



Study on in-house Finance and Accounting (F&A) functions

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1. Preface

Deloitte was commissioned by the Economic Development Board (EDB), the Singapore Accountancy Commission (SAC) and Workforce Singapore (WSG) to conduct a study on the in-house Finance and Accounting (F&A) functions in Singapore.

Globally, F&A functions are evolving, which is increasing expectations on F&A professionals. The study aimed to encourage organisations in Singapore to transform their F&A functions by increasing the level of process sophistication in line with best practices to remain competitive. It also examined the need for F&A professionals to upskill to stay relevant and take on higher-value jobs.

To gain insights into the future of F&A functions, the study assessed the impacts of 20 F&A job roles (based on the Skills Framework for Accountancy) and 9 key F&A processes. It considered implications across corporate segments in Singapore, including multinational corporations, large local enterprises, and small and medium enterprises. The study used a 4-phase methodology:

Phase 1 – F&A trends and impacts on work, including megatrends, sophistication of F&A processes and technology impacts

Phase 2 – Job impacts and future skills analysis, including impacts on F&A roles, future skills required, adjacent roles and emerging roles

Phase 3 – Industry validation with F&A leaders, F&A professionals and professional organisations

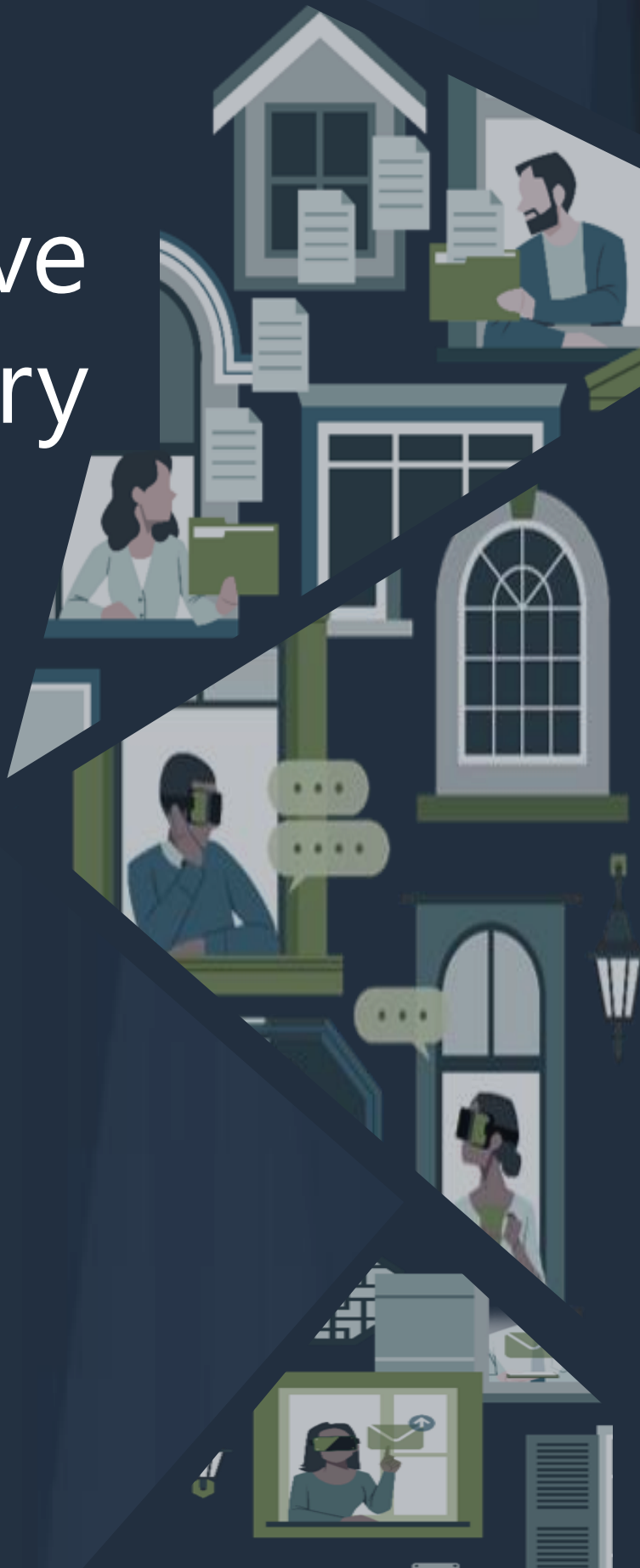
Phase 4 – Call to action for F&A functions and F&A professionals to transform.

The study engaged 65 corporates, 10 institutes of higher learning and 7 professional bodies through interviews and focus group discussions. Deloitte Global Finance Transformation Leaders also provided their inputs. Quantitative insights were drawn from labour market data from Singapore's Ministry of Manpower, Burning Glass Technologies, LinkedIn Talent Insights, MyCareersFuture Singapore and O*NET OnLine.

Although F&A functions are essential in all organisations, increased volatility in the macroeconomic environment and advances in digital technology will change how they operate and the types of roles they require. Importantly, with a growing number of organisations focusing on growth in Asia, Singapore has an opportunity to play a more significant role as an F&A centre of excellence and hub in the region. Correspondingly, F&A professionals can seize opportunities to take on emerging roles by actively upskilling, having a broader regional outlook and adopting an open mindset.



2. Executive summary



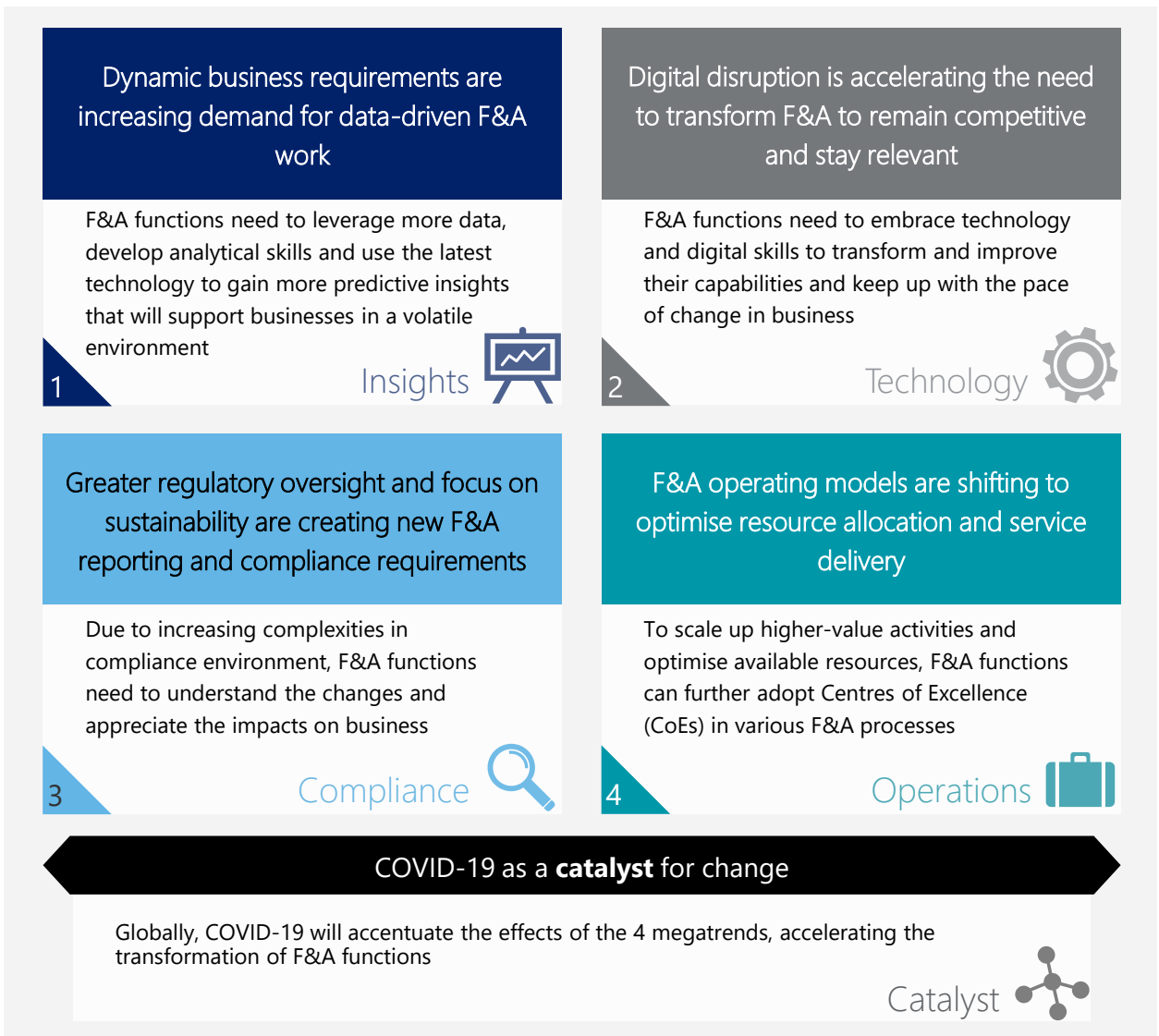
Introduction

Finance and Accounting (F&A) functions are expected to play an increasingly strategic role in driving business' growth objectives, resource efficiency and transformation efforts. As a crucial pillar in safeguarding and improving the financial health of a business, F&A functions have to keep up and evolve through enhanced remote work arrangements, system automation, improved process efficiency, more financial insights and greater agility. These will reshape in-house F&A functions in Singapore, both in terms of the work F&A does (Future of Work) and the job roles (Future of Workforce).

Megatrends reshaping F&A functions

The study identified 4 megatrends that are reshaping in-house F&A functions. These megatrends have been further accelerated by COVID-19 (see Figure 2.1).

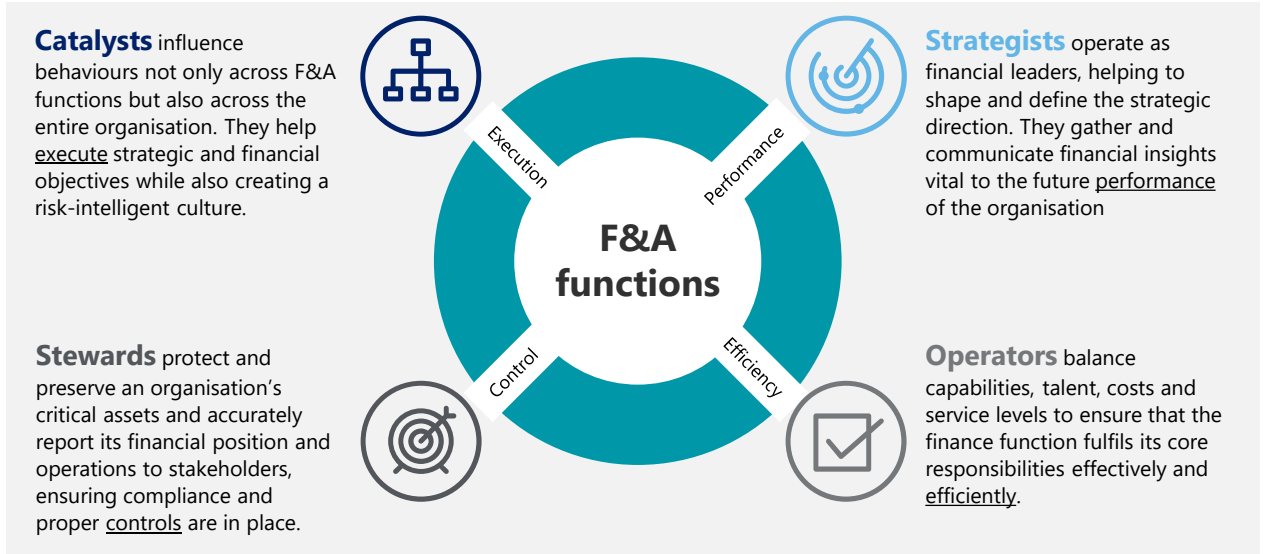
Figure 2.1 : The 4 megatrends reshaping in-house F&A and COVID-19 as a catalyst



The Four Faces of F&A functions

F&A functions are expected to play 4 diverse and challenging profiles (also known as 'Faces'), as demonstrated in Deloitte's Four Faces of the CFO framework, shown in Figure 2.2.

Figure 2.2 : The Four Faces of F&A functions

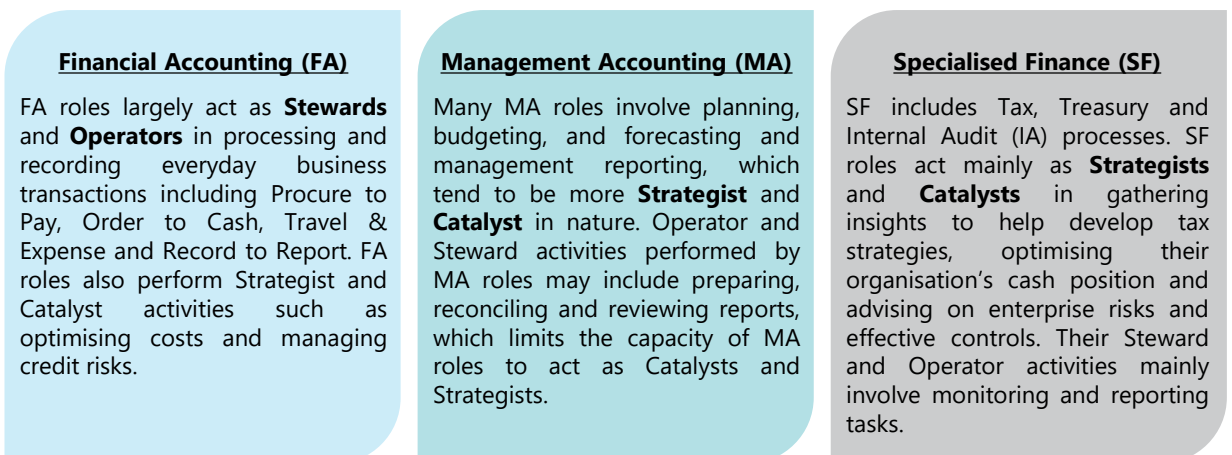


Stewards and Operators are 2 fundamental but essential 'Faces' of F&A functions. However, Strategists and Catalysts will perform more value-adding tasks that will make their work increasingly important as megatrends continue to reshape the F&A landscape.

A survey of 65 corporate F&A leaders noted that F&A functions spend 60 percent or more of their time as Stewards and Operators today. The aspiration is for them to spend 60 percent or more of their time as Strategists or Catalysts, by aligning processes with best practices and automating transactional and repetitive tasks. Consequently, F&A job roles have to evolve, with a greater emphasis on increasing business knowledge, using data well, and developing technical and soft skills.

As part of the study, **20 F&A job roles were identified across the key process areas** of Financial Accounting (FA), Management Accounting (MA) and Specialised Finance (SF). Each of these job roles focuses on different faces of the F&A function, as shown in Figure 2.3.

Figure 2.3 : How the Four Faces of F&A functions apply to FA, MA and SF



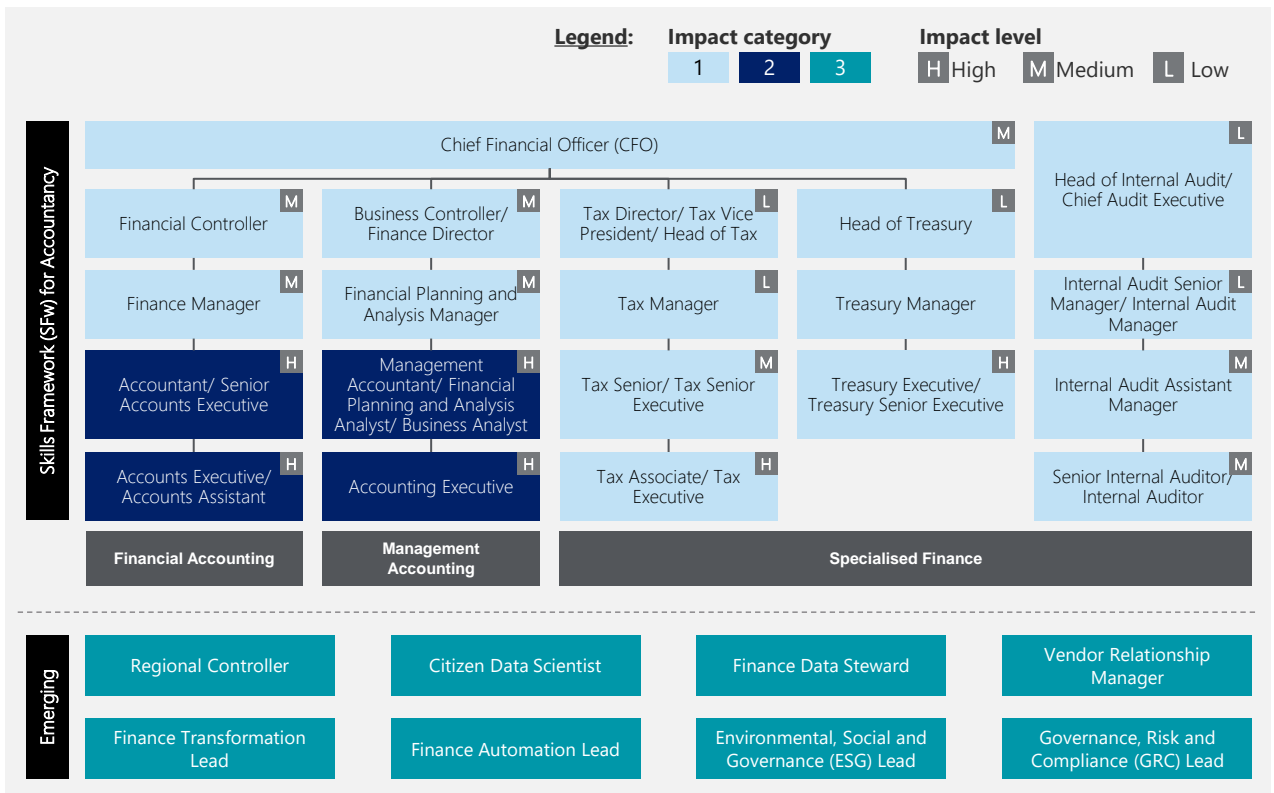
Impacts on F&A job roles

The 20 F&A job roles examined in the study will be impacted to varying degrees as F&A functions evolve to keep up with megatrends. Two criteria were used to assess the likely impact in the next 2 to 5 years: (1) the extent of automation, and (2) the extent of change in tasks and skills, as F&A functions transform and progress up the levels of sophistication. An impact level of 'high', 'medium' or 'low' was assigned to each job role.

The 20 F&A job roles were classified into 2 categories. Category 1 included those job roles that are expected to change. Category 2 included job roles at risk of displacement. Emerging roles were identified in Category 3.

Figure 2.4 : 3 categories of impacts on the F&A workforce

Impact Categories:



Impact category 1: 16 out of 20 F&A job roles will undergo changes in job tasks

16 out of 20 F&A job roles will experience varying impact levels in the next 2 to 5 years depending on (1) the changes to their job tasks and skills, (2) the degree of technology disruption and (3) the seniority of the role. Nonetheless, these job roles are not susceptible to displacement due to automation because they are likely to perform more value-adding tasks as Strategists and Catalysts.

FA roles will experience a **medium** level of impact as their tasks mainly involve judgement and approval authority. Despite technology disruption, their tasks may become more challenging due to increasing complexity of doing business.

MA roles will experience a **medium** level of impact. MA roles will be required to better use data, understand business changes, work closely with various functions in the organisation, and prepare more forward-looking, predictive insights and recommendations to deal with a dynamic business environment.

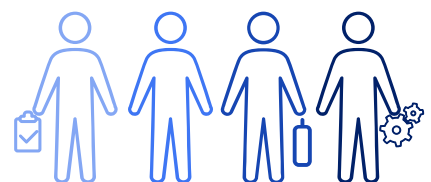
SF roles will experience a **wide range of impacts**.

