it undergoes transformation, CFOs need to identify areas where technology adoption can result in the greatest impact for their functions, prioritise them and take action. In particular, platforms that will enable their companies

to reduce costs and increase operational efficiency would be invaluable in their work.

“ [CFOs] can start digitising their operations and creating tools that provide them with real-time information and a holistic situation of their companies' operations at the touch of their fingertips. Or an app that integrates all the information a CFO requires (cashflows, and so on). You shouldn't wait till you have a cashflow problem, you should use this finance data to project ahead, using data analytics. ”

– John Lo, Tencent

Another consideration for CFOs is the impact of technology advances on their function and structure, as well as the talents and capabilities required within the function. Increasingly, the finance function's size and make up will look different. For example, with automated tools increasing the accuracy of

¹⁴ *Goldman Sachs CFO Pick Highlights Rise of Tech*. The Wall Street Journal. December 2016. Retrieved from: <https://blogs.wsj.com/cfo/2016/12/14/goldman-sachs-cfo-pick-highlights-rise-of-tech>

¹⁵ *Norfolk Southern Promotes CIO Cynthia Earhart to CFO*. The Wall Street Journal. August 2017. <https://blogs.wsj.com/cfo/2017/08/16/norfolk-southern-promotes-cio-cynthia-earhart-to-cfo/>

¹⁶ Professional accountants – the future: Drivers of change and future skills. ACCA. June 2016. Retrieved from: <http://www.accaglobal.com/gb/en/professional-insights/pro-accountants-the-future/drivers-of-change-and-future-skills.html>

USING AI IN BUSINESS STRATEGY?

Some CFOs may wonder if it's even possible to use AI in business strategy. Google-owned AI system, AlphaGo, have been defeating Go world's leading players. Go is a hugely complex ancient strategy game, and AlphaGo's successes so far seem to suggest that even strategy-making can eventually be automated.

Yet, deep learning is a black box. Such technologies can be so complex that even their creators may not know the reason for the tool rejecting one transaction or portfolio over another. Eventually, regulators would want to know the logic behind it, and this might be impossible, even for simple systems. Already, the EU's General Data Protection Regulation, which will come into force in May 2018, has restrictions on AI systems which "significantly affect" users. It also creates a "right to explanation," so that anyone can ask for an explanation of an algorithmic decision that was made about them. Without knowing how the AI arrives at a conclusion, C-Suite executives will find it hard to predict when failures might occur.

For now, from a regulatory perspective, it would be difficult to justify AI decisions:

“ We are not going into a state where the machine is responsible for decision making. That would be disastrous in terms of legal liability. For example, autonomous vehicles are not taking off as quickly as expected. It is not about the technology but about the party who owns the responsibility when the accidents occur. A lot of factors remain unsettled and there will be social forces that push back. Likewise for CFO in the data world, you can't have a bot telling everyone what to do. ”

– **Lyon Poh**
Head of Digital + Innovation
KPMG in Singapore

transaction monitoring and reducing the number of false positives, CFOs and risk management teams could potentially reduce their headcount in fraud detection.

CFOs believe that in future, their finance teams will comprise of technologically savvy individuals with multi-dimensional backgrounds who are able to use technology tools effectively. This is especially the case given the present educational trends.

“ Young kids are now being told that learning how to code and develop computational skills is as important as developing literacy and numeracy skills. Schools are introducing computer science to 5 year olds, and the age for exploring complicated computing concepts is reducing every year. ”

– Vinika D. Rao, Executive Director, INSEAD EMI

As technology improves, CFOs will need to manage future teams, comprising of both humans and digital labour, and help their organisation offer a seamless approach to interacting with customers.





Competency
Level 2:
Value in the
age of data



Advances in technology and an explosion of data have changed the game for many organisations. Leading enterprises leverage technology to identify profitable markets and customer segments, and understand how to connect them with their business. And data has been hailed as a driver of revenue, with some even calling it as the new fuel for the economy.

In some sense, data is a living and evolving asset, and can be used to unleash fresh opportunities for monetisation, provided that data has integrity and is managed. Data monetisation is about converting that asset into currency (profits) by increasing revenues or decreasing costs. By unlocking the value of data, CFOs can identify and advise CEOs on the new opportunities ahead.

“ You can monetise your customer segmentation or you can bring new products and services to your customer through a data platform. It may open up a totally new market where you can play a different roles in different industries. You must first appreciate and understand what this enterprise data means and how we can work with the ecosystem to create more products and offerings. If the CFO can play this role, it

will be more than just data reporting. ”

– Lyon Poh, Head of Digital + Innovation,
KPMG in Singapore

USING ANALYTICS AND MACHINE LEARNING

CFOs are sitting on a treasure-trove of information and enterprise data from ERP systems, line-of-business applications, and management reporting tools. Most of this data would be classified as structured data. Around 20 percent of the data available to enterprises is estimated to be structured data, while the rest is unstructured. Unstructured data offers a rich mine of information that CFOs can use to find the keys to current and future business drivers.

“ Basically we collaborate with a lot of people, like training department or business groups because we have a lot of broad data, a lot of data collected from their business IT systems. There are ways we can analyse this data, in order to generate some value out of it. Without some form of analysis it's basically useless. ”

– John Lo, Tencent

Unstructured data is data that does not follow a specified format for big data and may not always be easily converted into a structured model. Some examples of unstructured data include presentations, voicemails, free text documents, social media feeds, digital images and more.

Whether on its own, or used in conjunction with structured data, unstructured data can be used to inform CFOs about many aspects of the business, including validating the business strategy. But this has remained relatively untapped until advances in cognitive technology in the last few years were made.