- **Junior roles in Tax and Treasury** will face a **high** level of impact. They will need to deepen their technical knowledge to help their organisation understand and comply with evolving regulations, resolve system exceptions, and generate better insights and forecasts. Some of their tasks, such as preparing reports, may be automated.
- The **other SF roles** will face **low to medium** levels of impacts as their specialised technical expertise in Tax, Treasury and IA continues to be valued and their tasks are less susceptible to technology disruption.
- Overall, the scope of tasks in SF roles will expand. SF roles will require better analytical skills and the ability to use data and digital tools to increase tax efficiency, minimize risks, and improve cash and liquidity positions. They will need to build on their specialised knowledge to perform more value-adding tasks.

Impact category 2: 4 out of 20 F&A job roles are at risk of displacement

4 F&A job roles are at risk of displacement due to automation of their job tasks in the next 2 to 5 years. Junior FA and MA roles will be particularly affected as new technologies are introduced to automate high-volume, repetitive and manual tasks. These roles are expected to manage process and system exceptions, and to validate and analyse system-generated data. To do this, they will need to increase their knowledge of processes, systems and new technologies by reskilling themselves in areas such as Data Analysis, Digital Problem Solving and Cross-Functional Acumen. They should also upskill themselves and progress upwards in their respective function by building on their technical expertise and business knowledge.

Alternatively, they can consider opportunities to transition to adjacent job roles within F&A or in other sectors by reskilling. For example, an MA Accounting Executive can develop new skills in Project Feasibility Assessment to become an Executive (Project Financing) in the Engineering Services sector.



Impact category 3: 8 emerging F&A job roles will shape the future of F&A functions

F&A professionals will find growth opportunities in emerging roles in the next 2 to 5 years as F&A functions become more sophisticated. Many of these new roles will place greater emphasis on cognitive and interpersonal skills, compared to the technical accounting expertise commonly expected in traditional F&A job roles. 8 emerging roles are shown in Figure 2.5.

Figure 2.5 : 8 emerging roles



As the only Asian country in the top 10 of the Institute for Management Development World Talent Ranking 2020, Singapore is well positioned to become a talent hub for these emerging roles. Potential candidates for these high-growth roles can be found in existing F&A professionals as well as among mid-career professionals in non-F&A sectors. To successfully transition to new roles, F&A professionals will need to have Cross-Functional Acumen as well as skills in Digital Technology Adoption and Innovation, Project Management, Data Analytics and Regulatory Compliance.

The Chief Financial Officer as a driver of change

Chief Financial Officers (CFOs) need to equip F&A functions with the right tools and skills to drive the organisation forward and, more importantly, lead the change agenda while building an agile and sustainable F&A function. CFOs can drive a successful transformation through the 3 broad practices, shown in Figure 2.6.

Figure 2.6 : 3 practices to help CFOs drive change



Recommendations



Corporates need to actively transform their F&A functions and processes to meet increasing demands resulting from the megatrends. This study found that the F&A functions differ between small and medium enterprises (SMEs), large local enterprises (LLEs) and multinational corporations (MNCs), which means that each will take different transformation pathways. Various government initiatives are available to support F&A functions in their transformation journey.

1. Invest in digital technologies to move up the levels of sophistication

SMEs – Improve the ability to drive business insights through the MA processes that can benefit the entire organisation

LLEs – With a relatively larger F&A team, digitalise FA processes to increase productivity, and invest in improving MA processes to better deliver strategic, data-driven insights

MNCs – As decisions on technology adoption may be driven by the corporate headquarters, identify solutions that supplement existing tools to deepen data analytics and predictive capabilities

The ‘sophistication maps’ shown in Appendix 6.1 outline the different levels of process sophistication and the associated technology solutions to help F&A functions assess and move up the sophistication level(s).

2. Redesign F&A job roles

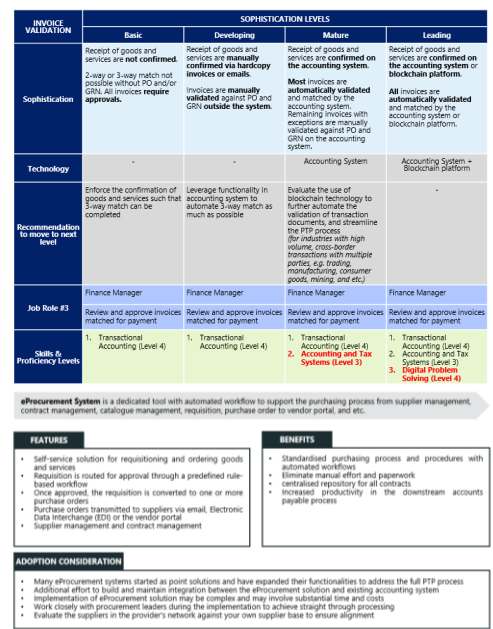
Skills gaps should be assessed to help develop workforce strategies, training programmes and change management plans that will enable F&A professionals to transition to new and redesigned job roles. Recruitment plans should also target mid-career entrants and those not trained in F&A work (for example, candidates with a background in IT or engineering), who have transferable skill sets such as in Programming and Coding, and Digital Problem Solving.

3. Reimagine F&A operating models to include new and emerging capabilities

To be future-ready, F&A functions that have the resources and the scale should consider building up CoEs for high-growth F&A areas, including MA, SF, and emerging capabilities such as data analytics, internal controls and governance, and digital transformation. By centralising scarce talent, CoEs can help to streamline access to these high-demand skills across the organisation and the region.

To improve FA processes, some MNCs may find value in building up digitalised Global Business Services (GBS) in Singapore, leveraging digital technology to achieve higher productivity, and drawing on higher-skilled F&A professionals to improve service delivery.

Figure 2.7: Example of a sophistication map and a technology solution overview





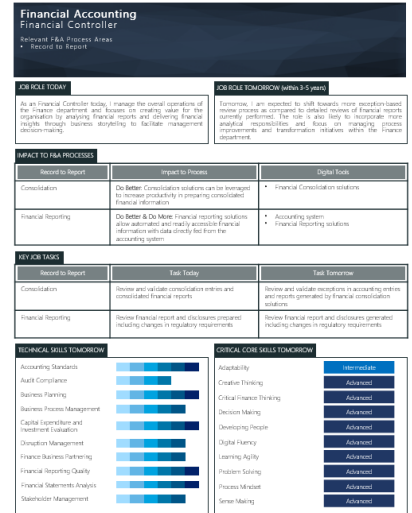
As F&A functions transform, demand for certain skills and competencies will inevitably change. F&A professionals need to understand the changes to their job roles, take stock of their current skills and competencies, and identify skills gaps that need to be filled.

Examples of skills in demand:

- Finance Business Partnering
- Digital Technology Adoption & Innovation
- Business Acumen
- Data Analytics
- Digital Problem Solving

The 'job canvasses' in Appendix 6.4 outline the changes in key job tasks for F&A professionals and the skills they will need in the future. To gain those skills, F&A professionals may need to enrol in Continuing Education and Training (CET) courses to upskill or reskill. Various government initiatives are available to support F&A professionals in their continuous learning journey.

Figure 2.8 : Example of a job canvas



F&A professionals can consider the following three career pathways to future-proof their career.

A. Progress up existing job functions

Individuals facing changes to their job tasks can progress further in their career by:

- deepening technical expertise such as Accounting Standards
- broadening skill sets in data analysis and technology.

B. Transition to adjacent F&A job roles

Individuals at risk of displacement due to automation could transition to adjacent roles by:

- leveraging the skills overlap between their existing role and adjacent roles
- acquiring skills in new areas.

C. Explore and transition to new and emerging roles

As F&A functions evolve and new needs surface, there will be opportunities to move into new and emerging roles by:

- upskilling or reskilling towards these new areas
- developing deeper business acumen.

Conclusion

In-house F&A functions will continue to be an essential part of all organisations despite the impacts of megatrends that are exacerbated by COVID-19. To remain competitive, F&A functions need to leverage technology to perform their Steward and Operator activities more efficiently, freeing up capacity to focus more on their Strategist and Catalyst responsibilities.

F&A professionals must also take ownership in shaping their career development, so they can stay relevant and benefit from redesigned and new F&A job roles.

To facilitate this, there is a need for in-house F&A, and for the government and CET providers to collaborate more closely to develop a future-ready workforce.

3. Overall findings



3. Overall findings

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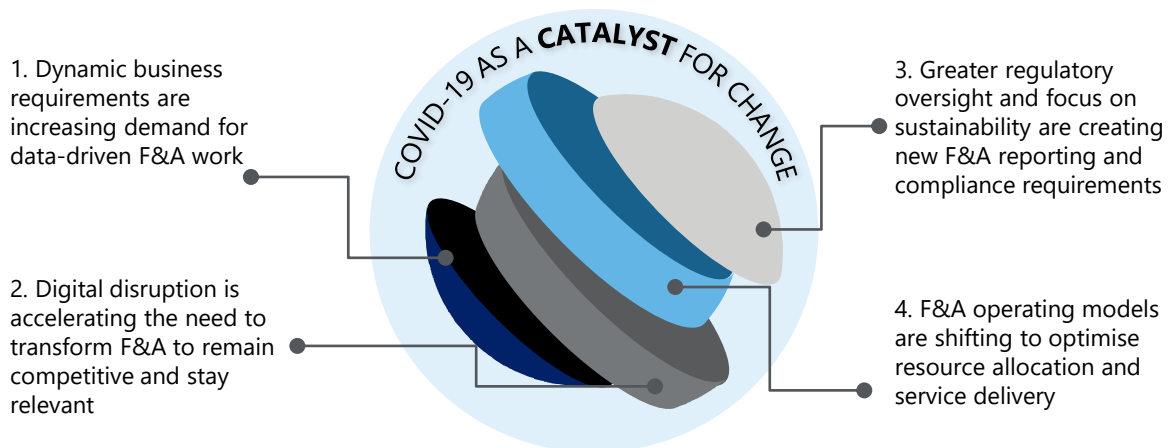


3.1 Megatrends reshaping F&A functions

Efficient F&A functions are essential in all organisations as they are responsible for financial reporting, financial planning and budgeting, and internal controls. A review by the International Federation of Accountants aimed at understanding the relationship between accountancy expertise and business performance found that a strong F&A function positively correlates to better business performance. This is mainly due to an increased understanding and trust in financial information, better controls and robust risk management, which lead to superior decision making and strategy development.

4 megatrends, largely accelerated by COVID-19, are causing in-house F&A functions to evolve rapidly (see Figure 3.1). As organisations adapt their operating models to remain competitive and stay relevant, there are increasing expectations for F&A functions to play a more strategic role in supporting corporate growth, resource efficiency and transformation efforts. This will reshape in-house F&A functions in Singapore, both in terms of the work F&A does (Future of Work) and the job roles (Future of Workforce).

Figure 3.1 : Overview of 4 megatrends and a catalyst for change



Megatrend 1: Dynamic business requirements are increasing demand for data-driven F&A work

An increasingly volatile business environment causing more frequent change in business directions

Business requirements are evolving quickly in a globally interconnected environment where dramatic and unexpected changes are the 'new normal'. Even before the pandemic, businesses faced greater global trade volatility and tension, commodity price fluctuations, the emergence of new competitors and startups, and digital disruption in many industries, just to name a few. Organisations are making more changes in response, such as expanding into new markets and retreating from others, finding new go-to-market and sales channels, and optimising their distribution processes and supply chains.

In a recent study conducted by Deloitte across Southeast Asia, the region's Chief Financial Officers (CFOs) indicated that management teams had begun to ask more 'what-if' questions during the pandemic. F&A functions traditionally known for their cost and control focus are **increasingly playing an active role in anticipating, developing and analysing financial scenarios to predict the impacts of changes on the organisation.** This scenario modelling is used to determine appropriate strategic and operational responses.

F&A functions need to keep up and support organisations with more predictive insights

However, such forecasting is challenging even in stable environments where changes are gradual and predictable. There is a lot more data to analyse – both internal and external – and boards, managements and stakeholders are requesting deeper insights about the implications of market, customer, operational and macroeconomic changes. To support the changing demand, F&A functions have taken on a stronger business partnering role and doing more scenario analyses. By leveraging technology tools and predictive analytics, they can plan for specific scenarios and model their impact on the financial performance.

Impact on F&A functions and F&A professionals

F&A functions need to assess large volumes of data and **develop appropriate data governance strategies**, before employing advanced analytical tools and techniques to support more accurate data-driven decisions. With a greater emphasis on growth in Asia, many organisations are using Singapore as a base to expand in the region, and F&A professionals need to transform to meet these new demands. By equipping themselves with **skills in Data Governance, Data Analytics, Risk Assessment and Finance Business Partnering**, F&A professionals can find opportunities as jobs evolve.



No organisation can control the occurrence of black swan events, but all of them must be able to assess their impact and respond to them, usually in a very short timeframe.

- Deloitte



Megatrend 2: Digital disruption is accelerating the need to transform F&A to remain competitive and stay relevant

Potential benefits of technology in elevating F&A functions

The acceleration of digitalisation brought about by automation, advanced analytics, and cognitive and artificial intelligence (AI) applications will continue to disrupt F&A functions. The impacts will differ across the wide range of F&A activities and processes. Some standardised, repetitive F&A tasks will become automated. F&A processes augmented by digital tools will become more streamlined, efficient and insight-focused, which presents an opportunity for F&A functions to evolve and increase the value they provide to organisations.

The pace of digital disruption is expected to increase for the following reasons.

1. Many more new applications: Digital disruption has led to a proliferation of many new software applications rich in features and functionalities. Beyond traditional accounting software and systems, there are now applications that help solve F&A-specific issues. Some applications can scan, digitise and decipher documents via optical character recognition (OCR) and machine learning (ML) (see Case study 1). Some can analyse large volumes of data and generate commentary using natural language generation (NLG) (see Case study 2). There are also others that specialises in niche areas like reconciliation.

Case study 1



Axiom Asia

Using OCR & ML to streamline and digitise processes

Challenge

The Accounts Payable (AP) team of fund management company Axiom Asia was processing many hard-copy documents, from supplier invoices to employee expense claims. Its manual processes were time-consuming and prone to human error, and resulted in delays in supplier payments and employee reimbursements.

Transformation journey

The company integrated OCR and ML technologies with its core accounting systems, going paperless in three months. The AP team now scans hard-copy invoices and processes them using OCR and ML, eliminating manual data entry. The new system makes validating invoices and audit expenses more efficient. Employees can scan hard-copy receipts with mobile devices and submit reimbursement claims electronically. This was especially helpful when COVID-19 forced employees to work remotely.

Benefits



60%

Productivity gained by moving from hard-copy to paperless processing for supplier invoices and employee expense claims



Improved employee experiences, with seamless expenses submission via mobile devices, and faster reimbursement payments

Case study 2



A European financial institution

Using NLG to enhance reporting

Challenge

F&A professionals at a European financial institution were tasked with writing monthly progress reports for more than 100 branch offices. That meant a great deal of manual labour, and increased risk of repetition and error, especially given growth in the volume and complexity of data.

Transformation journey

To manage the vast number of complex records, the organisation implemented a cloud-based NLG system that could securely and automatically translate branch performance data into plain-language expressions of key metrics, which could then be delivered in useful visual formats. Agile prototyping helped manage software validation and enabled the 15-member F&A team to learn to use the system more quickly. With its new cloud-based tools, the team has been able to automate processes and increase its capacity to handle other work. It now spends 94 percent less time compiling monthly reports – and the reports contain richer detail and better analysis. The number of errors has decreased, and the employee experience has improved.

Benefits



94%

Reduction in time spent compiling monthly reports



Reports are more accurate and the employee experience has improved

2. Less costly and easier to implement: Many modern software applications focus on providing a better user experience and flexible configuration to minimise development and coding efforts, and enable fast implementation and easy adoption. Cloud-based software as a service (SaaS) delivery models accelerate implementation because organisations do not have to worry about infrastructure, hardware setup or software upgrades. These new subscription-based models also reduce total upfront costs and, importantly, provide a scalable platform to adjust the service as and when required, without costly hardware upgrades or replacements.

Impact on F&A functions and F&A professionals

Although these applications can future-proof the F&A function, organisations need to **assess the huge array of options to find one that best meets their business needs** and unlocks the greatest benefit. This means that F&A professionals need to **strengthen their digital skills** to better select and harness these applications to stay competitive and relevant. The skill sets they will need are detailed in Section 3.3 of this report.

Megatrend 3: Greater regulatory oversight and focus on sustainability are creating new F&A reporting and compliance requirements

More complicated business activities are increasing complexities in accounting standards

The **growing complexity of business transactions and greater scrutiny from investors, regulators and the public** have heightened regulatory pressure on the F&A functions. According to the Accounting and Corporate Regulatory Authority (ACRA), “financial reporting standards have become increasingly complex and require more professional judgement on the part of the preparers of financial statements”. Examples include “the accounting for business acquisitions, the fair value measurement of assets and revenue recognition of multi-element transactions”. While these changes in accounting standards aim to provide more transparent and accurate information to the public, they also complicate the work of F&A functions due to the need to translate complex business activities into compliant financial statements.

A study by ACRA and the Singapore Management University on the extent of audit adjustments made by Singapore’s listed companies revealed that a high proportion of proposed audit adjustments to financial statements could be due to “**increased volume and complexity in accounting when companies scale up and expand operations**, including overseas ventures”. This in turn requires F&A functions to keep up with increased reporting and compliance needs as business models evolve to expand into new markets.

Greater expectations on environmental, social and governance (ESG) reporting

An increasing focus among investors, regulators and the public on issues such as climate change, human rights and labour standards is creating new demands for organisations to meet higher levels of transparency in ESG reporting. According to Gartner, CFOs who improve their organisation's ESG reporting to investors can enjoy **improved access to capital, stock performance and customer loyalty**. F&A functions have a key role to play in ensuring that the ESG metrics provided to internal and external stakeholders are **relevant, compliant and accurate**, and support the **overall execution of the ESG strategy**. An example is Olam International (see Case study 3), which created a dedicated 'Finance for Sustainability' department to help embed ESG reporting within the organisation.

ESG metrics are currently not mandatory in financial reporting, though organisations are increasingly making disclosures in their annual report or in a stand-alone sustainability report. Despite a recent initiative by the International Business Council of the World Economic Forum to develop a common, core set of metrics and recommended disclosures, **organisations are still struggling to operationalise ESG principles in their operations**. F&A functions are **uniquely suited** to identify and balance the added value of F&A and ESG measures because they **understand the value drivers of the business**. As such, they play a central role in integrating ESG measures into standard processes across an organisation.

Impact on F&A functions and F&A professionals

These evolving reporting and compliance requirements will require F&A functions to assess the impacts of changes, identify and quantify relevant data, and provide the necessary insights. A report launched by the Association of Chartered Certified Accountants (ACCA), the Singapore Accountancy Commission and Shanghai National Accounting Institute found that "Accounting Advisory" and "Sustainability & CSR Advisory" were among the top 5 professional accountancy services demanded in Singapore. F&A professionals not only need to continue to upskill in their knowledge of **Accounting Standards**, but they must also develop their **Business Acumen** and acquire new skills in **ESG and Non-Financial Reporting** to meet the new regulatory and sustainability requirements.

Megatrend 4: F&A operating models are shifting to optimise resource allocation and service delivery

Reshaping high-value F&A operations into Centres of Excellence (CoEs)

Many F&A functions have implemented centralised finance structures through shared services. This concept has evolved in recent years as F&A functions reconfigure their operating models to **leverage F&A hubs or CoEs to deliver higher-value, more specialised F&A activities**. CoEs are driven by the need to increase the sophistication of F&A functions; rather than to drive transactional activities, they are designed to deliver differentiating and niche capabilities. Examples of these F&A capabilities include Financial Planning and Advanced Analytics, Internal Audit, Tax, Treasury (see Case study 4), Automation, Technical Accounting, Manufacturing Finance, and ESG reporting.

Case study 3



Olam International

Finance for Sustainability (F4S) to maximise long-term value

Challenge

ESG issues have been top of mind for consumers, regulators and investors in recent years. Food and agri-business company, Olam International believes that sustainability should sit at the heart of the business and has made it one of 4 key enablers in delivering the company's strategic plan. However, the 6 non-financial capitals – social, human, manufactured, natural, intangible and intellectual – are not universally assessed under the current reporting framework, despite driving a significant portion of a company's market value.

Transformation journey

In 2018, the Integrated Reporting (IR) Task Force (a cross-functional team with representatives from Finance, Risk, Human Resources (HR) and Sustainability) was formed to evaluate the company's approach to Multiple Capital Accounting (MCA). The task force developed a decision-making tool – the Integrated Impact Statement (IIS) – at the profit centre level to establish a numerical link to sustainability. In late 2019, Olam established a dedicated Finance for Sustainability (F4S) department in the Finance function as a CoE for MCA methodologies and to help embed MCA within the organisation. F4S leverages the expertise of the Finance function to uncover hidden costs and benefits not previously reported. Olam is now better informed about its natural, social and human capital impacts, and able to provide actionable management information.

- ✓ **2017:** Began reporting against 6 non-financial capitals in its first integrated annual report
- ✓ **2018:** Established the IR Task Force
- ✓ **2018:** Piloted its IIS tool with 3 businesses – Dairy, Cocoa and Palm
- ✓ **2019:** Created the F4S department
- ✓ **2019:** Piloted first natural capital accounting case study, for its Cocoa business unit
- ✓ **2020:** Completed full-scale natural capital accounting for the Cocoa business unit for 2018 (baseline), 2019 and 2020
- ✓ **2020:** Piloted a human capital accounting case study for its Vietnam operation

Olam's IIS aims to provide all business units and functions with an understanding of the company's impacts and dependencies, from a monetary perspective. This allows business units and functions to manage a broad set of drivers beyond just financial capital, and help bring about net positive change.

F4S aspires to become a best-in-class business partner responsible for maximising long-term intrinsic value



Internalisation of externalities

- Bridge finance and sustainability concepts
- Support strategic financial business decisions via business units



Accountants' culture and mindset change

- Formalise approach to measure, quantify and report on the organisation's long-term 'invisible' value
- Create partnerships and collaborations to grow this mindset



Common financial currency

- Use common language that everyone can understand, evaluate and articulate
- Communicate both stakeholder and shareholder value

Case study 4



General Electric

Creating a centralised Treasury hub in Asia

Challenge

General Electric (GE) established a regional treasury hub in Singapore to expand its treasury footprint among its businesses and banks in the region. The challenge was to meet the global liquidity needs of GE businesses across a complex market landscape involving many legal entities and bank accounts across the region.

Transformation journey

GE embarked on a journey to create a Regional Treasury Centre (RTC) in Singapore due to the country's open and robust financial ecosystem, ease of doing business and wide talent pool. In creating an RTC in Singapore, its Treasury team worked closely with its banking partners to implement a structure for liquidity mobilisation and risk management. This structure enabled automated cash consolidation and an efficient funding mechanism. Implementing an efficient and sustainable cross-currency, cross-border structure helps GE tackle the complexity of the region, which covers more than 10 currencies and countries. GE's RTC structure, enabled by its Treasury Management System platform, has equipped the company to effectively manage risks in the region. The team has embraced a Lean mindset and used Lean principles and tools to drive successful transformation in its businesses across the region, and has received multiple awards recognising their efforts and accomplishments.

Benefits



Optimised cost of funding and yield uptick while making cash available for the organisation



Automated and sustainable cross-currency and cross-border liquidity structures



Greater certainty over liquidity and risk planning through improved visibility of cash and risk

By centralising scarce and in-demand talent, CoEs can achieve the following benefits.

Figure 3.2 : Benefits of CoEs

- 01 **Improve the reach of key (or scarce) expertise** that can be used across businesses and geographies.
- 02 Drive the development and **standardisation of best practices** and innovation, to **deliver consistent service quality** to stakeholders.
- 03 Leverage **economies of scale** in driving investments, including digital technology.
- 04 Offer a **scalable platform** to support the growth ambition of the business.
- 05 Provide a platform to **develop talent in highly skilled areas**.

Singapore's attractiveness as a regional base for CoE activities

With a **well-developed digital infrastructure and highly skilled workforce**, Singapore is an attractive location for building up F&A CoEs and capabilities, further expanding the country's identity as a hub for MNCs and LLEs. Singapore's **favourable business environment and connections to the region** will continue to attract organisations looking for a base to grow from in the region, as they may not be able to find the talent they need in the other markets. As LLEs expand regionally, F&A processes that support activities in new markets can be delivered effectively through CoEs.

Impact on F&A functions and F&A professionals

The transition to widespread use of CoEs will require F&A functions to increase their capabilities, which will lead to new and increased job opportunities. For this trend to materialise, F&A functions need to invest in infrastructure such as communication and collaboration tools to allow CoEs to deliver services across geographies. F&A professionals also need to transform and develop new or specialised F&A skills; have a broader regional outlook, becoming more attuned to the region; and adopt an open mindset to taking on new roles.

COVID-19 as a catalyst for change

Globally, COVID-19 has disrupted standard operating procedures for many organisations. Crisis management and business continuity plans were activated in response to the pandemic, and many **adopted new ways of working**. Critical F&A tasks such as financial closing and reporting had to be done virtually for the first time, **to ensure continuity**. Many F&A functions have demonstrated their resilience in shifting to remote work, and some have even shown productivity gains in doing so.

Since then, F&A functions have **learned and emerged stronger** from the crisis. They **recovered by increasing reporting activities**, including profit-and-loss forecasts and cash flow forecasts; doing more scenario planning; leveraging technology tools and predictive analytics when planning for specific scenarios; and modelling the impacts of these scenarios on margins.

COVID-19 has accelerated the transformation of F&A functions, largely due to the 4 megatrends described above. As organisations prepare themselves to **thrive in the 'next normal'**, they need to recognise that there will be no return to business as usual. F&A functions should capitalise on this momentum to invest in digital transformation and implement new ways of working, and F&A professionals should equip themselves with new skill sets to stay relevant.

3.2 The role of F&A functions

F&A functions are expected to play 4 diverse and challenging profiles: Catalyst, Strategist, Steward and Operator, based on Deloitte's Four Faces of the CFO framework, shown in Figure 3.3. The megatrends discussed in Section 3.1 have changed how F&A functions work, and realigned the focus and efforts of each of the Four Faces.

Defining the Four Faces of F&A functions

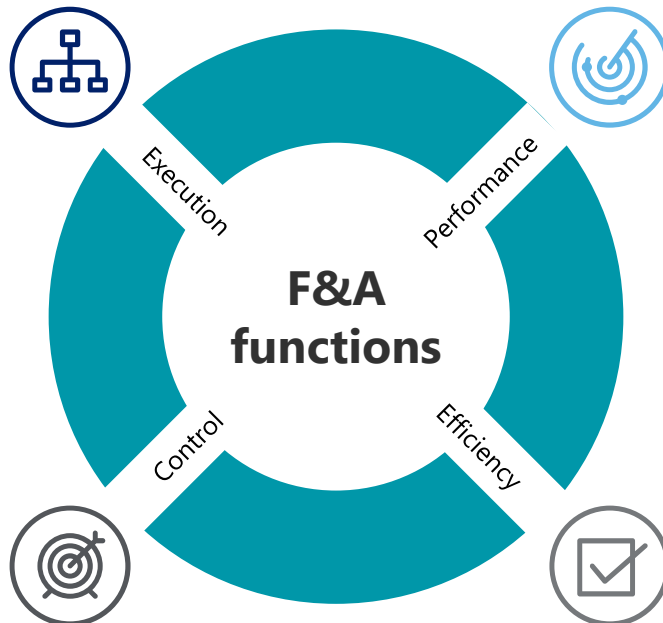
Stewards and Operators are 2 fundamental but essential faces of the F&A functions. Stewards preserve the assets of the organisation by minimising risk and getting the books right. Operators run an efficient and effective F&A function, for example by ensuring vendors are paid and financial reports are filed.

Catalysts and Strategists play more value-adding roles and will be more in demand as megatrends take hold. Strategists help to shape overall strategy and direction. Catalysts instil a financial approach and mindset throughout the organisation to help other parts of the business perform better.

Figure 3.3 : The Four Faces of F&A functions

Catalysts influence behaviours not only across F&A functions but also across the entire organisation. They help execute strategic and financial objectives while also creating a risk-intelligent culture.

Strategists operate as financial leaders, helping to shape and define the strategic direction. They gather and communicate financial insights vital to the future performance of the organisation.



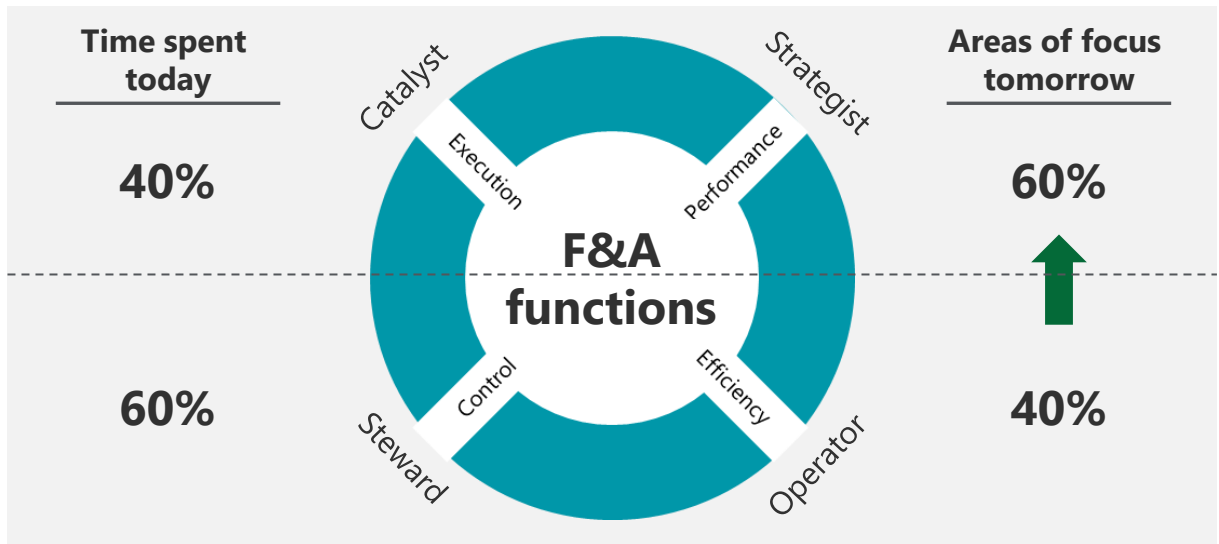
Stewards protect and preserve an organisation's critical assets and accurately report its financial position and operations to stakeholders, ensuring compliance and proper controls are in place.

Operators balance capabilities, talent, costs and service levels to ensure that the finance function fulfils its core responsibilities effectively and efficiently.

The future of F&A functions

The study surveyed 65 corporate F&A leaders, such as CFOs and Finance Directors, to understand the current average level of sophistication of F&A functions in Singapore. Majority of them said they spent approximately 60 percent of their time acting as Stewards and Operators. The **aspiration is to shift the focus to spend at least 60 percent of their time as Catalysts and Strategists**. This is shown above the broken line in Figure 3.4.

Figure 3.4 : Shift in areas of focus for the F&A function



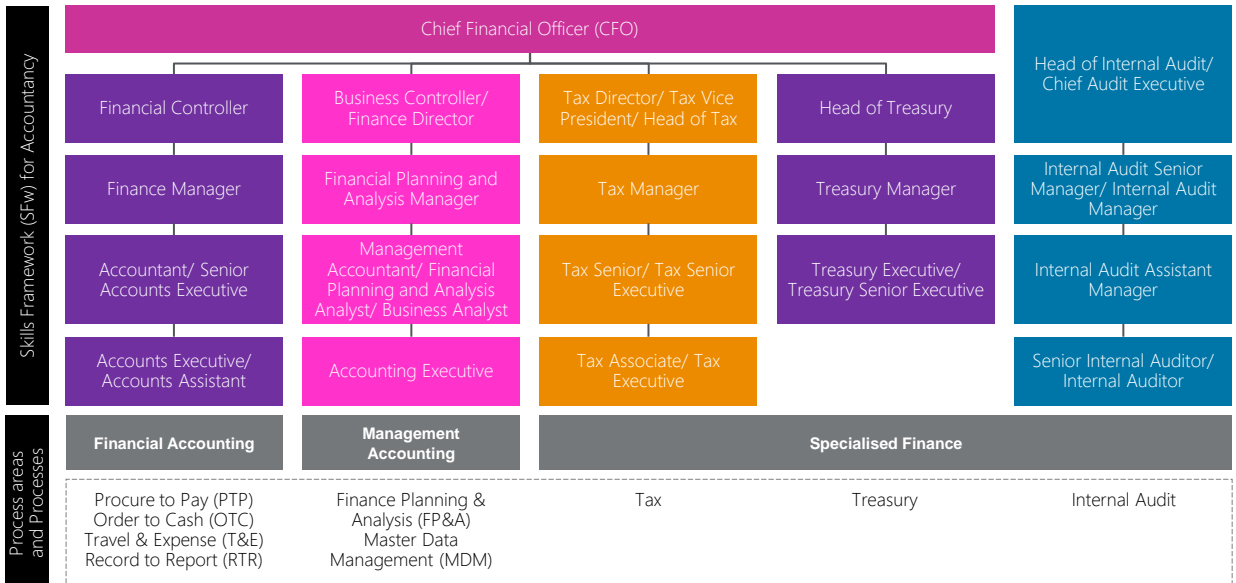
Most F&A functions grapple with manual processing, substantial hard-copy paperwork and complex workflows today. There are opportunities to increase the level of sophistication in these areas through standardisation, automation and better data management. **Transactional, high-volume and repetitive activities have a higher potential to be automated by technology**. This will also help to improve the consistency and accuracy of data, and ensure higher-quality financial reporting. It means Stewards and Operators can **shift their focus to monitoring processes and automations, and managing exceptions not addressed by technology**. This will free up time so F&A functions can channel resources and focus on being Catalysts and Strategists.

To realise the Catalyst and Strategist ambition, F&A roles have to evolve, developing a greater emphasis on **business knowledge, data, and technical and interpersonal skills**.

The job roles in F&A functions

Based on the Skills Framework (SFw) for Accountancy, F&A functions comprises **20 job roles covering 3 process areas, namely Financial Accounting (FA), Management Accounting (MA), and Specialised Finance (SF)** (see Figure 3.5). Each job role focuses on different ‘Faces’ of F&A functions to support the organisation in achieving its goals and objectives.

Figure 3.5 : 20 job roles in F&A functions



The **FA process area** includes Procure to Pay, Order to Cash, Travel & Expense, and Record to Report. FA roles largely operate as **Stewards and Operators** (see Figure 3.6).

Figure 3.6 : The Four Faces of the FA process area

FA processes	Four Faces	Responsibilities
Procure to Pay	Steward and Operator	<ul style="list-style-type: none"> Check budget availability for purchases and payments Create supplier contracts and issue purchase orders Input and validate supplier invoices through 3-way match Process payments to suppliers
Travel & Expense	Steward and Operator	<ul style="list-style-type: none"> Input and validate expense claims Process payments to employees
Order to Cash	Steward and Operator	<ul style="list-style-type: none"> Create and issue customer invoices Collect and match customer payments to billing records Issue reminder to recover overdue customer payments
	Strategist and Catalyst	<ul style="list-style-type: none"> Assess credit risks and review customers' credit terms
Record to Report	Steward and Operator	<ul style="list-style-type: none"> Record journal entries Process financial close at period-end Consolidate financial statement of multiple entities within the organisation Prepare financial statements and disclosures
	Strategist and Catalyst	<ul style="list-style-type: none"> Interpret accounting standards and determine the accounting approach for financial transactions

The **MA process area** includes Financial Planning and Analysis and Master Data Management. Figure 3.7 outlines the processes and responsibilities in MA, aligned to the Four Faces.

Figure 3.7: The Four Faces of the MA process area

MA processes	Four Faces	Responsibilities
Financial Planning and Analysis	Steward and Operator	<ul style="list-style-type: none"> Collect, validate and clean financial and non-financial data Prepare budget and track budget utilisation
	Catalyst and Strategist	<ul style="list-style-type: none"> Prepare management reports Plan and forecast budget and financial performance targets Analyse budget utilisation and financial performance Develop financial models and perform scenario analyses of business impacts
Master Data Management	Steward	<ul style="list-style-type: none"> Approve changes to master data
	Strategist and Catalyst	<ul style="list-style-type: none"> Formulate data governance strategy for master data definition, data structure, data ownership, data input controls and data security access

The **SF process area** comprises Tax, Treasury and Internal Audit processes with its own unique alignment to the Four Faces (see Figure 3.8) :

Figure 3.8: The Four Faces of the SF process area

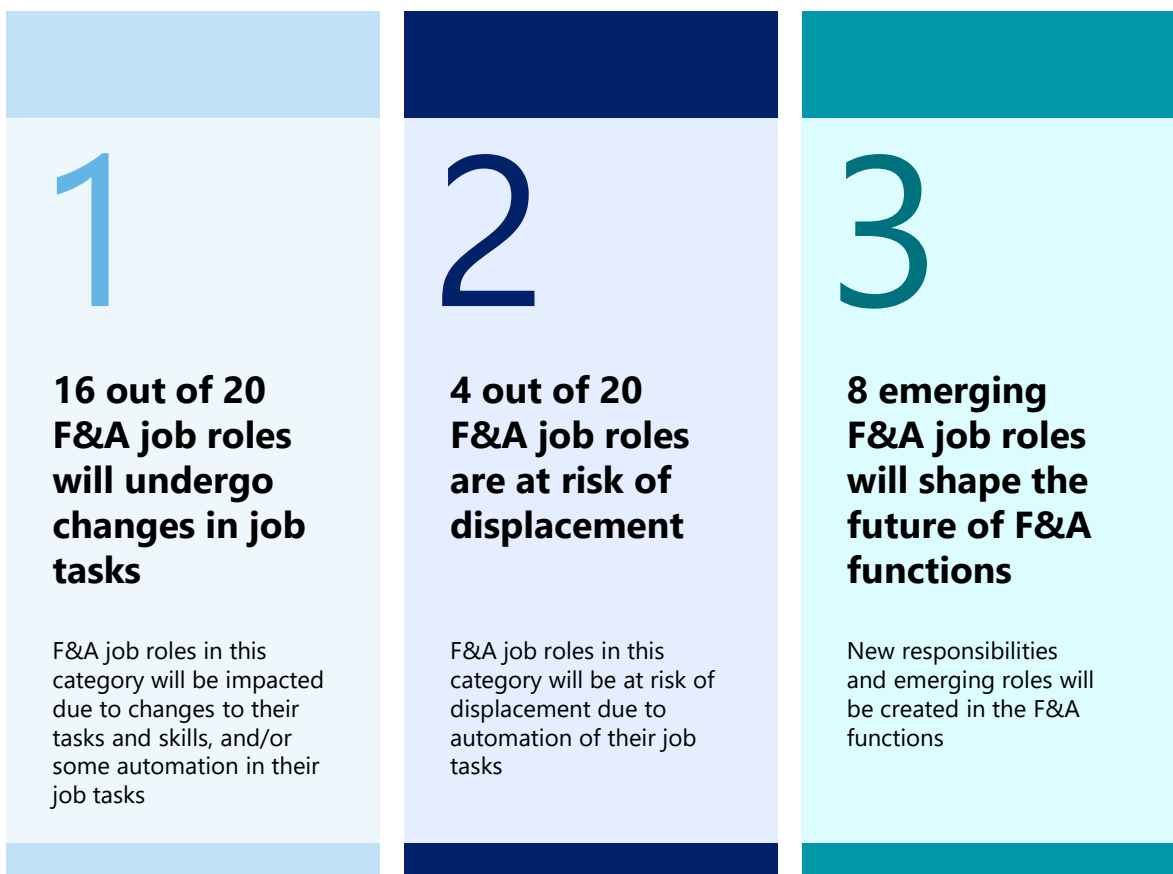
SF processes	Four Faces	Responsibilities
Tax	Steward and Operator	<ul style="list-style-type: none"> Validate business transaction for tax regulatory compliance Prepare and file tax returns
	Catalyst and Strategist	<ul style="list-style-type: none"> Analyse and develop tax strategies Perform scenario analyses of tax exposure Assess business scenarios and provide tax advice Address inquiries from tax authorities
Treasury	Steward	<ul style="list-style-type: none"> Monitor and report cash and liquidity position Monitor and report financial risks
	Catalyst and Strategist	<ul style="list-style-type: none"> Analyse and develop strategies in cash and liquidity, and financial risk management Forecast and stress test cash and liquidity position Perform scenario analyses of foreign exchange and interest rate risk Provide investment and hedging recommendations
Internal Audit	Steward	<ul style="list-style-type: none"> Audit internal controls Monitor audit issues Prepare and report audit results
	Catalyst and Strategist	<ul style="list-style-type: none"> Assess and identify business risks Analyse business processes Determine audit scope and plan audit

3.3 Impacts on F&A job roles and skills

Given the distinctions in F&A job roles, tasks and focus areas (or Faces) within F&A functions, the impacts of the megatrends will differ across the F&A workforce. The study assessed the potential impacts on 20 identified F&A job roles over the next 2 to 5 years, based on two criteria: **(1) the extent of automation**; and **(2) the extent of change in tasks and skills**, as F&A functions transform and progress up the levels of sophistication (for more details, see Section 5: Methodology).