Cognitive technology is a broad concept that involves the combination of many sophisticated analytic technologies such as machine learning, data-mining and pattern recognition. These can turn previously inaccessible unstructured data into insights for businesses. It allows organisations to access, analyse and identify patterns in big data in a way that is beyond human abilities.

“It’s becoming humanly impossible for businesses to sift through the tsunami of data being generated, and make sense of it. Machine learning and other big data technologies are key enablers to learn from the data, identify

shifting market dynamics and consumer behaviour, and quickly adapt our business models to succeed.”

– Sunil Golecha, Thomson Reuters

It is now possible for organisations to analyse their mountains of unstructured content in ways they could not before using machine learning capabilities. With a more holistic picture of their data, finance teams can swiftly interpret and act on sophisticated financial analyses, thus minimising time spent on data entry and maximising operational efficiencies. And with their big picture views and business perspectives, CFOs can translate data into performance insight and meaningful value that produces better decisions on customers, service delivery, product development and other business enablers.

“Deeper insights from AI/ML models combined with greater understanding of external factors such as industry trends and customer needs will substantially increase the value Finance brings to the business.”

– Fabiano Siufi, Microsoft Singapore

TAPPING INTO EXTERNAL DATA

In addition to financial data, CFOs are increasingly asked by their boards to include sustainability performance dimensions such as economic sustainability performance (ESP) and non-financial environmental, social, and governance (ESG) sustainability performance into their managerial decision-making.

“ [CFOs] are moving away from pure financial data and financial concepts into much more operational commercial data. This is not new but at least we have new tools to approach it. We have new tools to understand the data, put them into format and to use them as CFOs. ”

– Jean-Philippe Gauvrit, Nokia

External sources of data, such as social media insights, environmental data, market and economic data such as fiscal policies, currency fluctuations, market prices and even ecosystem data such as partner performance metrics and vendor trends, can be used as additional factors to assess the operational needs for the business.

“ I considered buying certain types of customs data for some countries to allow for granularity in market size analysis. The availability of such data depends on the data owner’s (government or company’s) willingness to make the data available for sale on the public domain. ”

– Gabriel Low, Weidmuller

Data has expanded the role of CFOs in other aspects, albeit subtly. A Dun & Bradstreet study of 250 finance executives found that finance leaders are playing an important role in navigating their organisation’s customer experience, a mandate that was traditionally under the purview of Chief Marketing Officer. Finance executives find themselves having to make customer-focused initiatives a top priority. Some key actions they are taking include investing in the right tools and technology, as well as augmenting internal data with third-party data and analytics.¹⁷

“ Zalora operates different business models. We have our private labels and branded

¹⁷ *The Customer-Obsessed Finance Leader*. Dun & Bradstreet. June 2017. Retrieved from: <http://www.dnb.com/perspectives/finance-credit-risk/improve-customer-experience-with-data-analytics.html>

outright buys, we operate a Marketplace and have consignment arrangements. Each has its own P&L characteristics. All these business models have different economics, different working capital requirements and business needs. Today's technologies can ensure that you have all the required information in an interactive manner at your fingertips. Knowing the business as the CFO and enabling your organisation to understand how to drive value is very important. ”

– Ruben Stappers, Zalora

However, it seems that the use of external data is still very limited within the finance function. KPMG and ACCA's report, *Enterprise Performance Management*¹⁸, found that about one third do not use external data in the forecasting process or that its application had limited use. The main impediment to the use of external data is the quality of data. It is a known barrier to the use of data analytics.

CALL TO ACTION

CFOs need to react proactively and make informed decisions quickly to strategically manage an organisation's day-to-day operations due to economic and regulatory volatility. Analytics and machine learning can enrich CFOs' financial planning perspectives and allow them to provide the C-Suite with richer information and deeper insights.

By using analytics and machine learning to distil vast amount of structured and unstructured data into actionable insights, patterns and predictions, CFOs can make sense of the business drivers, and be able to present to the board what the outlook for the organisation is, what the costs are, and what actions need to be taken.

This invariably implies that CFOs must acquire new skills when it comes to dealing with massive amounts of data, and the analytics that goes with it. In some sense, they need to become partial data scientists and be able to identify the right data. They will need to know when to consult deep experts in data analytics. In addition, being able to identify the signals from the noise will be a key competency of CFOs.

¹⁸ *Enterprise Performance Management*. KPMG & ACCA. November 2016. Retrieved from: http://www.accaglobal.com/content/dam/ACCA_Global/Technical/fin/PI-KPMG-EPM_conclusion.pdf

“I believe that the true value-add of the CFO is not just about having a timely and accurate set of financials. It is about having the ability to translate that kind of information into the opportunities and risks for the business. As Philips transforms itself into a health technology company providing solutions, how will the finance function transform? From a solutions perspective, it is not about understanding IFRS or accounting technicalities, but about solving the problem for our customers.”

– Ivy Lai, Philips Electronics





Competency
Lever 3:
Digital labour;
changing face
of resources



Organisations are always on the lookout for ways to minimise operating costs and maximise service quality. Shared services and business process outsourcing models were long used by organisations to shape and evolve the optimal model to drive business performance. And finance and accounting (F&A) activities such as payroll accounting, accounts payable, and accounts receivables were one of the first processes to be outsourced.

Yet, while these were once profitable strategies, rising global workforce costs have reached the tipping point where the benefits of offshoring may no longer outweigh the costs. Indeed, this strategy is almost impossible to sustain, even with the shrewdest workforce management. What's more, while cost benefits were once feasible, performance problems driven by attrition meant that it might not always equate to an increase in productivity.

What's next for organisations then? Inevitably, as technologies converge, CFOs will have to consider the role and potential impacts that digital labour will have on the shape, size and function in organisations.