The 20 F&A job roles were classified into 2 categories. Category 1 included those job roles that are expected to change. Category 2 included job roles at risk of displacement. Emerging roles were identified in Category 3.

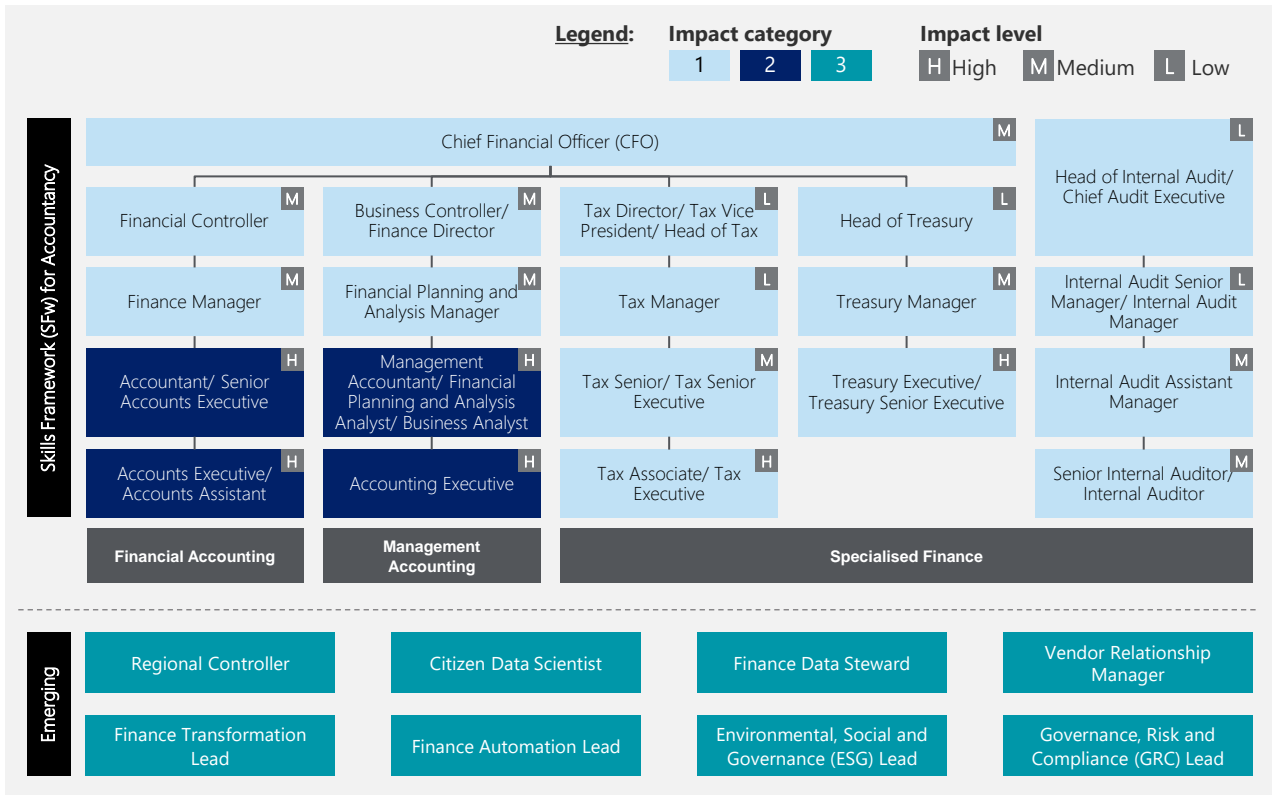
Figure 3.9 : 3 categories of impacts on the F&A workforce



Study on in-house F&A functions | Section 3: Overall findings

Based on a holistic assessment of the 2 criteria, an impact level of **'high'**, **'medium'** or **'low'** was assigned to each job role (see Figure 3.10). This will be further explained in the following pages. Figure 3.11 also summarises the 8 emerging roles that were identified in the study.

Figure 3.10 : Impacts on F&A job roles



1

16 out of 20 F&A job roles will undergo changes in job tasks

F&A job roles in this category will be impacted due to changes to their tasks and skills, and/or some automation in their job tasks

Varying levels of impact across F&A process areas

16 out of 20 F&A job roles will undergo varying levels of impacts in the next 2–5 years. Nonetheless, these roles are not susceptible to displacement due to automation because they are likely to perform more value-adding tasks as Strategists and Catalysts. The degree of impact depends on:

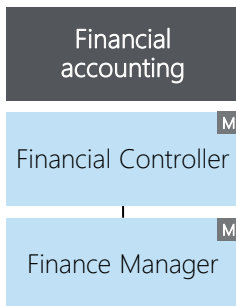
1. the changes in job tasks and expectations, and corresponding skill requirements
2. the degree of technology disruption
3. the seniority of the role.

The subsequent paragraphs analyse how FA, MA and SF roles will be affected. It highlights the changes expected to these roles, and suggests the skills and competencies that will be required for these roles in the future.

The evolution of each specific role is further illustrated in Appendix 6.4 Job canvas, including changes to job tasks; digital enablers that will be required in the future; skills and competencies that will be necessary; and compatible adjacent and emerging roles, where applicable.

Financial Accounting (FA)

Impact on FA roles – driving process excellence



The impact on senior FA roles such as Financial Controller (FC) and Finance Manager (FM) is expected to be medium as they evolve to keep pace with the increase in the level of sophistication of the underlying processes.

As automation and technology adoption become more prevalent in the FA process areas, transactional tasks that are repetitive in nature or have a clearly defined logic can be replaced by process automation or workflow solutions.

FCs and FMs typically review transactions, analyse outputs and manage process exceptions. With increased business complexity as organisations reshape their business models or grow into new markets or segments, there will be **greater emphasis on FCs and FMs to undertake Strategist and Catalyst activities**. This will include providing data-driven insights and analysis, assessing the impacts of changing accounting standards, and shaping improvements based on process knowledge.

Figure 3.11 : Changes to FM and FC job tasks

FA processes	Changes in tasks
Procure to Pay	<ul style="list-style-type: none"> Standard checking processes such as budget checks and milestone tracking on large projects will be increasingly automated. Organisations will improve upstream procurement processes with new ways of purchasing, such as catalogue buying. FCs or FMs will oversee complex areas and subjective decision making, including relating to accounting treatment or invoice disputes. More data and tools are likely to be used for tasks such as expense analysis and advising on spend management.
Order to Cash	<ul style="list-style-type: none"> Reconciliation activities such as matching of collections against billing records will be increasingly automated. FCs or FMs will still oversee areas requiring judgement such as credit risk assessment, and reviewing and managing customer credit limits. More data and tools are likely to be used for credit risk assessments and analysis, for example, analysing customer buying patterns and providing insights to improve the customer journey.
Record to Report	<ul style="list-style-type: none"> Creation of standard accounting entries, reconciliations and exception alerts throughout the financial close, and reporting processes will be increasingly automated. Complex areas and subjective decision making such as compliance with accounting standards and making financial statement disclosures will still require the professional judgement of FCs or FMs in the increasingly complex compliance environment. More data and tools are likely to be used for accounting analysis, for example, in analysing sporadic fluctuations in key accounts to detect anomalies in the transactions

With increased automation, **FCs and FMs will need to manage both human and automated environments**. They must be clear on their responsibilities in using automation tools and know which tools will be most effective while **ensuring the necessary controls** are still in place. Increasing compliance requirements will also require FCs and FMs to **better appreciate the need to learn and apply technical accounting expertise**.

Future skills for FA roles

Deepening existing skills such as **Accounting Standards** and **Audit Compliance** will enable FCs and FMs to ensure that the necessary controls in F&A functions remain in place and effective after processes have transformed. These skills will be fundamental to better analyse the impact of changes in accounting standards and regulations.

New skills such as **Digital Problem Solving** will also become necessary as digital tools are increasingly used in FA. With the proliferation of data and a greater emphasis on analytics, **Data Governance** skills will be crucial in managing the quality, integrity and security of data. The career journey of an individual who has adapted to the new requirements of FM is showcased in Case study 5 (see Appendix 6.6 for more case studies).

Figure 3.12 : Key skill requirements for FA roles

F&A process area	Existing skills to deepen	New skills required
Financial Accounting	<ul style="list-style-type: none"> Accounting Standards Audit Compliance Business Acumen Data Analytics Financial Statements Analysis Financial Reporting Quality 	<ul style="list-style-type: none"> Data Governance Digital Problem Solving Macroeconomic Analysis

See Appendix 6.3 for definition of these skills and competencies.

Case study 5



Seah Chee Im

From FA Accounts Executive to Finance Manager

Career overview

With her previous background in accounting and audit, Seah Chee Im joined Infineon Technologies Asia Pacific (IFAP) as a contract AP accountant, responsible for processing invoices and payments. Chee Im later progressed to a permanent role, where she was tasked with higher-value responsibilities such as GST and profit and loss reporting, managing intercompany processes and transfer pricing margin compliance for IFAP. With the knowledge and experience gained, she was entrusted with new and larger projects. She was also given the opportunity to work collaboratively in cross-functional teams to drive transformation initiatives in Asia Pacific (APAC) sites. This included leading process harmonisation for AP and intercompany payments, and implementing global tools such as a lifecycle management and master data management tool, and an accounting performance dashboard. She worked with Treasury and IT teams to automate payment processes, and contributed to the successful roll-out of an employee claims system. Given her exposure and experience, Chee Im is now part of the regional project team, implementing SAP S/4HANA across various sites in APAC.

Development journey

Chee Im has progressed through her career with an open mind and strives to explore new areas, including leading and managing finance transformation initiatives. Her involvement in various projects has equipped her with project management and digital skills, which complement her experience in transactional accounting. Chee Im has also enrolled in project management courses to polish her skills, and actively pursues internal training offered by the firm.

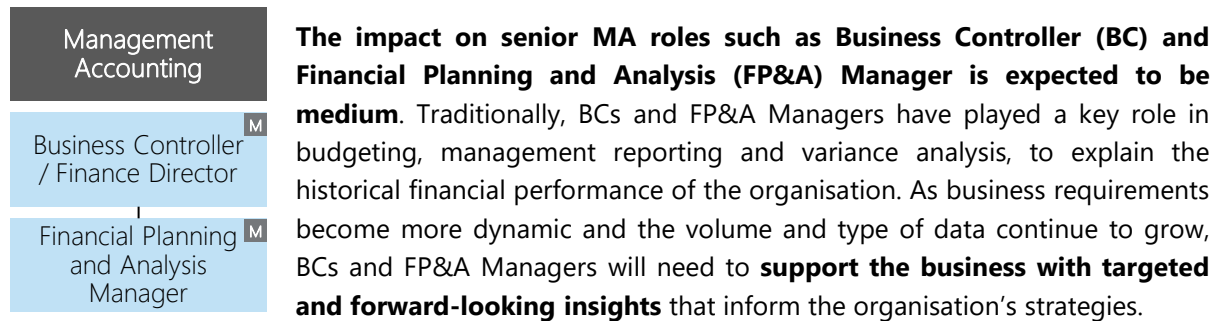


F&A individuals should stay curious, have an open mind and strive to explore new areas beyond their current roles.



Management Accounting (MA)

Impact on MA roles – business insights need to be faster, better and deeper



The primary function of BCs and FP&A Managers is to translate overarching company strategy into the organisation’s annual operating and capital budgets, incorporating financial and non-financial key performance indicators and targets. These roles are expected to **become more prominent and will grow in demand** as F&A functions **shift towards being Strategists and Catalysts**, providing more in-depth and holistic business insights as well as ensuring data quality. As such, they will need to improve the level of sophistication in the processes, while deepening or developing new skills due to changes to the kinds of tasks they have to undertake.

Figure 3.13 : Changes to BC and FP&A Manager job tasks

MA processes	Changes in tasks
Financial Planning and Analysis	<ul style="list-style-type: none"> BCs and FP&A Managers will have to leverage technology such as Business Intelligence (BI), Enterprise Performance Management (EPM) and Visualisation Tools, to monitor financial and budget performance more frequently in the increasingly volatile business environment. They will need to become increasingly agile; perform more scenario and sensitivity (what if) analysis, sophisticated data modelling, and predictive and cognitive analysis to forecast possible outcomes, and meet increasing demand for data-driven insights. Increasingly, they will have to use Data Science, Machine Learning and Advanced Analytics Tools to yield deeper data insights. They will need to gain deeper operational understanding of the business and specific areas such as sales, marketing or supply chain, to partner effectively with business counterparts and develop more holistic insights. They will need to integrate business knowledge and data insights to support and influence management decisions.
Master Data Mgmt.	<ul style="list-style-type: none"> With increasing reliance on data, BCs and FP&A Managers will need to ensure data governance is well defined and maintained across the organisation. This includes areas such as master data definition, data structure, data hierarchy, data ownership, data input controls, and data security access. They will need to collaborate with IT and data owners to ensure consistent data quality.

Globally, organisations have started creating CoEs (see Megatrend 4) to develop deeper capabilities in MA processes. This will allow MA roles to be ramped up, to support a wider group of stakeholders across the organisation.

In Singapore, MNCs and LLEs have already begun setting up similar CoEs that focus on FP&A and even more specialised areas like Manufacturing Finance or Supply Chain Finance, to support the region. BC and FP&A Managers can play a key role in managing these CoEs.

Future skills for MA roles

Improving existing **Finance Business Partnering** and **Disruption Management** skills will allow BC and FP&A Manager roles to anticipate changing business requirements in their organisation, and develop rapid insights for the business. As the reliance on data increases within the organisation, they will also need to enhance their **Data Governance** and **Data Analytics** skills to ensure accurate and meaningful insights.

Developing new skills such as **Financial Modelling** and **Digital Problem Solving** will become more pertinent in building Planning, Budgeting and Forecasting (PBF) models and applying digital tools in the Management Reporting process. **Data Storytelling & Visualisation** and **Scenario Planning and Analysis** skills will become increasingly critical in translating data effectively into valuable insights.

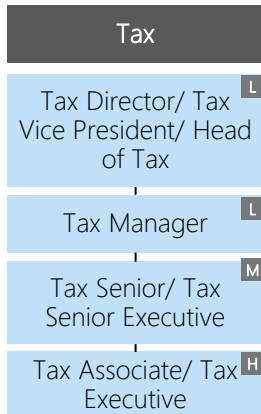
Figure 3.14 : Key skill requirements for MA roles

F&A process area	Existing skills to deepen	New skills required
Management Accounting	<ul style="list-style-type: none"> • Data Analytics • Data Governance • Finance Business Partnering • Macroeconomic Analysis • Disruption Management 	<ul style="list-style-type: none"> • Programming & Coding • Digital Problem Solving • Cross-Functional Acumen • Business, Product & Portfolio Acumen • Scenario Planning and Analysis • Financial Modelling • Data Storytelling & Visualisation

See Appendix 6.3 for definition of these skills and competencies.

Specialised Finance – Tax

Impact on Tax roles – increasing the focus on advisory and business partnering



The impact on Tax roles – comprising Head of Tax, Tax Manager, Tax Senior Executive and Tax Executive – varies according to the seniority of the role and the job tasks undertaken. Traditionally, the Tax function has focused on ensuring that organisations comply with tax legislation and standards, and produce timely tax reports. However, as the pace of change in the legislative and regulatory environment accelerates and cross-border transactions become increasingly common, Tax roles will need to stay abreast of the latest developments to develop effective tax strategies that optimise the organisation’s tax position, while remaining compliant.

Tax roles are expected to apply a **Strategist and Catalyst** lens to their tasks in **optimising the organisation’s tax efficiency** and **providing tax advice** based on the organisation’s strategic goals and direction. To effectively provide recommendations to the business, Tax roles will need to improve the level of process sophistication, while deepening or developing new skills so they can undertake new job tasks expected in their roles.

Figure 3.15 : Changes to Tax job tasks

Tax processes	Changes in tasks
<p>Tax Accounting and Compliance</p>	<ul style="list-style-type: none"> • Tax roles will increasingly use accounting systems with tax modules and specific tax compliance software to automate simple, standard tax computations, and configurable templates to facilitate tax returns and tax filing activities. • As tax regulations become increasingly complex, Tax Senior Executives and Tax Executives have to deepen their technical knowledge to manage areas that cannot be automated, such as compliance- and reporting-related tax exceptions, payments monitoring, handling tax refunds and tax authority enquiries. • Heads of Tax and Tax Managers will continue to oversee and review tax activities, assess tax exposure and apply root cause analysis, to develop tax measures and manage multiple stakeholder relationships.
<p>Tax Strategy and Advisory</p>	<ul style="list-style-type: none"> • Increasingly, Tax roles at all levels will need to use Data Science, Machine Learning and Advanced Analytics Tools for data modelling, to yield deeper insights for developing tax strategies and tax advice. • Those in junior Tax roles will need to learn how to use these tools and models. • Those in senior Tax roles will continue to partner with business units and draw on their business and specialised tax knowledge to provide recommendations to stakeholders.

The adoption of various technology solutions may help to streamline and automate certain tasks in the Tax function, especially in Tax Accounting & Compliance processes. However, a significant portion of Tax roles will still rely on robust technical competence to advise on strategies that optimise the organisation’s tax position. This will involve the use of more data and analysis to identify trends and outliers. More critically, the Tax function will need to keep up to date with the latest tax regulations.

Future skills for Tax roles

Tax roles will need to continue deepening skills such as **Tax Compliance** and **Taxation Laws** that are fundamental to the Tax function. In addition, strengthening skills such as **Tax Risk Management**, **Tax Controversy** and **Tax Advisory** will allow Tax roles to better develop tax strategies and provide strategic tax advice to organisations in line with corporate growth plans.

New skills such as **Digital Problem Solving**, **Financial Modelling** and **Data Storytelling & Visualisation** will be crucial in helping Tax roles transform Tax processes. These skills will help identify and implement technologies that can automate Tax process, and aid in building effective tax models to deliver insights.

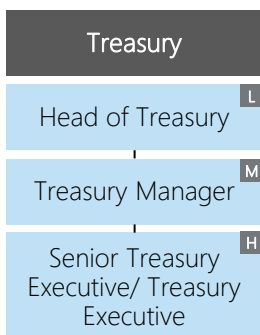
Figure 3.16 : Key skill requirements for Tax roles

F&A process area	Existing skills to deepen	New skills required
Tax	<ul style="list-style-type: none"> • Tax Compliance • Taxation Laws • Tax Risk Management • Tax Controversy Management • Tax Advisory 	<ul style="list-style-type: none"> • Digital Problem Solving • Financial Modelling • Data Storytelling & Visualisation

See Appendix 6.3 for definition of these skills and competencies.

Specialised Finance – Treasury

Impact on Treasury roles – generating value through optimal cash flow and financial risk management



The impact on Treasury roles – comprising Head of Treasury, Treasury Manager, Senior Treasury Executive and Treasury Executive – will vary according to the seniority of the role and the job tasks involved. Treasury roles are pivotal in managing and forecasting cash flows, and minimising financial risks to the organisation. As markets and business environments become more volatile, there is a growing need for Treasury functions to increase the speed and accuracy of cash forecasts and to more effectively manage and mitigate financial risks and exposures.

Treasury roles are expected to play a **more proactive role in driving value** within the organisation, through optimised cash and liquidity positions and minimised financial risks. This function will need to improve its level of process sophistication, and to deepen or develop new skills that allow Treasury roles to act as better **Strategists and Catalysts** due to the changing job tasks shown in Figure 3.17.

Figure 3.17 : Changes to Treasury job tasks

Treasury processes	Changes in tasks
Cash and Liquidity Mgmt.	<ul style="list-style-type: none"> • Real-time monitoring of cash and liquidity positions can be automated by integrating Treasury Management Systems with banking systems and pre-configured cash flow models. • Senior Treasury Executives and Treasury Executives will need to deepen their technical knowledge in navigating banking regulations and handling reporting-related exceptions. • Heads of Treasury and Treasury Managers will continue to call on their experience and technical expertise to develop strategies; create operating and capital cash flow models for short- and long-term analysis; and manage liquidity risks and their impacts.
Financial Risk Mgmt.	<ul style="list-style-type: none"> • Treasury management systems can be used to enhance trade monitoring activities in line with internal policies. • Treasury roles will have to proactively monitor macroeconomic events that may impact the organisation’s financial risk exposure. • Treasury roles will need to focus on developing and refining financial risk frameworks and complementary models to better manage risk exposure and mitigate risk through financial instruments (including optimal hedging), in the context of a more volatile business environment. • Heads of Treasury and Treasury Managers will continue to provide investment and optimal hedging recommendations by analysing various source data (such as from accounting systems and market data providers).

Overall, digital tools such as Treasury management systems may help improve the visibility of information and facilitate reporting. However, Treasury roles will need to continue applying their technical treasury expertise and knowledge to provide the business with better insights and advice in relation to managing cash flows and financial risks.

Future skills for Treasury roles

Existing skills such as **Treasury Management** and **Business Planning** will continue to play a part in the Treasury function. These critical skills will be relevant even in an environment augmented by automation. Enhancing these skills will enable the Treasury roles to play a better strategic role in supporting the organisation’s business decisions.

Treasury roles will need to acquire new skills such as **Digital Problem Solving** and **Data Analytics** to support the development of cash flow models. Understanding how digital tools in the Treasury function operate will facilitate a better appreciation of the outputs from these automated process. Case study 6 shows the career journey of an individual who has progressed up the Treasury function (see Appendix 6.6 for more case studies).

Figure 3.18 : Key skill requirements for Treasury roles

F&A process area	Existing skills to deepen	New skills required
Treasury	<ul style="list-style-type: none"> • Treasury Management • Credit Risk Management • Business Planning • Macroeconomic Analysis • Business Acumen 	<ul style="list-style-type: none"> • Data Analytics • Digital Problem Solving • Regulatory Risk Management • User Centric Approach & Testing • Vendor Relationship Management

See Appendix 6.3 for definition of these skills and competencies.

Case study 6



Pulat Yunusmetov

From Treasury Executive to Treasury Manager

Career overview

Pulat started his career as a Treasury Analyst covering the Eastern European region. He gained a thorough understanding of corporate Treasury and controlling functions, and polished his stakeholder management skills – managing collaboration between the regional F&A function and external stakeholders, including banks, auditors, regulators and others. In doing so, he gained an understanding of the elements and benefits of an RTC. He progressed as a Senior Treasury Analyst in a FinTech company, where he was exposed to global Treasury management, and debt and working capital management. Later, he took up the role as a Treasury Manager in an MNC in the fast-moving consumer goods industry, covering APAC and the Middle East. He initiated many improvement projects and brought several industry awards to the MNC’s regional Treasury team.

Development journey

Pulat has extensive experience within the Treasury function. As he progresses in his career, he realises the importance of being open to learning new skills, taking up responsibilities beyond the job scope and using technology to improve efficiency. He has upskilled himself by attending EuroFinance courses, and gained accreditation as a Chartered Financial Analyst and Certified Treasury Professional. He has also completed Six Sigma Green Belt certification to facilitate his management role across multiple Treasury projects.

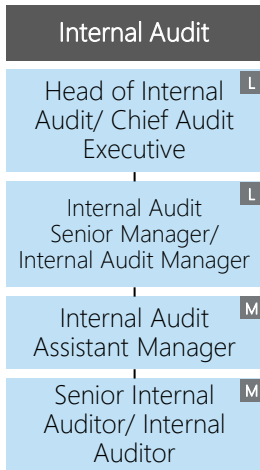


Individuals should be open to new challenges, be willing to learn and continuously apply the new knowledge gained.



Specialised Finance – Internal Audit (IA)

Impact on IA roles – innovating to remain relevant as the organisation evolves



The impact on IA roles – comprising Head of Internal Audit, Internal Audit Manager, Internal Audit Assistant Manager and Internal Auditor – varies according to the seniority of the role and the job tasks involved. As organisations become more technology-driven and business processes change, the IA function will need to be better attuned to the challenges of emerging risks, technologies, innovation and disruption across the organisation.

IA roles will need to adapt to changes in the business environment and apply their technical expertise to provide assurance for the effectiveness of risk management, internal controls and governance processes in the organisation.

In addition to maintaining objectivity and neutrality, IA roles are increasingly expected to provide a point of view in managing changes relating to risk management, internal controls and corporate governance within the organisation. To do so, they will have to perform more **Strategist and Catalyst** activities, integrating business knowledge and data analysis in their audit execution and post-audit recommendations. The IA function will need to develop more sophisticated processes and expand skill sets in response to the changes in job tasks shown below.

Figure 3.19 : Changes to IA job tasks

IA processes	Changes in tasks
<p>Audit Plan, Risk Assessment and Execution</p>	<ul style="list-style-type: none"> IA roles will need to use more Data Science, Machine Learning and Advanced Analytics Tools to provide real-time updates on risk assessment and risk monitoring processes. Repetitive audit procedures that require less judgement will be increasingly automated, using technology and data. IA Assistant Managers and Internal Auditors will need to use more analytical tools to audit business processes and identify exceptions. Heads of IA and IA Managers will require greater understanding of the business, so they can identify risks more promptly in a more volatile business environment. Heads of IA and IA Managers will need to use predictive analytics model and understand audit technology-enabled processes to perform risk assessment, develop effective audit strategies and plans.
<p>Reporting and Monitoring</p>	<ul style="list-style-type: none"> IA Assistant Managers and IAs will increasingly use Audit Management Systems to automatically generate audit dashboards and workflows to report audit findings and monitor remediation plans. Heads of IA and IA Managers will have to work closely with business counterparts, and apply data analytics and IA expertise to provide post-audit recommendations to stakeholders.

Digital tools and analytics may be used to streamline and complement some of the processes in the IA function, but IA will still rely heavily on individuals’ deep technical knowledge, professional judgement and scepticism to provide assurance and advice on the organisation’s risks, controls and governance.

Future skills for IA roles

Existing skills such as **Internal Controls, Enterprise Risk Management** and **Governance** will remain essential to the IA function. IA roles will need to be well equipped with these skills as evolving business environments and processes change the way IA is typically performed.

To use analytics throughout the IA process, those in IA will need to acquire new skills such as **Digital Problem Solving, Scenario Planning and Analysis** and **Data Storytelling & Visualisation**. These skills will allow them to derive the greatest value from the technologies that complement IA processes, elevating their insights and delivering stronger advice to management.

Figure 3.20 : Key skill requirements for IA roles

F&A process area	Existing skills to deepen	New skills required
Internal Audit	<ul style="list-style-type: none"> • Data Analytics • Enterprise Risk Management • Internal Controls • Internal Audit Quality Assurance • Governance 	<ul style="list-style-type: none"> • Data Governance • Digital Problem Solving • Scenario Planning and Analysis • Programming & Coding • Data Storytelling & Visualisation

See Appendix 6.3 for definition of these skills and competencies.

The way forward

In summary, 16 out of 20 F&A job roles that will undergo changes in job tasks will need to sharpen existing skills and competencies and/or acquire new skills to tackle these changes.

This presents the F&A workforce with an opportunity to improve the quality of the work delivered, while expanding and developing skills and competencies. For example, minimising manual processing with Robotic Process Automation will increase efficiency and reap productivity gains, reduce laborious tasks and free up individual capacity to perform more value-adding activities. For this to happen, F&A professionals need to be **aware of the disruptions and necessary changes** to their roles. With this understanding, they can **reinvent themselves through upskilling and/or reskilling** to **better adapt and bring higher value** to their role.

Organisations have a responsibility to provide the right guidance and support required to upskill their employees. They need to be **cognisant of the changes in F&A functions** and the need to **adopt progressive HR practices**, such as **redesigning job roles** and **retraining F&A professionals**. In upskilling and/or reskilling employees, organisations need to identify drivers that motivate their employees to take ownership of their development, to improve the success of training initiatives. Organisations should also present training schemes as a form of empowerment and personal growth, rather than as a defensive or preventive measure.

Among the 16 F&A job roles facing changes in their job tasks, CFOs plays a vital role in leading F&A functions and F&A professionals through the F&A transformation. As such, **CFOs are exposed to a medium impact** as their tasks expand to include more involvement in change management, digital enablement and talent development, which will be discussed in Section 3.4.

2

4 out of 20 F&A job roles are at risk of displacement

F&A job roles in this category will be at risk of displacement due to automation of their job tasks

Junior roles in FA and MA process areas are at risk of displacement

4 out of 20 F&A roles are at risk of displacement in the next 2 to 5 years due to automation of their job tasks. Junior roles in FA and MA will face the most impact due to automation. This section analyses the impact on these 4 roles, highlighting the potential disruption to the job roles and suggesting adjacent roles they could transition into. See Appendix 6.4 for details of each impacted role and the top 3 compatible adjacent roles.

Financial Accounting (FA)

Impact on FA Roles – manual, routine tasks such as data entry will be automated



The impact on junior FA roles such as Accountant/ Senior Accounts Executive (SAE) and Accounts Executive/ Accounts Assistant (AE) is expected to be high, as their tasks are predominantly transactional, high-volume, repetitive and rule-based.

As automation and technology adoption become more prevalent in the FA process area, **repetitive transactional tasks and those that follow a clearly defined logic could be replaced by process automation or workflow solutions**. Tasks such as reviewing the numerical accuracy and completeness of financial reports, for example, can be replaced by automation tools.

Specifically:

- In **Procure to Pay**, the effort to read hard-copy invoices and transpose data into the system will gradually be replaced by electronic invoices – either using OCR and ML to read hard-copy invoices or offering vendor portals for suppliers to directly input invoice details. Together with the use of purchase orders, and automated budget checking, standard invoice processing will require minimal human intervention.
- In **Order to Cash**, billing and reconciliation of collections will gradually be replaced by accounting systems that are integrated with banking platforms. SAEs and AEs may still need to follow up with customers on collections, but the task of issuing rule-based payment reminders will be automated.
- In **Record to Report**, accounting systems will be able to prepare standard and recurring journal adjustments as well as standard financial reports. Financial consolidation and disclosure management solutions will help automate consolidated financial statements and disclosure reporting.

Overall, the job tasks performed by SAEs and AEs are at risk of being displaced by automation. Up to 60 percent of manual and repetitive tasks, such as data entry, will be automated. Some tasks will shift towards validating data and managing exceptions in the accounting systems.

Potential FA pathways and skills required

As a result, SAEs and AEs will have to upskill and progress upwards in FA by performing work that involves more technical expertise in accounting standards and statutory reporting.

It will be useful for SAEs and AEs to have a sense of the job roles within and adjacent to F&A function, so they can identify which roles they have the greatest potential to transition into. The study identified potential job adjacencies for the highly impacted roles, taking into account existing skills and competencies.

Figure 3.21 outlines the top 3 identified job adjacencies for AEs and the skills gap AEs would need to bridge to make the transition. Similar job adjacencies for SAEs are detailed in Appendix 6.4.

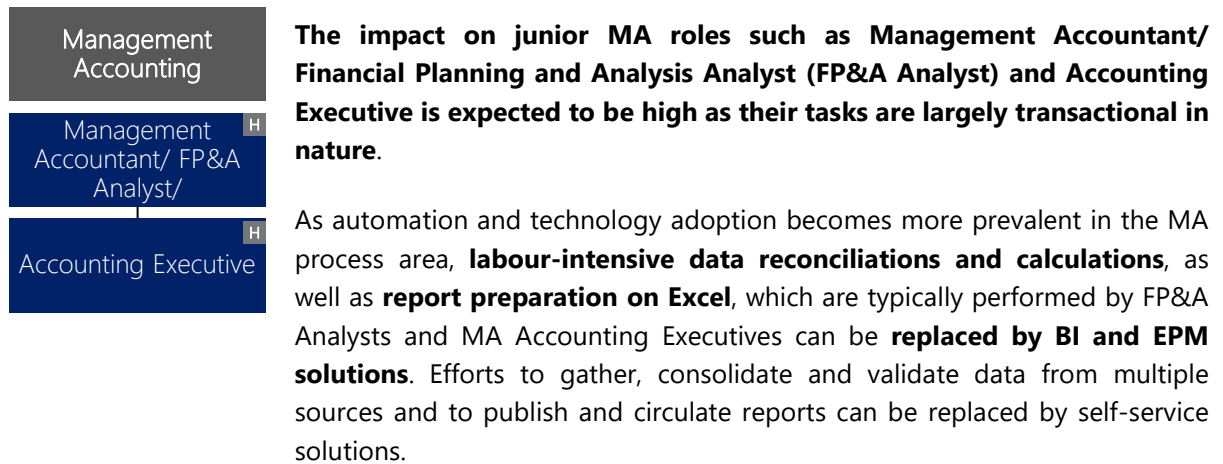
Figure 3.21 : Top 3 job adjacencies for FA AEs

Adjacent roles	Existing skills overlap	Additional skills to develop
Senior Internal Auditor/Internal Auditor – SFw for Accountancy	<ul style="list-style-type: none"> • Business Innovation and Improvement • Data Analytics • Digital Problem Solving • Internal Controls 	<ul style="list-style-type: none"> • Cyber Security • Business Process Analysis • Enterprise Risk Management • Fraud Risk Management
Tax Associate/ Tax Executive – SFw for Accountancy	<ul style="list-style-type: none"> • Accounting and Tax Systems • Professional and Business Ethics • Taxation Laws • Transfer Pricing 	<ul style="list-style-type: none"> • Data Storytelling & Visualisation • Tax Advisory • Tax Compliance • Tax Risk Management
Audit Associate/ Audit Assistant Associate – SFw for Accountancy	<ul style="list-style-type: none"> • Accounting Standards • Data Analytics • Internal Controls • Taxation Laws 	<ul style="list-style-type: none"> • Auditing and Assurance Standards • Engagement Execution • Financial Statements Analysis • Risk Assessment

See Appendix 6.3 for definition of these skills and competencies.

Management Accounting (MA)

Impact on MA Roles – data reconciliation and report preparation will be automated



In **Planning, Budgeting and Forecasting**, the effort to reconcile, cleanse and aggregate data in Excel will gradually be replaced by BI and EPM tools that offer consistent data structures. Charts, graphs and financial ratios will be automatically generated using self-service dashboards.

In **Management Reporting**, data consolidation and report preparation will be automated by BI and EPM tools that use standardised reporting and dynamic, interactive dashboards. Using NLG, these dashboards can also automatically generate insightful commentaries.

Overall, job tasks currently performed by FP&A Analysts and Accounting Executives are at risk of being displaced by automation. Similar to the SAE and AE roles in FA, technology solutions will automate up to 40 percent of time-consuming and labour-intensive MA tasks, such as data reconciliation and report preparation. Some job tasks will shift towards interpreting, validating and analysing the outputs of AI- and ML-powered BI and EPM tools, such as revenue projections and scenario forecasts.

Potential MA pathways and skills required

As a result, FP&A Analysts and Accounting Executives will have to upskill and progress upwards in MA by developing the business understanding required to provide more valuable insights.

Alternatively, those in junior MA roles can consider transitioning to potential adjacent roles. Figure 3.22 outlines the top 3 potential job adjacencies this study identified for MA Accounting Executives, and the skills gap they would need to bridge. The job adjacencies for FP&A Analyst are also detailed in Appendix 6.4. Case study 7 showcases the career journey of an individual who has successfully transitioned from FA to MA and then to Treasury (see Appendix 6.6 for more case studies).

Figure 3.22 : Top 3 job adjacencies for MA Accounting Executives

Adjacent roles	Existing skills overlap	Additional skills to develop
Enterprise Risk Mgmt. Associate/ Enterprise Risk Mgmt. Executive – SFw for Accountancy	<ul style="list-style-type: none"> • Data Analytics • Data Governance • Financial Analysis • Macroeconomic Analysis • Risk Management 	<ul style="list-style-type: none"> • Cyber Security • Fraud Risk Management • Risk Advisory • Systems Thinking
Business Valuation Associate/ Business Valuation Executive – SFw for Accountancy	<ul style="list-style-type: none"> • Benchmarking • Corporate and Business Law • Data Analytics • Financial Analysis • Macroeconomic Analysis 	<ul style="list-style-type: none"> • Financial Modelling • Stakeholder Management • Valuation Approaches and Methodologies • Valuation Research and Analysis
Executive (Project Financing) – SFw for Engineering Services	<ul style="list-style-type: none"> • Cost Management • Data Analytics • Financial Analysis • Risk Management 	<ul style="list-style-type: none"> • Contract Development and Management • Project Feasibility Assessment • Project Risk Management • Valuation Research and Analysis

See Appendix 6.3 for definition of these skills and competencies.

Case study 7



Patricia Sng

From FA Accounts Executive to FP&A Analyst to Treasury Manager

Career overview

Upon graduating with a diploma in Accounting and Finance, Patricia started her career as an Accountant, focusing mostly on transactional financial accounting work. She later moved into the banking industry as a Portfolio Accountant, where she was exposed to banking operations and ignited her interest in Treasury. After 3 years, Patricia transitioned into FP&A, which she enjoyed as it steered away from her transactional processing role and allowed her to cultivate a strategic and analytical mindset. Not only did she realise the importance of using visualisation tools to deliver better insights, she also realised also the value for stakeholders and business decision making. Upon completing her bachelor’s degree, she embarked on a new career path in Treasury with an LLE in the coworking industry. She leveraged her knowledge of banking products and supported the establishment of the organisation’s RTC in Singapore.

Development journey

Patricia upskilled herself with a bachelor’s degree in banking and finance, to ease her transition from FP&A to Treasury. She relied on on-the-job training to close skill gaps, as well as guidance from experienced mentors, especially in establishing herself in the Treasury function.

3

8 emerging F&A job roles will shape the future of F&A functions

New responsibilities and emerging roles will be created in the F&A functions

Emerging roles – new opportunities in the F&A workforce

As F&A functions move up the levels of sophistication, new responsibilities and emerging roles may surface to support the new requirements of F&A functions. In total, the study identified **8 emerging roles** that are **expected to grow and continue to be in demand in the next 2 to 5 years**. Appendix 6.5 contains the 'Emerging roles persona', illustrating a day in the life of each role and the skills they require.