The influx of new, automated technology will most likely displace workers in the lower and middle tiers of an organisation and it is pertinent that CFOs help to work out the organisational dilemmas created by this.

At the same time, with the global talent pool getting

shallower and more expensive, the 21st century enterprise is likely to be one that is leaner, utilises digital labour to augment humans, and accesses skills on demand through platforms and alternative employment models.

LEVERAGING DIGITAL LABOUR

Digital labour broadly refers to the automation of labour by leveraging digital technologies to augment, or automate the tasks undertaken by knowledge workers in the organisation. This extends from simple robotic automation through to machine learning and cognitive automation.

CFOs are no strangers to automation. Much of the focus in recent years has been around robotic process automation (RPA), particularly in functions like finance where processes are well-codified, highly repetitive, regular and routine. RPA is widely expected to bring about transformative shifts in the economy and the larger society as it integrates with a new class of cognitive technologies.

At the higher end of the automation spectrum, RPA can be combined with more advanced, cognitive technologies such as natural language processing, machine learning, the analysis of structured and unstructured data, and even probabilistic reasoning.

Cognitive automation are applications and machines that perform tasks that previously required human intelligence. This has been a major element of AI

and self-learning systems that use data mining, pattern recognition and natural language processing. The computer acquires knowledge automatically and continuously through deep-learning algorithms, and, as it learns, becomes capable of anticipating new problems and modelling approaches in response.

Leading CFOs are already focusing on next-generation automation to reduce significant costs in finance while also reducing risk and helping the business make better decisions. Automated processes have already allowed CFOs and their teams to deliver more frequent, accurate financial reports, complete a financial close more swiftly, and dive into company data to instantly deliver strategic insights to other business leaders.

Many are starting to realise that wider use of software robotics could deliver significant additional value. These kinds of cognitive systems can take on complex tasks that have historically required human intelligence and situational analysis. They can support employees by responding to customer inquiries, conducting research, providing quick and accurate answers to business questions and even managing aspects of office security.

“For many finance transformation leaders, “hiring” robots may be the next obvious step in making finance process delivery more efficient and effective. And it’s a reasonable guess that

they will eventually incorporate RPA to some degree into transaction processes as various forces converge, and a greater understanding of the benefits and better value propositions become available in the marketplace. But the next frontier may be far more exciting, incorporating greater computing power and artificial intelligence into robotics, so that the lines between human judgment and automation become blurred.”

– Jamie Lyon, Head of Corporate Sector, ACCA

Cognitive automation is where the market is headed in the longer term, and a good portion of CFOs’ future workforce may well be digital. There is potential for robotics and AI to support, or augment, existing roles. These technologies, like other transformative technologies through the years, may just transform the nature of work.

Not surprising, CFOs we have spoken to appear to welcome this change. For instance, when spreadsheets were introduced into the workplace, it automated finance’s task of doing calculations with calculators and paper ledgers, to produce departmental budgets.

“ During my first industrial attachment in college with a liquidator, I was one of ten people assigned to balancing the books for a bookshop. We walked into a room full of ledger books, and our job was to cast and check if the numbers tally. If you look at that age versus where we are now, we are in a better position today because we do not have to worry about the accuracy of manual clerical tasks like these. If I were a CFO at that point in time, I would have to ensure accuracy in my reporting, and timeliness comes second to that. CFOs today would not imagine going back to those days where many tasks were unautomated and more man-hours were put into manual tasks. ”

– Ivy Lai, Philips Electronics

As such, cognitive automation may not be as much a threat to the human workforce as some pundits have feared. Instead it is the next evolutionary step towards smarter, more productive and innovative employees. Displaced workers can be deployed into

strategic, higher-value roles, resulting in meaningful work and maybe even better paying jobs.

At the same time, as these software-based intelligent process automation technologies become a more significant part of the workforce, they become cheaper. By augmenting humans, cognitive automation helps to raise worker productivity, resulting a leaner enterprise.

However there are skills that automation will not be able to replace humans in. At the present age, AI lacks the fundamental emotional quotients (EQ) and creative quotients (CQ) that humans have. AI would not be able to take all signals and convert it into business acumen for the business.

Cognitive automation tools with deep machine learning can provide CFOs insights and even make low-level decision. However, it is unlikely that the organisation will allow these applications to make high-level strategic decisions. From a regulatory perspective, it would be difficult to justify them.

MANAGING MILLENNIALS

Millennials are beginning to dominate the workplace. There are approximately 1.1 million millennials (aged 15-34) in Singapore, accounting for 27 percent of the country’s resident population in 2016.¹⁹ As they move into management positions, they bring new perspectives and new business values.

¹⁹ *Population Trends 2016*. Singapore Department of Statistics. September 2016. Retrieved from: <http://www.singstat.gov.sg/publications/publications-and-papers/population-and-population-structure/population-trends>

Whether in finance or across the organisation, the workforce will mirror the existing and future customer bases. If millennials are not well represented in the organisation, and if their voices are not heard at all, the business model, products and services that it provides may not be relevant.

Millennials have high expectations of their workplace environment. They grew up in a world where speed, automation, and accessibility is expected, therefore their priorities differ from those of the generation before them. They desire flexibility and transparency, and to get the best talent, businesses must know how best to engage them so as to retain them.