These emerging roles present a potential pathway for existing F&A professionals in Singapore to develop skills and capabilities they need to be future-ready. Singapore is the only Asian country in the top 10 of the Institute for Management Development World Talent Ranking 2020, and as home to nearly half of Asia's regional headquarters, is well positioned as a talent hub for these emerging roles. The 8 emerging roles are:

Responsible for defining F&A policies, providing technical accounting advice and providing oversight of F&A operations as companies grow regionally



Regional Controller



Finance Transformation Lead

Responsible for managing and implementing the F&A transformation roadmap

Responsible for providing data-driven insights and analysis, using analytical tools and methods to assist in business decision making



Citizen Data Scientist



Finance Automation Lead

Responsible for automating F&A processes to drive greater efficiency, compliance and productivity

Responsible for managing and governing current and anticipated data needs on a day-to-day basis



Finance Data Steward



Environmental, Social and Governance (ESG) Lead

Responsible for establishing frameworks to measure, quantify and report on activities that drive value, aligning the pursuit of profit with the need to build a sustainable future organisation

Responsible for overseeing F&A vendors and ensuring quality services are delivered, while maintaining strong relationships both internally and externally



Vendor Relationship Manager



Governance, Risk and Compliance (GRC) Lead

Responsible for optimising enterprise risk, helping to increase transparency and understanding of emerging issues that affect business performance

Many of the emerging roles place **greater emphasis on digital, cognitive and interpersonal skills** as compared to technical accounting expertise commonly expected from traditional F&A job roles. As such, some of these emerging roles – for example Finance Transformation Lead, Citizen Data Scientist and Finance Automation Lead – can be filled by mid-career professionals from non-F&A sectors such as IT and Engineering, to supplement the F&A workforce.

Nevertheless, **some level of upskilling and/or reskilling will be required for existing F&A professionals who aspire to transition to these emerging roles.** Figure 3.23 outlines the potential emerging roles for Finance Manager, and the skills gap to be bridged for the job transition. Appendix 6.4 details the applicable emerging roles for other existing F&A job roles. Case Studies 8 and 9 highlight the career journeys of 2 individuals who have successfully transitioned to some of these emerging roles (see Appendix 6.6 for more case studies).

Figure 3.23 : Potential emerging roles for Finance Managers

Emerging roles	Compatibility	Additional skills to develop
Finance Transformation Lead	The Finance Manager will require strong project management skills, good understanding of project and business risk and complexities to lead F&A transformation initiatives as a Finance Transformation Lead.	<ul style="list-style-type: none"> • Change Management • Digital Tech Adoption & Innovation • Project Execution and Control • Project Management • Stakeholder Management
Finance Data Steward	Being able to manage and govern data in the F&A functions including how data connects across systems, and possessing good cross-functional acumen skills, the Finance Manager makes a suitable candidate for Finance Data Steward.	<ul style="list-style-type: none"> • Cross-Functional Acumen • Data Governance • Stakeholder Management • Systems Thinking • User Centric Approach & Testing
Vendor Relationship Manager	Leveraging on experience with managing external stakeholders including contract negotiations and service standards assessments, the Finance Manager will have the right experiences to perform the Vendor Relationship Manager role.	<ul style="list-style-type: none"> • Business Negotiation • Change Management • Conflict Management • Project Management • Stakeholder Management
Environmental, Social and Governance (ESG) Lead	Familiarity with the collection and reporting of data in accordance with legal/reporting requirements, as well as the ability to derive insights into the organisation’s performance will benefit the Finance Manager in the ESG Lead role.	<ul style="list-style-type: none"> • Business, Product & Portfolio Acumen • Cross-Functional Acumen • Data Analytics • Financial Reporting • Macroeconomic Analysis

See Appendix 6.3 for definition of these skills and competencies.

Case study 8



Melvin Lim

From Audit Associate to Internal Audit Manager to Business Controller

Career overview

Melvin joined one of the Big 6 audit firms as an Audit Associate after graduating with a diploma in Accountancy. During this time, he attained his ACCA and Chartered Accountant qualifications, gained experience in financial audits for clients of varying size and industries, and eventually got promoted to the role of Audit Manager. After public accounting, Melvin joined an MNC as an IA Manger, where he managed the Internal Controls function across the APAC region. He then became a Regional BC, providing commercial support and reviewing key financial metrics. Following this, Melvin joined another MNC as a Regional Commercial Controller, providing guidance on revenue recognition and helping business leaders identify and mitigate financial and business risks in commercial strategies and deals. He then joined the organisation's Global Technical Controllership CoE team, where he provided leadership in delivering global excellence in commercial controllership, established global policies and provided technical accounting consultation services. Melvin is currently a Regional Controller with a pharmaceutical MNC, where is he responsible for driving technical accounting compliance, financial and operational internal controls, process simplification, and operational excellence, all driving accurate actual financial reporting and analysis. In this role, he uses his understanding of industry trends; interprets internal and external business challenges; and recommends best practices to improve products, processes and services.

Development journey

Melvin sees his tenure in public accounting as a good foundation learning experience. The ability to learn quick and adapt is a skill he still practices today. In his role, he develops deep domain expertise through self-learning, and wide knowledge by learning from peers across functions. And as a leader, he shares his learning experience while continuing to learn from those around him.



Keep an open mind and keep learning everyday – there are lessons to be learnt from everything and everyone. Understand why you are doing what you are doing – this helps you see the objective and value.



Case study 9



Deline Loke

From FA Accounts Executive to Finance Automation Specialist

Career overview

Deline started her career with DFS as a graduate in the Accounts Receivable team. As an Accounts Officer, she was involved in tasks such as sending invoices, analysing vendor statements and preparing recurring monthly reports. Technology was a topic commonly discussed in school, but Deline didn't have much firsthand experience in applying technology in her day-to-day tasks.

Development journey

Deline was introduced to Excel VBA Macros, which showed her how automation could help in her daily work, freeing her to focus on more value-adding tasks. After her initial experience with automation, Deline kept a constant lookout for opportunities to upskill so she could work more efficiently and effectively, and add more value to the team. She jumped at the opportunity to participate in the organisation's Robotic Process Automation initiative and after only two weeks of training, she was able to code simple robots to execute her daily tasks. With each successful robot she built, Deline was more motivated to automate complex tasks and help the rest of the team automate their work so the whole department could function more efficiently. Today, Deline is the go-to person for process automation in the F&A function. The support Deline received from her organisation throughout her upskilling journey has given her opportunities to learn and progress further.



Keep an open mind and look for ways to upskill. Leverage resources around you – be resourceful in developing your career journey.



3.4 The CFO as a driver of change

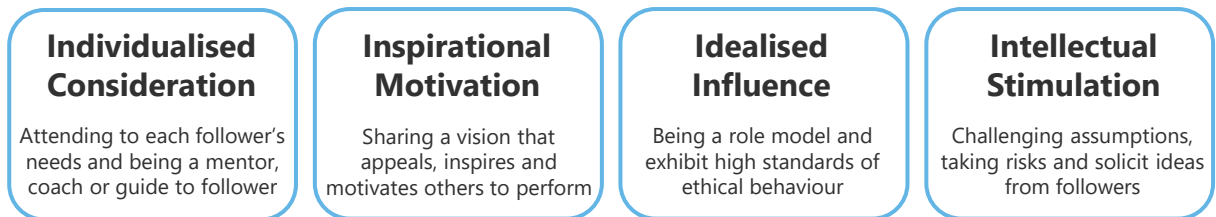
As in-house F&A functions evolve to remain competitive and stay relevant, the CFO's role will increasingly become more prominent and strategic, partnering with other corporate executives to navigate the disruptions.

CFOs need to equip the F&A function with the right tools and skills to drive the organisation forward. More importantly, they must lead the change agenda, while building an agile and sustainable F&A function. For this to happen, CFOs must drive change and transformation in F&A through three broad practices:

1. Inspire and motivate change

Effective leadership is key to successful change. CFOs can apply transformational leadership to inspire and motivate changes in F&A functions through 4 main dimensions:

Figure 3.24 : The 4 dimensions of transformational leadership (Bass & Riggio, 2006)



CFOs have to first consider individuals' concerns, removing any obstacles that might hold the team back from change. F&A professionals may be concerned about their job security. Addressing their concerns will help CFOs obtain the necessary buy-in to upskill, reskill or initiate new projects. CFOs should create a safe environment for open communication, hearing and recognising different concerns.

CFOs need to create and communicate a clear and consistent vision for the team, and to guide the change through inspiration and motivation. CFOs should articulate how F&A functions can play a more strategic role and highlight the potential for new opportunities, instilling a strong sense of purpose. This would encourage F&A professionals to invest in their own abilities and be optimistic about the future.

“It's important to be able to take the strategic vision and set milestones to guide and measure progress from the beginning point to where we want to be, looking three to five years ahead.”
- Kelly Kramer, CFO, Cisco

As influential leaders, CFOs also have to be role models, standing by their commitments to stakeholders and their vision for F&A transformation. CFOs should keep these plans and vision consistent, to build trust and, where necessary, keep their teams inspired despite challenges.

Lastly, CFOs should challenge the status quo and encourage feedback to solicit new ideas from F&A professionals. Maintaining a culture of two-way communication – for example, through monthly forums with F&A professionals – can empower them to take ownership and proactively seek out improvements to adopt.

Applying these 4 dimensions will help CFOs inspire and motivate change. Nonetheless, CFOs will need to use their Transdisciplinary Thinking and Cross-functional Acumen skills to obtain buy-in, along with Communication and Influence skills to inspire and motivate their teams.

2. Embrace technology

CFOs generally understand the need to embrace technologies that drive change, but they still face the challenge of selecting the right tools for their F&A function. They may struggle with:

- **how to choose digital solutions from the large number available**
- **a lack of resources and expertise to drive the technology change**
- **uncertainty about where and how to get started.**

Figure 3.25 : 'Think big, start small, act fast' methodology for embracing technology



First, CFOs need to think big and gain exposure to available technology solutions by participating in various F&A conferences and events. This allows CFOs to understand what is possible, make comparisons and shortlist solutions suitable for their F&A vision. The 'Technology solution overview' in Appendix 6.2 can also help CFOs get a quick understanding of what technology solutions are relevant to F&A processes, including their features and benefits, and factors to consider in implementation.

Given the limited resources and talents available, CFOs should start small by prioritising one or two initiatives to establish a proof of concept (see Case study 10). To get started, CFOs can refer to the 'Sophistication maps' (SMs) in this report (see Appendix 6.1) to assess the current sophistication levels of their F&A functions; discover process and technology solutions to move up the sophistication level(s); and pick one or two solutions that will drive meaningful value. Although this provides a starting point, CFOs still need to evaluate the costs, resource needs and available expertise, and strike a balance before deciding on which solution to invest in.

Finally, CFOs must act fast to keep pace with the constantly changing environment. **CFOs need to adopt an agile, iterative piloting approach to move from strategy to prototyping as quickly as possible. They need to 'fail fast' and achieve rapid results** (see Case study 11). Once successful, CFOs can then incrementally build the people and capabilities they need to scale up the technology solution to serve more use cases.

The 3-step methodology in Figure 3.25 can guide CFOs in navigating the challenges of embracing technology. To do so effectively, CFOs have to act and think strategically, and leverage skills across Digital Technology Adoption and Innovation, Capital Expenditure and Investment Evaluation to prioritise the right technology solutions. Change Management, Agile Project Delivery and Disruption Management skills will also be essential for successful technology implementation.

Case study 10



EtonHouse International

Leveraging BI & visualisation tools to enable timely and better insights

Challenge

The F&A function was spending a significant amount of time extracting information from student management systems and manually creating management reports. The manual management reporting process made the delivery of timely insights to stakeholders challenging.

Transformation journey

EtonHouse adopted BI and visualisation tools to facilitate better insights and real-time visibility in their management reporting process. Equipped with dashboards that allow them to drill down into details, stakeholders can make quicker and better-informed decisions. The transformation also integrated information from student management systems, reducing the time and effort the F&A function needs to spend generating reports and enabling it to focus on supporting business partnering activities.

Benefits



~25%

of time saved by using visualisation tools and shifting away from manually produced management reports



Enhanced insights and visibility in the management reporting process, facilitating better-informed decisions

Case study 11



GlobalFoundries

Embarking on a multi-year digitalisation journey to streamline labour-intensive manual processes

Challenge

GlobalFoundries was processing a huge volume of hard-copy supplier invoices, which were delivered via a trolley. The process was very manual and labour-intensive, and prone to human error such as incorrect data entry and missing invoices. GlobalFoundries had to spend a considerable amount of time managing vendor enquiries, and auditing individual employee expense claims with hard-copy receipts attached.

Transformation journey

GlobalFoundries first introduced OCR to digitalise and process the invoices more efficiently, but accuracy levels were still not ideal. The organisation implemented a self-service supplier portal to enable suppliers to submit invoices and view their invoice status online. It also implemented Concur and Appzen, to automate expense audits. The AI-powered system looks for duplicates, errors, unexpectedly high expenses, fraudulent entries and out-of-policy spending, automatically approving low-risk transactions and routing high-risk entries for further attention.

Benefits



Lean and automated Procure to Pay and Travel & Expense processes that only require a small team to manage exceptions



Increased value add to the business, freeing up capacity for FP&A and MA activities

3. Develop talent

The analysis of impacts on F&A roles has highlighted that repetitive, rule-based and manual tasks are at risk of displacement due to automation, and that F&A professionals need to be equipped with new skills such as Digital Problem Solving, Scenario Planning and Data Analytics. To anticipate these changes, CFOs can put in place a number of initiatives that support upskilling and reskilling of F&A professionals (see Case study 12).

Deloitte engaged with the CFO of a Fortune 100 organisation to create a pipeline of F&A talent supporting the organisation's transformation and growth. They worked with HR to develop an F&A workforce strategy focused on recruiting new talent, nurturing high-potential employees, developing leadership, and building technical and management skills. In addition, members of the F&A team were assigned mentors and are empowered to take ownership of their careers.

CFOs can champion a strategic workforce plan to ensure adequate workforce supply, competent workforce proficiencies and workforce retention that supports future F&A functions and their evolving objectives. This plan should be formulated and rolled out with the help of the Chief Human Resource Officer (CHRO), and should include training plans for upskilling new and existing F&A professionals in technology, future skills, and skills identified for new and emerging areas of work. They can use the SMs (see Appendix 6.1) and 'job canvasses' (see Appendix 6.4) to help formulate these plans, identify skills gaps and develop relevant training plans for each F&A job role.

Within F&A functions, **CFOs can provide opportunities for rotation across different process areas and involvement in cross-functional teams, to help F&A professionals broaden their expertise and skill sets in new areas.** This would enable horizontal movement of talent and allow F&A professionals to gain a greater overall perspective of F&A functions. This increased exposure can also help identify and develop the next generation of F&A leaders.

CFOs can initiate projects for F&A professionals to participate in or even lead. This empowers them to take ownership of improving their ways of working, drives value-adding innovation for the business, and ensures they buy into the transformation agenda. Through this experience, F&A professionals can gain the skills and experiences needed to be future-ready.

CFOs need to draw on Business Planning and Influence skills in engaging CHROs to co-develop an effective strategic workforce plan. Skills in Developing People will be crucial for the CFO to create rotation opportunities and transformation initiatives for F&A functions.

Skills CFOs need to drive change

Figure 3.26 summarises the skills CFOs need to be proficient in effectively driving innovation and transformation.

Figure 3.26: Key skills CFOs need to drive change

Skills category	Existing skills to focus on	New skills required
Technical Skills and Competencies (TSC)	<ul style="list-style-type: none"> • Business Planning • Capital Expenditure and Investment Evaluation • Change Management • Digital Technology Adoption & Innovation • Disruption Management 	<ul style="list-style-type: none"> • Business, Product & Portfolio Acumen • Cross-functional Acumen • Agile Project Delivery
Critical Core Skills (CCS)	<ul style="list-style-type: none"> • Communication • Developing People • Influence • Transdisciplinary Thinking 	<ul style="list-style-type: none"> • Think and Act Strategically

See Appendix 6.3 for definition of these skills and competencies.

Case study 12



Johnson & Johnson

Developing future-ready F&A capabilities to become a valued partner of the business

Challenge

The FP&A team at Johnson & Johnson (J&J) faced initial challenges in optimising the FP&A process. Processes within the function were not standardised, which made digital adoption difficult. The data structure within the FP&A process was also not optimised for reporting, which affected the overall user experience within the organisation.

Transformation journey

Recognising the value and importance of FP&A within the organisation, J&J took significant strides in developing its FP&A capabilities. J&J started by simplifying and standardising current processes and data structures within the FP&A function. This significantly improved the overall productivity and user experience within the FP&A function, and enabled the team to scale up its use of analytics tools and dashboards. J&J then continued to sharpen the FP&A team’s capabilities by developing digital skills and stronger FP&A capabilities, including in predictive and cognitive analytics. This transformation has elevated the FP&A function as a valued partner of the organisation – one that partners with business units and supports the senior leadership team in making key strategic decisions. Automation and simplification have resulted in double-digit improvements in data accuracy and consistency across all sectors.

Benefits



5,000+ hours of productivity gains within the FP&A function due to standardisation and automation



75% employees trained in advanced analytics tools to provide quality insights to the business



80+ employees trained in visualisation tools to provide enhanced visibility for FP&A reporting

4. Recommendations



Recommendations

Understanding F&A in different corporate segments

Based on research, surveys and engagements with corporate F&A leaders, this study has identified that the characteristics, level of sophistication and challenges within F&A functions differ across SMEs, LLEs and MNCs. The general profiles of each corporate segment are outlined below. Although this is not intended to represent every company in each segment, it offers a relative perspective across the segments and outlines the respective areas of focus for each.

Small and medium enterprises (SMEs)

- Headquartered, registered and operating in Singapore
- Limited footprint outside of Singapore
- Generates less than S\$100 million in annual revenue

Typical headcount	Estimated time split	Process area	Level of sophistication
5 - 10	60%	Financial Accounting (FA)	1 – Basic
	40%	Management Accounting (MA)	2 – Developing
	< 10%	Specialised Finance (SF)	2 – Developing

- SMEs typically have a small F&A team, with the majority of time spent in FA.
- F&A functions may also take on multiple roles, such as administrative or Human Resources (HR) duties.
- Generally, investment in F&A functions might not be seen as a priority given the scale and limited resources available, leading some SMEs to leverage government initiatives that help them drive F&A transformation.

Large local enterprises (LLEs)

- Headquartered, registered and operating in Singapore
- Primary presence in Singapore, with footprints outside Singapore
- Generates at least S\$100 million in group annual revenue, with local shareholding of at least 30 percent

Typical headcount	Estimated time spent	Process area	Level of sophistication
> 10	55%	Financial Accounting (FA)	2 - Developing
	40%	Management Accounting (MA)	2 – Developing
	< 10%	Specialised Finance (SF)	2 – Developing

- LLEs typically have a larger F&A team because their process sophistication is still largely at the Developing levels. They remain dependent on fairly manual processes to manage the increasing volume and complexity of their business transactions.
- In some cases, the F&A team consists of more than 100 F&A staff members due to the broader scope of work such as managing regional or global responsibilities and multiple business units.
- LLEs have generally undertaken some initiatives to innovate in F&A functions, such as adopting core accounting systems and BI tools, but more can be done to transform and future-proof the F&A functions.
- As LLEs expand regionally, a more sophisticated F&A set-up can be important to further support global activities.

Multinational corporations (MNCs)

- Typically has global headquarters overseas, with regional headquarters, business units or CoEs in Singapore
- Has a presence in multiple countries

Typical Headcount	Estimated time split	Process area	Level of sophistication
10 - 30	35%	Financial Accounting (FA)	3 – Mature
	55%	Management Accounting (MA)	3 – Mature
	<10%	Specialised Finance (SF)	2 – Developing

- MNCs typically retain a relatively lean F&A team in Singapore, focusing on more sophisticated activities in MA or SF such as Treasury.
- Nevertheless, some F&A functions may have a larger team – in some cases, more than 100 F&A staff members – due to the broader scope of work involved in managing regional or global responsibilities and multiple business units.
- Many MNCs perform their transactional activities (largely in FA) in offshore locations due to cost arbitrage. However, as MNCs transform their FA processes and move up the levels of sophistication, this leads to higher productivity and requires higher-skilled F&A professionals to run these operations. This presents the opportunity to set up digitalised GBS in Singapore.
- With a favourable business environment and high-quality talent pool in Singapore, MNCs can also use Singapore as an F&A hub to centralise higher-value and more sophisticated activities such as FP&A, Manufacturing and Supply Chain Finance, or emerging areas such as ESG reporting.