“ To appraise a staff who is Gen-X, I would need to set up a meeting with her. With the millennial and the youngest person in my finance team, this appraisal setting will not work. But if I bring her to the canteen or Starbucks for a coffee, the conversation will be much richer. That’s how you work with the younger generation. ”

– Subramanian Kasi, Tower Transit

Work has to have meaning and purpose. To cater to the millennial workforce, CFOs will need to look into automating transactional and menial tasks through technology. For example, millennials would not want to spend hours reviewing spreadsheets



With millennials, and with bots coming into the workforce, CFOs need to continue to invest in understanding the recruitment, development and make-up of their workforce, and designing it such that human and digital labour can be optimally integrated.

just to identify patterns. By taking the tedious and boring work out, employees will have time for more rewarding and higher-value work, and allowing them to innovate and grow within the company. CFOs will need to translate their work into meaning for millennials.

“I want my finance team to see that we are not just a finance department but an enabling function. It is through us that the company can get valuable insights. If our finance team is only good at handling statutory matters, we will run the risk of being replaced ultimately.”

– Freddie Koh, Pfizer

CALL TO ACTION

With millennials, and with bots coming into the workforce, CFOs need to continue to invest in understanding the recruitment, development and make-up of their workforce, and designing it such that human and digital labour can be optimally integrated.

By defining how this make up will look like, CFOs can then recruit the right “resources” for their organisation, thus improving productivity and creating

an inclusive, and productive working environment. CFOs can start by creating a detailed blueprint that cover structural aspects, such as who sits where, accountabilities, spans, and layers, as well as enabling factors, such as information flows, capability building, and career path redesign.²⁰

Regardless of how the finance function evolves, the need for talented people who can steer an organisation forward remains. The make-up will be very different, and our CFOs know what talents they need.

“Today, most Finance teams possess solid finance and accounting skills, with some focusing on enhancing their business partnering skills. But very few teams have tech savvy talent to seamlessly interact with cutting-edge technologies. The future Finance function will need to build technology expertise to create innovative solutions and drive digital transformation.”

– Sunil Golecha, Thomson Reuters

20 *Rise of the humans*. KPMG. November 2016. Retrieved from: <https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2016/11/rise-of-the-humans.pdf>

Competency Level 4: Power of collaboration



A more open and collaborative culture is critical for managing the complexity of business today but many organisations face obstacles when it comes to effective collaboration. Cultural and behavioural challenges, lack of diversity, and misalignment of goals or even key performance indicators often results in poor collaboration between functions. Yet, CFOs cannot work in silos and hope to effectively respond to strategic challenges impacting their businesses today. They will need to collaborate with internal and external partners.

“ Good ideas can come from anyone in any function, and don’ necessarily have to come from within the company. Look at Silicon Valley. They have a thriving innovation culture, because of the extensive cross-pollination of ideas between individuals and companies. There is a greater diversity of ideas when people with varied experiences gather together to solve a problem together, and CFOs can help foster and advocate this. ”

– Bob Yap, Head of Advisory, KPMG in Singapore

“ The Head of Finance needs to collaborate with all the functions without regard whether it is a critical function at a given time. One can’t pick and choose which function is more relevant - every function has a role to play. He/she must also know and clearly articulate what his/her expectations are from the various functions and what he/she would deliver to them. ”

– Srinivasan Venkita Padmanabhan, Olam

NAVIGATING CULTURES, BEING A TRUSTED BUSINESS PARTNER

CFOs are well-placed to lead by example, and drive effective collaboration across the organisation.²¹ They typically have experiences working in other cultures and have dealt with the regulators in other countries. This is particularly critical as cultural misunderstandings and different business conditions can lead to unforeseen setbacks and delays, threatening business ventures and adding unnecessary risk.

²¹ *CFOs and the C-suite – focusing on effective collaboration*. ACCA. June 2016. Retrieved from: http://www.accaglobal.com/content/dam/ACCA_Global/Technical/manage/8177%20-%20Final%20report%20-%20pi-cfos-effective-collaboration.pdf

“ Working with people from different cultures means you are dealing with different value systems. The education process takes a longer time. The biggest worry I have is not whether giving a bribe is right or wrong -- everybody knows this is wrong. The difficulties lie in the nuances surrounding that -- such as what is considered a bribe? To a lot of people, a bribe means hard cash. But as Philips also sells consumer products, it can be as simple as a government official asking you for a discount on the products for his personal use. ”

– Ivy Lai, Philips Electronics

Increasingly, teams are becoming virtual, creating digital workplaces that are extending above and beyond the physical workplace. Collaboration is especially important when people and teams are not located in the same physical location. Virtual collaboration enables functions to come together and in global organisations with geographically distributed teams, CFOs could tap on high-impact virtual collaboration technologies in order to respond to critical business signals. This requires CFOs to

understand the readiness of their teams to adopt new technologies or new ways of doing business.

EXTERNAL STAKEHOLDERS CAN BE BENEFICIAL

In addition, the CFO can consider developing relationships with other CFOs. A strong network of peers can help to drive innovation within the function as well.

“ A vast majority of CFOs from internet companies in China are part of a CFO society in China (CFEI). We have very close relationships with each other. Chinese CFOs are more nimble in nature and more responsive in terms of opportunities, in developments. We have a lot of experience-sharing sessions and a few annual conferences where we share our own experiences. ”

– John Lo, Tencent

Collaboration among industry sectors is more crucial than ever, and is a means for corporates to find

innovation outside their companies. For example, in 2016, Microsoft and GE announced a partnership that made GE's Predix, a platform for the industrial internet, available on Azure.²² The benefits are not lost on Alexander Joramsa and Fabiano Siufi who were at the same roundtable:

“Partnership is the way to go. What GE brings is industrial knowledge and what Microsoft brings is the technology and the engineering side. And that's where the partnership come into place. So there's a match.”

– Alexander Joramsa, GE Grid Solutions

Disruptors need not be seen as threats, but can be invaluable partners. For example, financial technology companies (fintechs) were once viewed as “threats” to banks. Now they are also considered as partners to financial institutions in their innovation journey. By changing the way people purchase and invest, they are helping banks to create an intimate, social, and personalised customer experience.

Organisations in different industries or even different stages of growth can bring each other opportunities through collaboration that, if designed correctly, will benefit both parties. Forward thinking CFOs can play

a part by helping their companies see this. They can first identify the key success factors in building a fruitful partnership or collaboration.

CALL TO ACTION

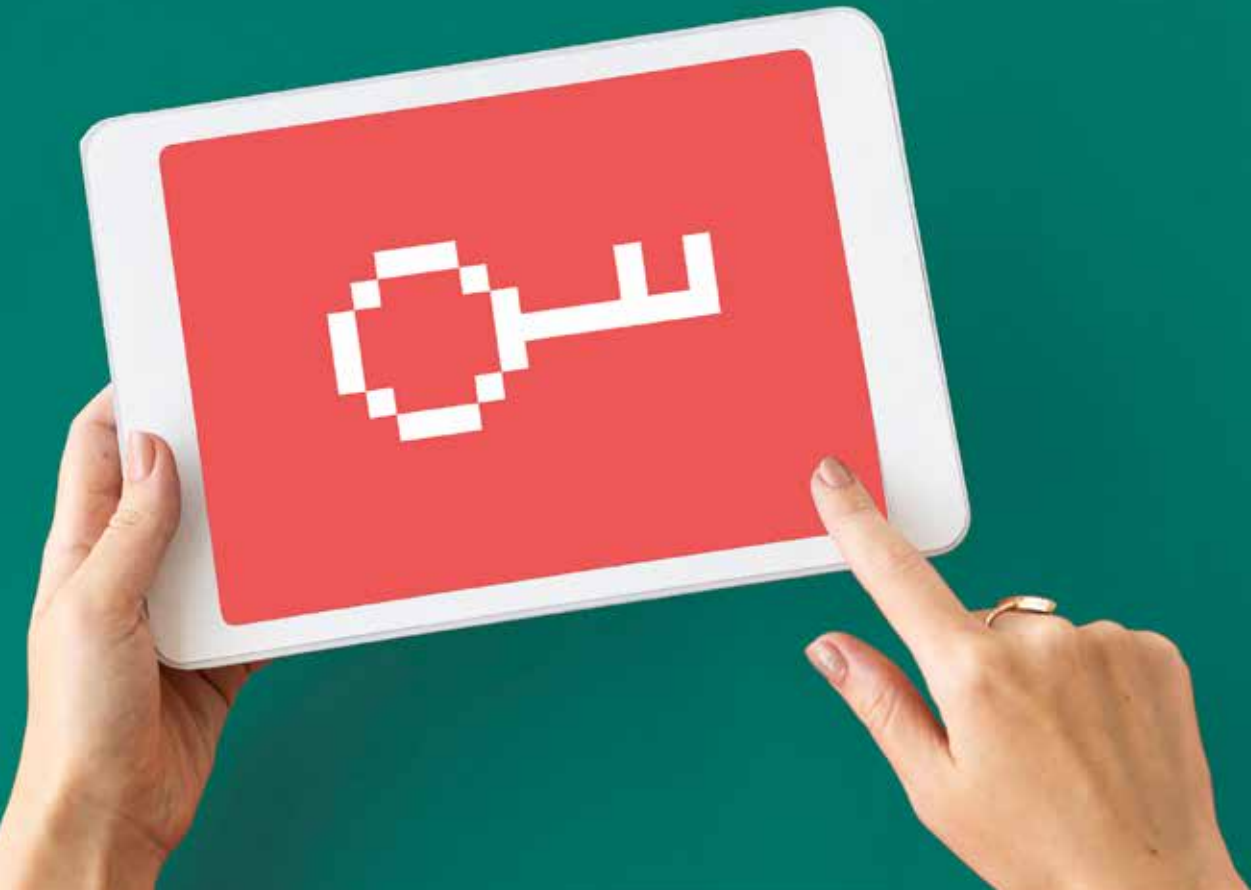
Collaboration comes with its own unique challenges. CFOs may find it challenging to cultivate trust and get teams to bond. It is even easier for misunderstandings to escalate when teams are seated in different geographies. To counter that, CFOs in our interviews said that they need to invest time in cultivating that relationship, to become the trusted advisors and business partner to other functions. They may find themselves being consulted on all fronts, even for non-financial decisions.

“I have so many people coming to me for counsel on so many issues that are have nothing to do with my job description arguably, but that's the role of that the CFO plays today. I love it, because I know what's going on in the company and I have a big say in what's happening.”

– Rod Jackson, Westpac

²² *GE and Microsoft partner to bring Predix to Azure, accelerating digital transformation for industrial customers.* Microsoft. July 2016. Retrieved from: <https://news.microsoft.com/2016/07/11/ge-and-microsoft-partner-to-bring-predix-to-azure-accelerating-digital-transformation-for-industrial-customers/>

Competency Level 5: Digital trust; changing face of threats



Cyber risk is a 21st century business problem. The financial cost to governments, corporations and individuals amounts to hundreds of billions of dollars each year, compounded by the damaging effect it has on brand and reputation. Given the pervasiveness of these risks, matched with the evolution into far more complex attacks, C-suites are getting serious about managing cybersecurity.²³

In KPMG's 2017 Global CEO Outlook²⁴, CEOs reported that the growing demands of cybersecurity management is more time consuming than ever. Reputational and brand risk has risen in importance for CEOs during the past year, to become one of the top three most important risks they face today (out of 16 in total). CEOs believe that building greater trust among external stakeholders and customers is a top three priority for their organisation and reputational damage will have the second-biggest impact on the growth of their organisation over the next 3 years.