Recommendations for F&A functions

F&A functions should undertake the following steps to improve the overall level of sophistication.

1. Invest in digital technologies to move up the levels of sophistication

Technology is a vital enabler to ensure F&A functions operate efficiently. F&A functions should develop their technology capabilities and embrace digital transformation to improve process efficiencies and move up the levels of sophistication. This can be achieved by following the steps shown below.

- 1. Understand current levels of process sophistication**

F&A functions first need to understand their current levels of process sophistication so they can identify potential areas of improvement. They can make use of the SMs in Appendix 6.1 to assess where they are today, and discover process and technology solutions needed to achieve the next level of sophistication.
- 2. Learn about technology solutions**

F&A functions can use the 'Technology solution overview' in Appendix 6.2 as a starting point to understand the technology solutions on the market, including their features, benefits and other adoption considerations. F&A functions then need to take the next step of looking at the solution and understanding how it can fit their organisation.

Continued on next page



3. Prioritise areas of digitalisation

F&A functions should prioritise which areas of digitalisation to focus on based on the business needs given the varying sophistication levels and resources.

SMEs	LLEs	MNCs
<p>Smaller SMEs may not have sufficient scale to benefit from automating the FA process area. Focusing on moving to digital invoices is one place to start.</p> <p>SMEs should prioritise in improving the ability to drive business insights in the MA process area, such as in planning and reporting tools. This will deliver benefits throughout the organisation.</p>	<p>LLEs can develop an overall transformation roadmap and identify appropriate technologies and dependencies across tools and processes.</p> <p>LLEs can gain productivity from digitalising the FA process area, freeing up capacity to focus on higher-value activities. LLEs should continue investing in MA process area to deliver strategic insights and better support the business.</p>	<p>MNCs' policy, process and technology decisions typically happen at the global headquarters.</p> <p>MNCs in Singapore should look into prioritising digitalisation that supplements existing tools to deepen data analytics and predictive capabilities</p>

To accelerate their digitalisation journey, F&A functions can also tap into government initiatives that provide support in areas such as:

- advice on financing, available technologies and implementation
- grants to support technology adoption and implementation
- easy-to-use technology, such as Business Intelligence (BI) tools and electronic invoicing platforms
- expertise equivalent to that of a Chief Technology Officer, focusing on digitalisation needs and project management.

With all the information and choices available, F&A functions can also choose to establish a proof of concept for shortlisted solutions, then decide which to proceed with. F&A functions should always evaluate costs, resource needs and available expertise, and strike a balance in their decision about which solutions to adopt.



4. Experiment and scale

Most importantly, F&A functions should adopt an agile, iterative experimental approach, 'fail fast' and learn in a constantly changing environment. F&A functions can then build on their experiences and success to incrementally scale up their technology adoption.

2. Redesign F&A job roles

As F&A functions embark on their transformation journey, job redesign is essential to help F&A professionals adapt to their new and redesigned job roles. Job redesign involves three steps:

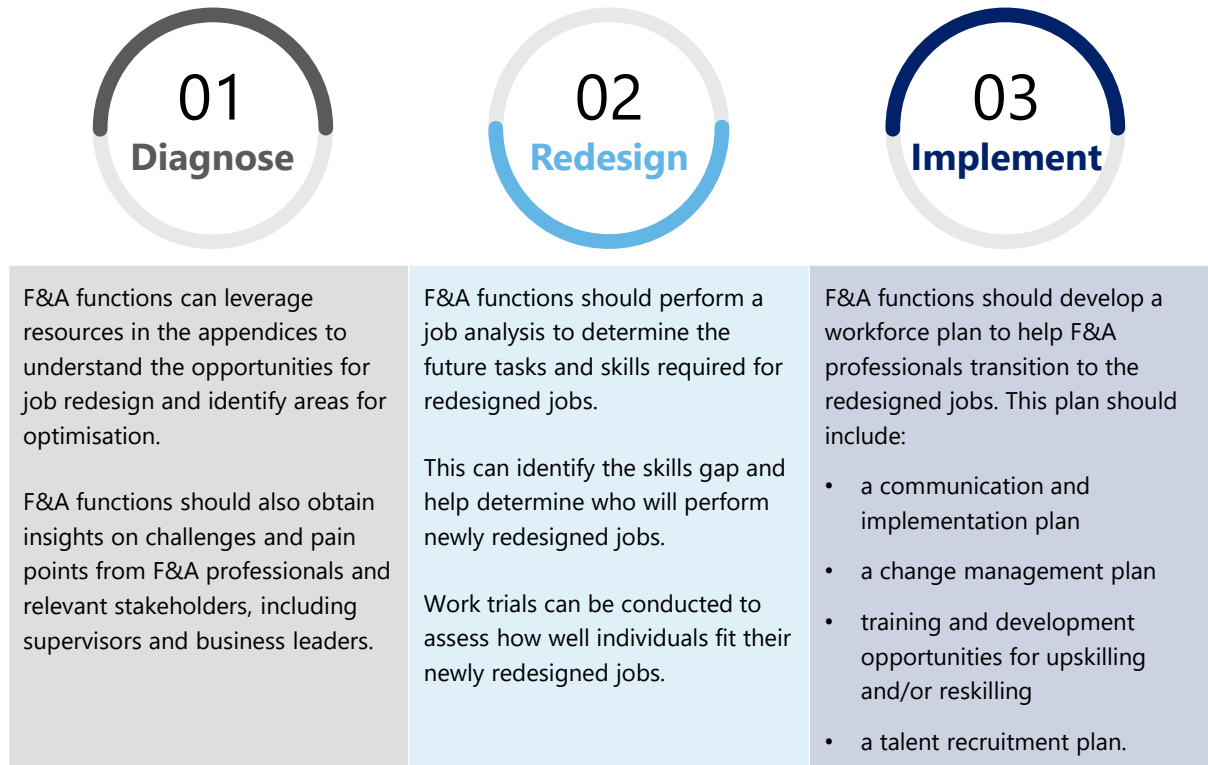


Figure 4.1 illustrates the focus and opportunities of redesigning jobs for each corporate segment.

Figure 4.1 Job redesign focus and opportunities for different corporate segments

	Focus of job redesign	Job redesign opportunities
SMEs	<p>Job retention – Keeping existing F&A workforce employable and relevant through continuous upskilling.</p>	<p>Job enlargement – SMEs can increase the responsibilities or scope of work within the same function. This should come with a review of how existing job scopes can be simplified before allocating new responsibilities, through gradual coaching to help staff gain confidence.</p>
LLEs	<p>Job redeployment – Reskilling existing F&A workforce in jobs that are being transformed by technology and pivoting them to new opportunities and new roles.</p> <p>Job leadership – Grooming promising talents for leadership roles at different levels.</p>	<p>Job rotation – LLEs can rotate staff to other F&A process areas to widen their exposure. This will allow them to learn more about the whole F&A functions and broaden their skills and knowledge in new and different F&A process areas, enabling flexible deployment within the F&A functions.</p>
MNCs	<p>Job specialisation – Deepening skills and capabilities in highly specialised areas where demand is strong.</p> <p>Job leadership – Grooming promising talents for leadership roles at different levels.</p>	<p>Job enrichment – MNCs can offer overseas secondments, allowing high-potential talent to learn best practices and develop capabilities in specialised areas. This will strengthen the skills and knowledge of the local talent pool, and prepare individuals for leadership roles in the future.</p>

Various government initiatives are available to help F&A functions redesign jobs, including:

- advice on the approach to redesigning jobs, and the efforts involved
- training courses and resources
- salary support for new hires or mid-career individuals undergoing training or reskilling
- a training allowance support for mid-career individuals undergoing job attachment with the organisation

Mid-career professionals from other sectors can also be recruited to supplement the F&A workforce. For instance, digital-savvy or analytical professionals from various disciplines – including economics, business, IT and engineering – can be employed in MA roles, which do not require deep accounting knowledge. Furthermore, the skills required for emerging roles – such as Finance Transformation Lead, Finance Automation Lead, Vendor Relationship Manager and ESG Lead – are transferable from sectors such as engineering, IT and financial services. Mid-career entrants are a valuable way to boost the diversity of the F&A workforce and to meet the growing demand for niche and emerging roles.

3. Reimagine F&A operating models to include new and emerging capabilities

To be future-ready, F&A functions that have the requisite resources and scale should consider building up CoEs for high-growth F&A areas including MA, SF, and emerging capabilities like data and analytics, controls and governance, and digital transformation. These capabilities are increasingly in demand, and many of the skills required are in short supply. By centralising scarce knowledge, skills and experiences in Singapore, tapping into the country's favourable business environment and high-quality talent pool, CoEs can streamline access to high-demand talent across the organisation and the region, providing 'economies of skills'.

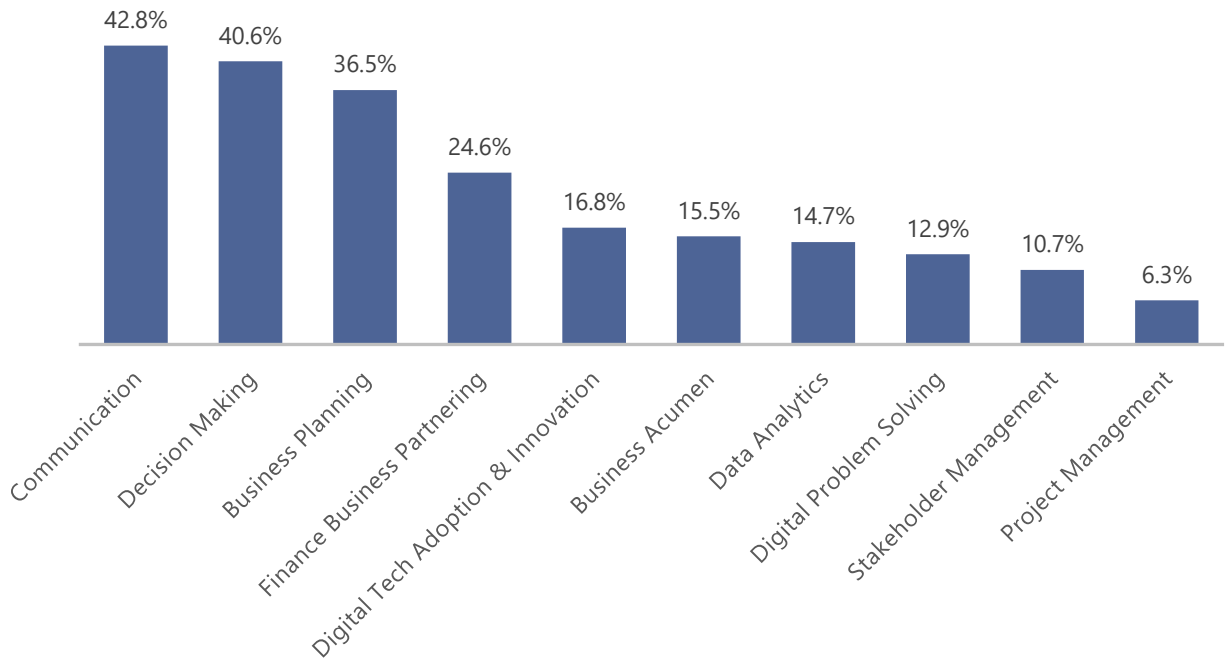
For the FA process area, some MNCs may find value in building up digitalised GBS in Singapore. Although this could vary from company to company, some of the key considerations by companies in selecting venues to site their GBS include (1) presence of digital infrastructure and cybersecurity, (2) presence of a more skilled workforce for improved service delivery, and (3) proximity to regional headquarters for agile decision making and economies of scale for centralised activities.

Understanding the skills in demand

As F&A functions transform their operations and processes, F&A job roles will likely be impacted, and the skills and competencies demanded of F&A professionals will inevitably change. F&A professionals need to be aware of the skills and competencies that will be in demand in the future, and understand how to equip themselves with the right skills for their desired career pathway.

In addition to the technical skills and competencies (TSC) shared in Section 3.3, F&A professionals also have to equip themselves with critical core skills (CCS) such as Communication and Decision Making. Based on analysis of F&A job postings from Burning Glass Technologies, the study identified the following top 10 skills that have grown in demand and become increasingly crucial in F&A functions over the past 5 years (see Figure 4.2).

Figure 4.2 Top 10 skills in demand among F&A professionals
(Percentage of total F&A job postings in 2020)



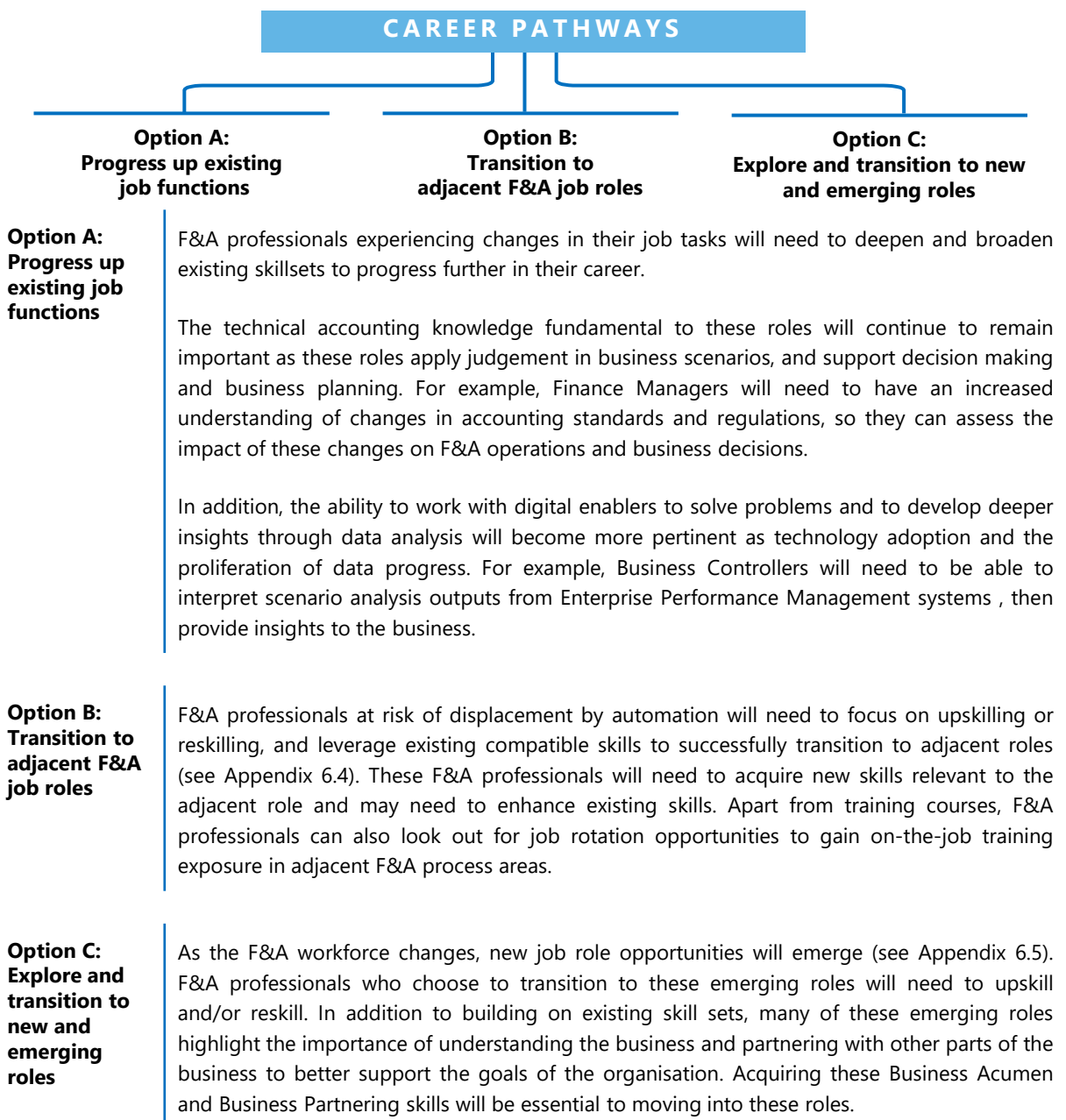
These trends reinforce perceptions of the evolving landscape of the F&A workforce, and further emphasise the need for F&A professionals to keep pace with the changes in the market, stay relevant and remain competitive in F&A.

Recommendations for F&A professionals

Before commencing their upskilling or reskilling journey, it is important for F&A professionals to adopt a growth mindset by embracing the culture of lifelong learning as it becomes crucial to survival and long-term employability. Using the SMs and job canvasses in appendices 6.1 and 6.4, F&A professionals can obtain a better understanding of the changes to their job roles, assess their current skills and competencies, and identify the skills gaps they need to fill. F&A professionals can then enhance existing skills (upskill) and/or acquire new skills (reskill) through CET.

The impact on F&A professionals differs based on their job roles and tasks performed. This study classified the can take (see Figure 4.3). impact on the F&A workforce into 3 categories (see Section 3.3) and recommends the following 3 career pathways that impacted F&A professionals

Figure 4.3 Potential career pathways for F&A professionals



To support F&A professionals in their skills and career development, individuals can access a number of government initiatives that provide:

- advice on the skills needed, and available training courses for upskilling or reskilling
- training opportunities with partnering organisations through employment or work attachment
- income supplement in the form of a training allowance when undergoing training with partnering organisations.

Relevant government initiatives

Further information of the various government initiatives that can support F&A transformation are available via the following government agency websites:

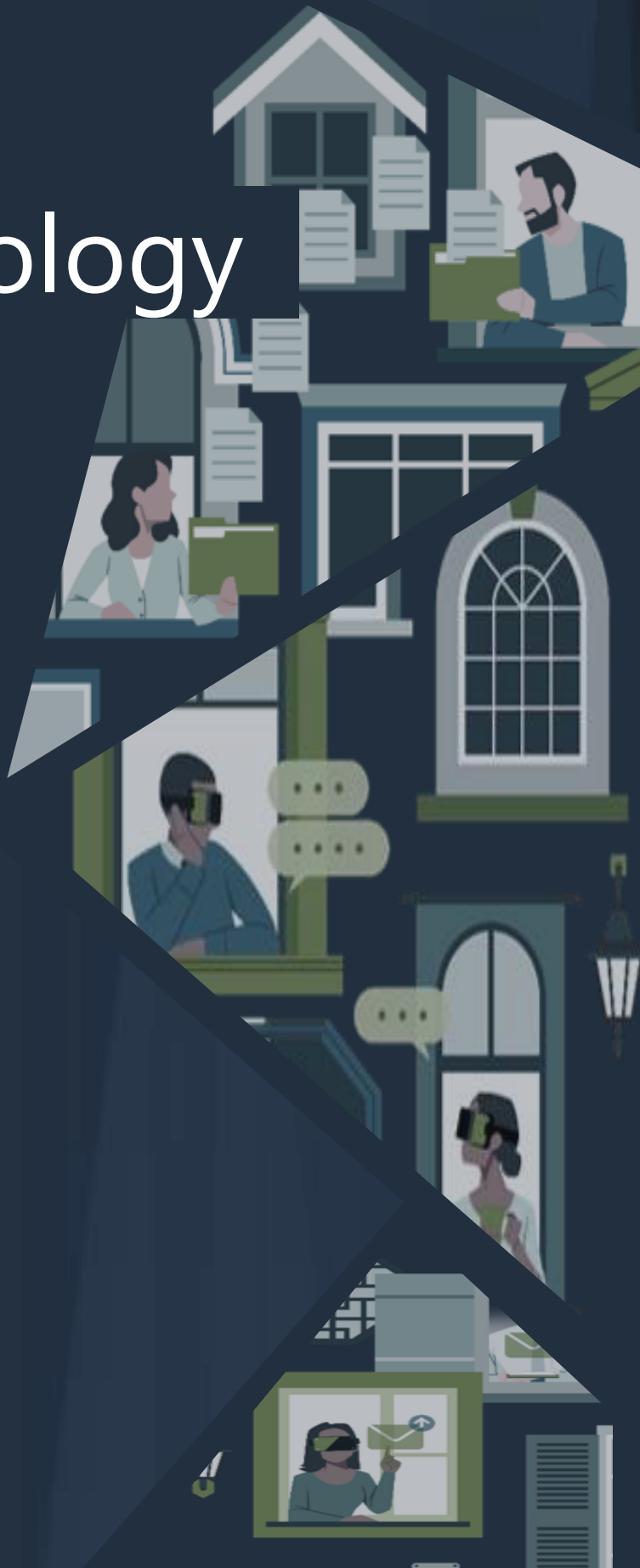
Government agency	URL
Economic Development Board (EDB)	https://www.edb.gov.sg/
Enterprise Singapore (ESG)	https://www.enterprisesg.gov.sg/
Infocomm Media Development Authority (IMDA)	https://www.imda.gov.sg/
Singapore Accountancy Commission (SAC)	https://www.sac.gov.sg/
SkillsFuture Singapore (SSG), Workforce Singapore (WSG)	https://www.ssg-wsg.gov.sg/

Conclusion

F&A will continue to be essential for all organisations despite the impact of megatrends that have been exacerbated by COVID-19. F&A functions will need to learn to take advantage of technology so they can perform its Steward and Operator activities more efficiently. At the same time, they will need to pick up digital skills, deeper analytics expertise, technical and compliance knowledge, and multidisciplinary exposure to carry out its Strategist and Catalyst responsibilities more effectively. To bring everything together, CFOs must play a vital role in this transformation journey, leading F&A functions and the workforce towards higher levels of sophistication.