More than ever, CEOs (71 percent) see their investment in cyber as an opportunity to find new revenue streams and innovate, rather than perceive it as an overhead cost. CFOs should be able to justify the value of investing in cyber-related technology, for example, such as one that alerts the customer if there is an unusual login in a different country. Such technology gives businesses a good opportunity to delight their customers.

Figure 3: The risk landscape, 2017 and 2016



²³ *Why Cybersecurity Should Be The CFO's Job*. Forbes. January 2017. Retrieved from: <https://www.forbes.com/sites/jeffthomson/2017/01/31/why-cybersecurity-should-be-the-cfos-job/>

²⁴ *2017 Global CEO Outlook*. KPMG. June 2017. Retrieved from: <https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2017/06/2017-global-ceo-outlook.pdf>

“ Cyber risks are going to be there, but not doing anything about it is unacceptable. So we have to embrace it like we embrace compliance. Be vigilant and educate the team, and make them understand what’s at stake. ”

– Alexander Joramsa, GE Grid Solutions

Cybersecurity is a business enabler and critical for business success. When organisations are cyber-ready and cyber-safe, it presents a golden opportunity to build trust and win consumer confidence. CFOs recognise that.

“ Cybersecurity is a prerequisite for companies to compete in a mobile/cloud-based economy. Cybersecurity & cyber-resilience strategies are no guarantee for success, however their absence is the perfect formula for business failure. ”

– Fabiano Siufi, Microsoft Singapore

CFOs have a vital role to play. They do not need to be technical experts in security protocols, such as encryption, or identity access management, but they do need to have a working knowledge of cyber and data security.

“ The Head of Finance has a role to play. As a leader, we need to collaborate with the CTO, or equivalent to make sure we are making the right investments to protect our information. We need joint accountability at the C-suite level to make sure that the company is not put at risk. ”

– Srinivasan Venkita Padmanabhan, Olam

SETTING THE TONE FROM THE TOP

Cybersecurity concerns all employees in an organisation and should not be delegated to a group of specialists. It is an attitude and to drive and maintain awareness, the right tone at the top is equally important. In this instance, CFOs can lead by example.

“ As part of the C-suite, CFOs must consider this risk seriously. Companies can be totally disabled by ransomware for example. If you pay too little attention to security, there are serious consequences. ”

– Gabriel Low, Weidmuller

CFOs, no matter in which industry, will take a more holistic view on cybersecurity and guide the conversations at the C-level. CFOs need to ask the right questions, especially when evaluating the firm's cybersecurity strategy. One way of ensuring that their organisation's cyber-preparedness is by simulating "what-if" scenarios, testing capabilities to respond to and mitigate different forms of cyber-attacks. Is the strategy clearly communicated across the organisation? What is the incident response plan in the event of a breach? Is the investment in network perimeter, intrusion prevention and detection systems sufficient?

Besides data, information assets, such as RPA or AI, that are coded in-house need to be protected, especially if these assets provide competitive advantage to the organisation. Often times, companies may neglect to consider that such programmes are also assets that should be secured and protected. CFOs are in the best position to highlight this.

“If information was an asset, would the IT person be the best person to identify it as a business asset, or would it be someone who is in the business, someone who is directly talking to the leadership? The CFO may not be in the (cyber) business, but he is closer to the

business than an IT person typically is.”

– Daryl Pereira, Head of Cybersecurity, KPMG in Singapore

GETTING THE RIGHT DEFENCES; FROM INSIDER THREATS TO EXTERNAL THREATS

Besides external threats, CFOs should also be cognisant of insider threats. Many organisations are beefing up their security layers, with the focus primarily on preventing external direct threats while overlooking threats from within. Security experts have noted that insider threats are escalating, powered by innovative technologies, new communication channels, an evolving socioeconomic climate, and geopolitical changes. And the greatest threats to corporate data sometimes stem from users with the most privileged access.

Insiders are individuals who have permission to operate from within the organisational perimeter. In today's managed services world, this includes external parties (such as vendors, contractors or business associates) who have some access to organisational systems, data or even physical premises. And with remote work and independent workers become more prominent, it is imperative to establish BYOD (Bring your own device) policies and data loss prevention strategies.

Employees are the biggest cybersecurity threats. Disgruntled employees may steal data or intellectual property from their organisation or even sabotage the operations. These clandestine activities go mostly undetected; their misbehaviour only uncovered by forensic analysis after they have left.

Data breaches can result from simple negligence. According to Verizon's 2017 Data Breach Investigations Report (DBIR)²⁵, 51 percent of all breaches last year involving malware and 66 percent of malware installs were caused by attachments in malicious phishing emails.

Employees may also fall victims to smart hackers who tricked them into clicking on malicious links, thus enabling malware to be deployed into an internal system. At the same time, there are employees who ignore the rules because they see them as inconvenient and do not appreciate the consequences of their actions.

These tend to be mostly millennials, who have an inherent trust for technology and often bypass or ignore rules about security and best practices. They may overlook security vulnerabilities just to be more efficient at work, and unintentionally put the organisation at risk. According to a study conducted by the Ponemon Institute²⁶, over half (55 percent) of 4,268

IT, security and enterprise professionals surveyed said millennials currently pose the greatest risk of "circumventing" IT security policies, while another 39 percent said they were also more likely to use unauthorised apps in the workplace.

With more millennials joining their finance teams, CFOs should be aware of the attitudes towards cybersecurity that they bring with them. As caretakers of sensitive commercial data, CFOs will have to balance between accessibility and data protection

“ Younger generation are digital natives, and we are digital migrants. They underestimate or even don't understand the risks involved with data. They understand the problem of confidentiality, security and all, but they don't have the same approach and the same way of thinking about it like we do. This is going to be a huge impact ”

– Jean-Philippe Gauvrit, Nokia

25 *Data Breach Investigations Report*. Verizon Enterprise Solutions. 2017 Retrieved from: <http://www.verizonenterprise.com/verizon-insights-lab/dbir/2017/>

26 *The Need for a New IT Security Architecture: Global Study on Compliance Challenges & Security Effectiveness in the Workplace*. Ponemon Institute LLC. March 2017. Retrieved from: https://www.citrix.com/content/dam/citrix/en_us/documents/analyst-report/ponemon-security-study-compliance-challenges.pdf

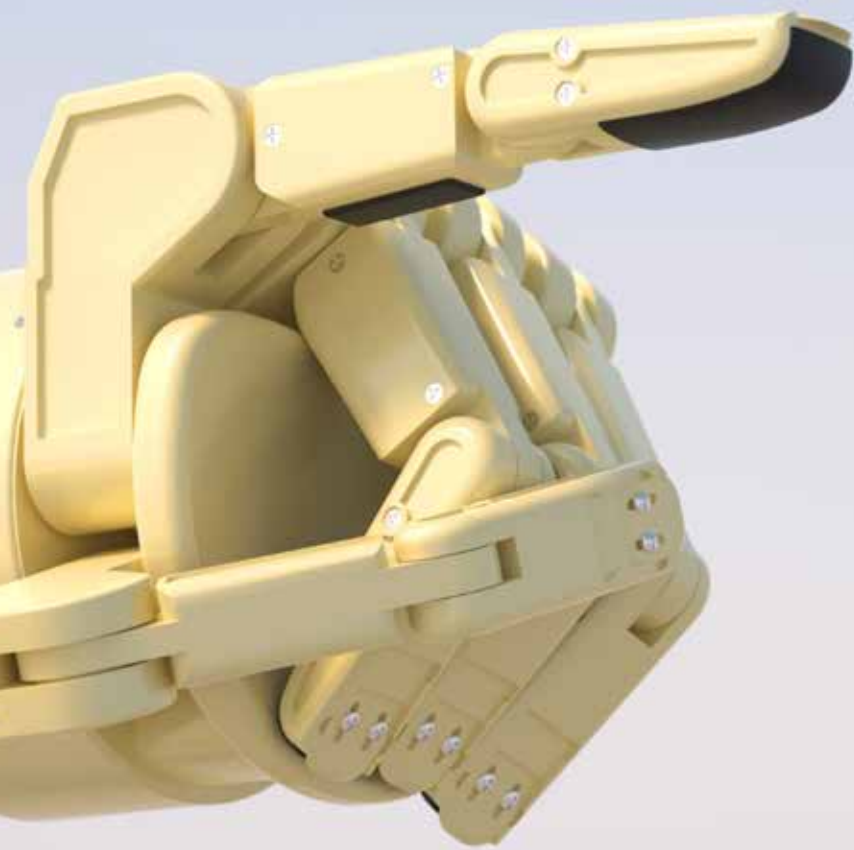
CALL TO ACTION

Cybersecurity is an issue not just for larger companies but also small and medium-sized enterprises (SMEs).

CFOs should take an active role in cybersecurity efforts. Cyber-attacks have a direct financial direct impact on the company. CFOs will need to perform an impact analysis, and take into consideration the trade-offs and costs of investigations. Such indirect costs can be a heavy financial strain to their organisation.

CFOs also need to be mindful of insider threats. They should assume that their employees are taking work home on their personal devices and storage areas, and plugging their corporate devices into less secure home networks. That increases the risk of corporate data being compromised. Therefore, security awareness training should be consistent and up to date. CFOs can also take an active role in planning an overall security posture of the company, as well as prevention-oriented cybersecurity strategies in three key areas: people, process, and technology.





Conclusion



Research by ACCA²⁷ suggests that future developments in local and global economies, the business environment, politics and law, society and technology are expected to reshape the roles and responsibilities of professionals in financial management and extend the scope of the matters they deal with. In the years leading to 2025, some technical knowledge and skills will increase in value, others will decrease, and new knowledge and skills will be required, which will vary across specialist areas.

The finance function has the unique ability to see all the data and bridge silos, and help other departments improve their bottom lines, but this happens over time. It starts first with CFOs being visionary and strategic in his/her thinking. They need to anticipate both future trends by extrapolating existing trends and identifying potential disruptions and facts by using data effectively.

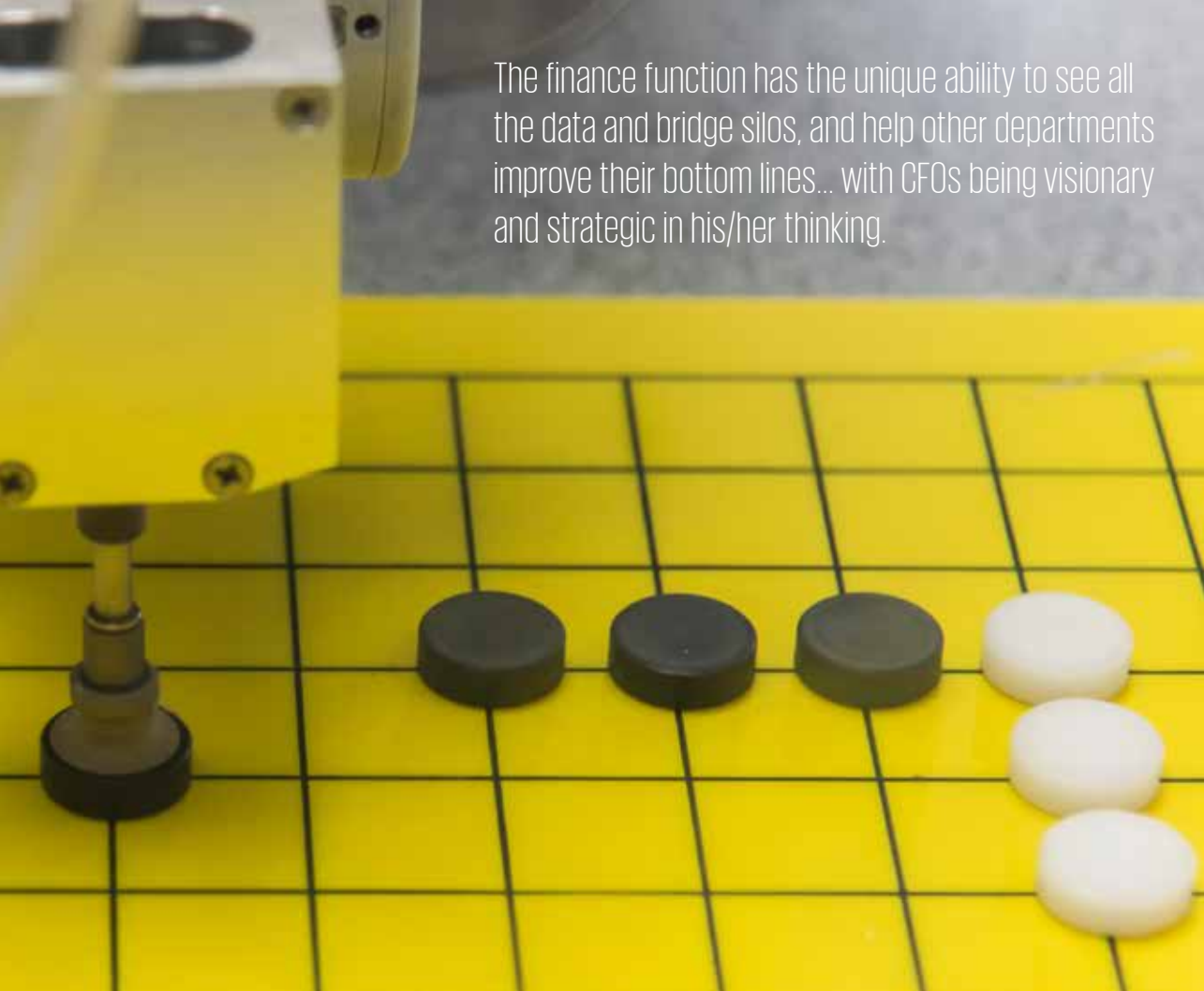
Effective financial strategy formulation means that CFOs should have an awareness of the risks, in particular, cybersecurity, and an assessment of the financial implications of any projects. However, focusing too closely on numbers and business operations can prevent CFOs from seeing and planning for wider trends. The latter is increasingly important but ever more difficult to achieve in today's complex business landscape.

CFOs would need to appreciate and utilise tools that enable and support virtual collaboration, disclosure and presentation. They will need strong collaboration, relationship building, leadership, and advocacy and negotiation skills.

In addition to their technical knowledge, CFOs would need soft skills to interact and communicate strategic choices, financial results, accounting rules, and policies to clients and other non-finance stakeholders clearly.

Whatever the shape of the future business environment, CFOs has to exhibit flexibility and adaptability. The five competency levers in this paper can guide CFOs as they lead in digital organisations in 2020 and beyond. The mix of these critical levers – leading strategically, creating value from data, leveraging on digital labour, collaborating with internal and external stakeholders, and embedding cybersecurity in the organisation – and how they are maximised and minimised can help to determine which scenario materialises for CFOs. To be even more relevant than before (as described in Scenario 3), CFOs will need to ensure they have the right competency levels for each of the levers.

²⁷ *Professional accountants – the future: Drivers of change and future skills*. ACCA. June 2016. Retrieved from: <http://www.accaglobal.com/gb/en/professional-insights/pro-accountants-the-future/drivers-of-change-and-future-skills.html>

A close-up photograph of a yellow robotic arm positioned over a yellow grid board. The board has a black grid pattern. There are three black circular pieces and three white circular pieces on the board. The robotic arm is on the left side of the frame, and the pieces are arranged in a row on the right side. The background is a grey surface.

The finance function has the unique ability to see all the data and bridge silos, and help other departments improve their bottom lines... with CFOs being visionary and strategic in his/her thinking.

Publisher:



Think Ahead

ACCA Singapore
1 Raffles Quay #22-10A South Tower
Singapore 048583
tel: +65 6734 8110
fax: +65 6734 2248

Joseph Alfred
Head of Policy
Tel: +65 6637 8182
joseph.alfred@accaglobal.com

Pauline Javani
Partnership Manager - Employers
Tel: + 65 6637 8172
pauline.javani@accaglobal.com



KPMG Services Pte Ltd
16 Raffles Quay, #22-00, Hong Leong Building,
Singapore 048581
Tel: +65 6507 1565
Fax: +65 6507 1551

Satya Ramamurthy
Head of Management Consulting
Tel: +65 6213 2060
sramamurthy@kpmg.com.sg

Gerard Seng
Director - Digital + Innovation
Tel: +65 6507 1911
gerardseng@kpmg.com.sg

Knowledge partner:



The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavour to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

Copyright © September 2017, KPMG Services Pte. Ltd. and ACCA Singapore. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission from KPMG Services Pte. Ltd. and ACCA Singapore.

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