Consequently, the F&A workforce faces a palpable change in the tasks and responsibilities of its job roles, and the need for F&A professionals to upskill and/or reskill will only increase over time. F&A professionals need to take an active role in shaping their career development so they can benefit from the new and redesigned F&A job roles. Only with the right shift in mindset will opportunities provided by organisations and government supports produce effective results in transforming F&A.

5. Methodology

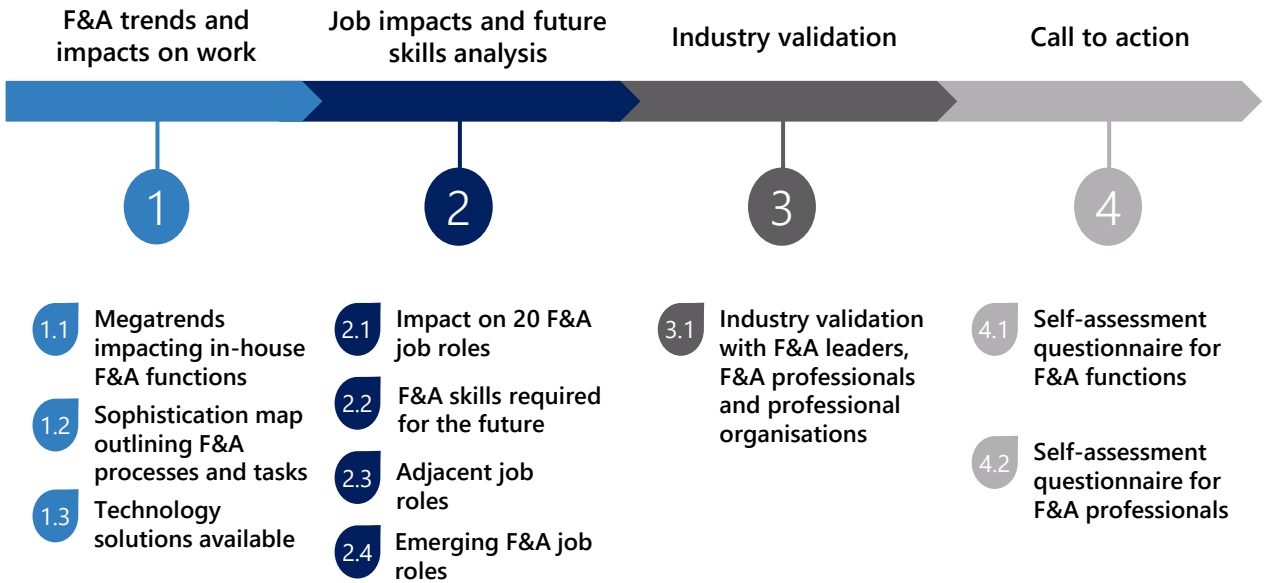


Methodology Overview

A 4-phase approach (presented in Figure 5.1 and detailed below) was applied to develop insights into the future of F&A processes and job roles. This approach incorporates globally sourced best practices and megatrends; a quantitative analysis of job postings; insights captured from Deloitte Global Finance Transformation Leaders; and engagements with Singapore based corporate F&A leaders across a variety of corporate segments, including SMEs, LLEs and MNCs.

Figure 5.1 : Overview of the 4-phase approach

Phases:

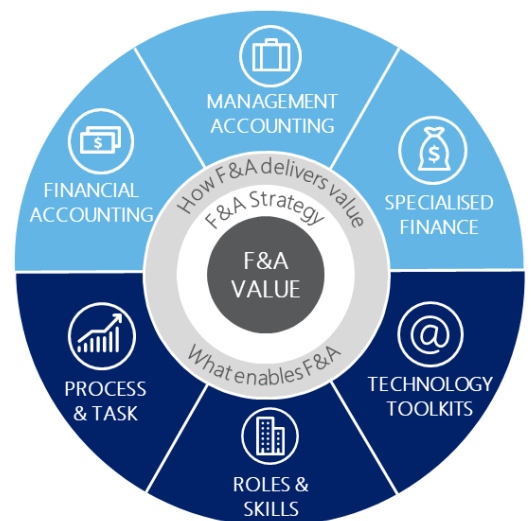


Scope

To determine the scope of this study, the Deloitte’s Finance Assessment Wheel (see Figure 5.2) was used as a framework for in-house F&A functions, considering the F&A processes and tasks, job roles and skills, and technologies involved. It was then validated with corporate F&A leaders and used to segment F&A functions into 3 key areas:

1. Financial Accounting (FA)
2. Management Accounting (MA)
3. Specialised Finance (SF)

Figure 5.2 : Finance assessment wheel



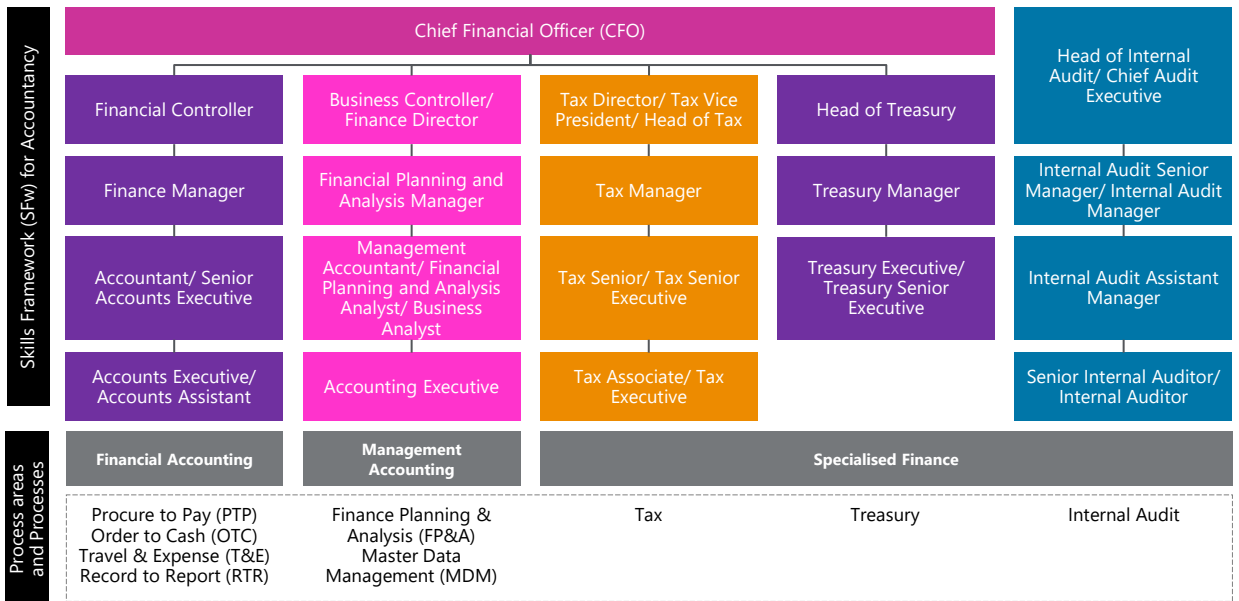
The 3 process areas were further broken down into 9 key F&A processes (see Figure 5.3).

Figure 5.3: The 9 key F&A processes



The F&A job roles (see Figure 5.4) performing the 9 key F&A processes were identified using the Skills Framework (Sfw) for Accountancy. Based on feedback from the industry engagements with corporate F&A Leaders such as CFOs and Heads of Treasury, an additional Treasury Executive/ Treasury Senior Executive role was identified and included it in this study to ensure completeness. **As a result, a total of 20 job roles were within the scope of this study.**

Figure 5.4 : 20 job roles in F&A functions covered in this study



The corresponding skills from the Sfw for Accountancy were used as a starting point for analysing skills by job role. Phase 2 discusses the approach to this skills analysis.



Study on in-house F&A functions | Section 5: Methodology

1 F&A trends and impacts on work

Step 1.1 Megatrends impacting in-house F&A functions

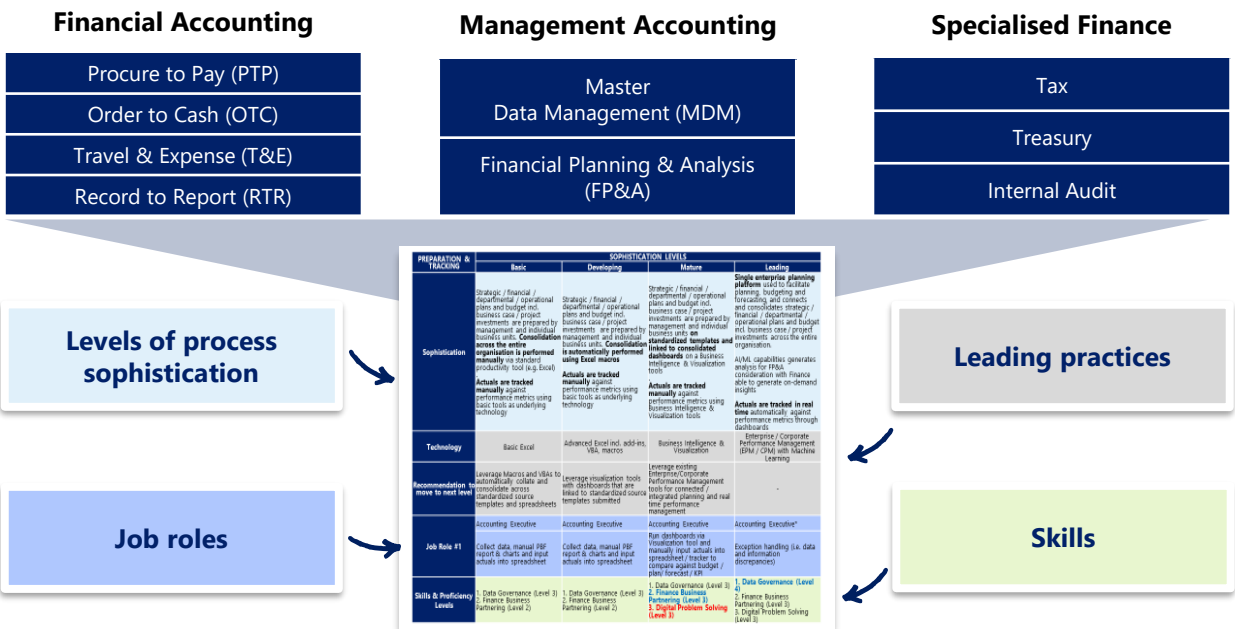
The study began with a top-down scan, comprising desktop research and Deloitte’s proprietary research on the megatrends impacting F&A functions. **4 megatrends and a catalyst were identified**, which were then **validated in discussions with Deloitte Global Finance Transformation Leaders** in the US, Europe, Canada, Australia and Southeast Asia.

Step 1.2 Sophistication map outlining F&A processes and tasks

The Sophistication Map (SM) was developed to provide a clear view of the levels of process sophistication and leading practices across the 9 key F&A processes. The SM allows F&A functions to assess their current level of sophistication in each of the process areas. It breaks down the key processes into Level 2: Sub Processes and Level 3: Tasks. The key challenges, levels of sophistication and best practices were developed **with reference to Deloitte’s Finance Maturity Model and Finance Best Practices; the Association for Financial Professionals Financial Planning & Analysis (FP&A) Maturity Model;** and the megatrends impacting F&A functions. The SM also incorporates recommendations for F&A functions to move to the next level of sophistication.

To highlight the impact on job roles and skills, the SM identifies the F&A roles performing the particular processes. More importantly, it calls out the skills requirements as F&A functions move up the levels of sophistication. Further guidance on using the SM is provided in Appendix 6.1.

Figure 5.5 : Example sophistication map



Given the wide array of technology enablers in the market, the SM also identifies the types of technology enablers required for each level of sophistication, as discussed in Step 1.3.

Step 1.3 Technology solutions available

Technology is a key enabler of F&A process sophistication, supporting organisations in their digital finance transformation journey. The SM incorporates specific technology solutions and their corresponding features and benefits. This provides F&A functions with a greater appreciation of specific technology solutions available in the market, to aid their functional transformation journeys and help them move up the value chain towards more sophisticated F&A activities.

The technology solutions were selected through the following approach:

- Broadly scanning F&A technology enablers available in Singapore
- Shortlisting technology enablers, considering the complexity of the tool and its applicability to the relevant F&A process areas
- Engaging technology vendors to validate the solution features and benefits
- Detailing the adoption considerations based on organisations' experiences.

The SM includes 42 Technology Solution Overviews as shown below, which can be found in Appendix 6.2 of this report.

Figure 5.6 : Example technology solution overview

Study on in-house F&A functions | Appendix 6.2: Technology solution overview

Financial Accounting

Procure To Pay (PTP)

Solution overview:

- eProcurement System
 - Invoice Now (e-invoice)
 - OCR & ML
 - Vendor Portal
- Blockchain Platform
 - Core Accounting Systems
 - Host-to-Host Payments

eProcurement System is a dedicated tool with automated workflow to support the purchasing process from supplier management, contract management, catalogue management, requisition, purchase order to vendor portal, and etc.

FEATURES	BENEFITS
<ul style="list-style-type: none"> • Self-service solution for requisitioning and ordering goods and services • Requisition is routed for approval through a predefined rule-based workflow • Once approved, the requisition is converted to one or more purchase orders • Purchase orders transmitted to suppliers via email, Electronic Data Interchange (EDI) or the vendor portal • Supplier management and contract management 	<ul style="list-style-type: none"> • Standardised purchasing process and procedures with automated workflows • Eliminate manual effort and paperwork • centralised repository for all contracts • Increased productivity in the downstream accounts payable process

ADOPTION CONSIDERATION

- Many eProcurement systems started as point solutions and have expanded their functionalities to address the full PTP process
- Additional effort to build and maintain integration between the eProcurement solution and existing accounting system
- Implementation of eProcurement solution may be complex and may involve substantial time and costs
- Work closely with procurement leaders during the implementation to achieve straight through processing
- Evaluate the suppliers in the provider's network against your own supplier base to ensure alignment



Phase 1 output



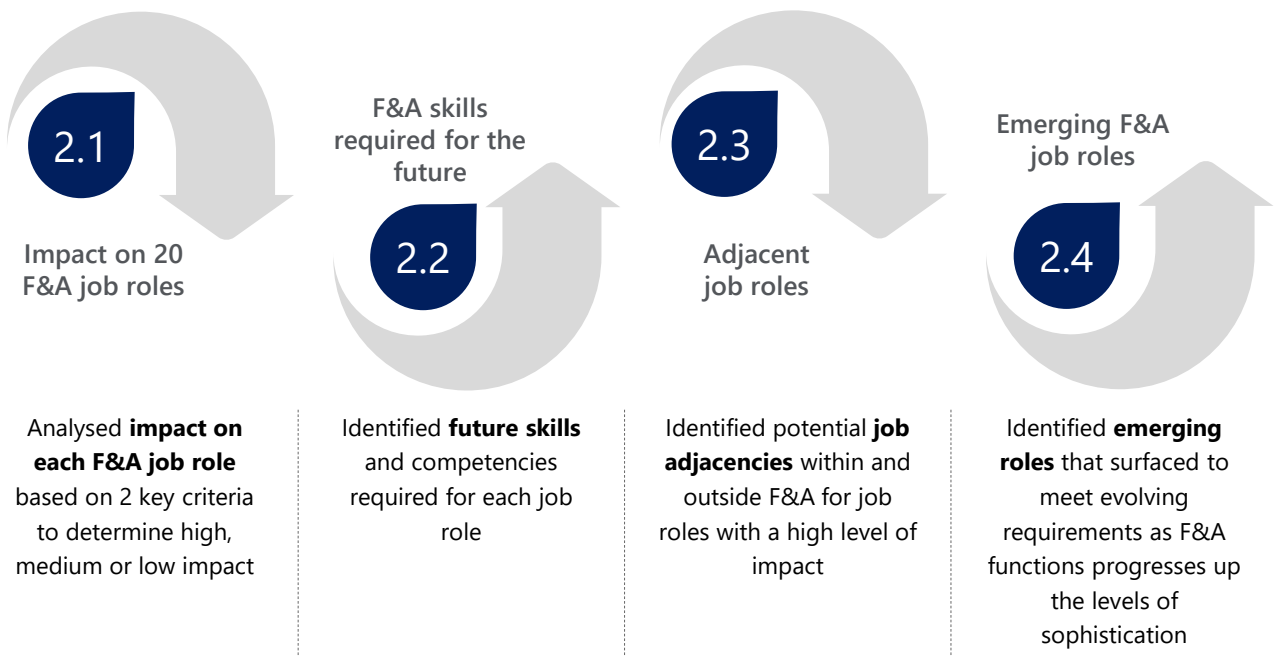
- ✓ Sophistication map
- ✓ Technology solution overview

2 Job impacts and future skills analysis

The impact analysis and skills analysis comprised:

- 1. Quantitative analysis** based on labour market data from Singapore Ministry of Manpower, Burning Glass Technologies, LinkedIn Talent Insights, MyCareersFuture Singapore and O*NET OnLine
- 2. Qualitative analysis** of key megatrends in F&A functions, and observations and insights from Deloitte Global Finance Transformation Leaders.

Figure 5.7: 4 steps for analysing job impacts and future skills for the 20 in-scope F&A job roles



Step **2.1** Impact on 20 F&A job roles

In this phase, an impact analysis was conducted on each of the F&A job roles to envision the future of the role, and how the tasks and the associated skills will evolve in the next 2 to 5 years. The impact on the 20 job roles were assessed based on **2 key criteria – (1) the extent of automation**, and **(2) the extent of change in tasks and skills** – as the F&A functions transform and progress up the levels of sophistication. Based on a holistic assessment of both criteria, an impact level of **'high'**, **'medium'** or **'low'** was then assigned to each job role.

Step 2.2 describes the detailed approach to this skills analysis.

Figure 5.8 : Assessment criteria for determining the impact on F&A job roles in the next 2 to 5 years

Impact criteria	High	Medium	Low
1. Automation	>50 percent of tasks will be automated	20–50 percent of tasks will be automated	<20 percent of tasks will be automated
2. Change in tasks and skills	Key tasks of the role will change, requiring significant changes in skills or new skills	Some tasks of the role will change, but key tasks remain the same, requiring a moderate change in skills	Key tasks largely remain the same with few changes, requiring a minimal change in skills

The results of this impact analysis are discussed in Section 3 of this report.

Step 2.2 F&A skills required for the future

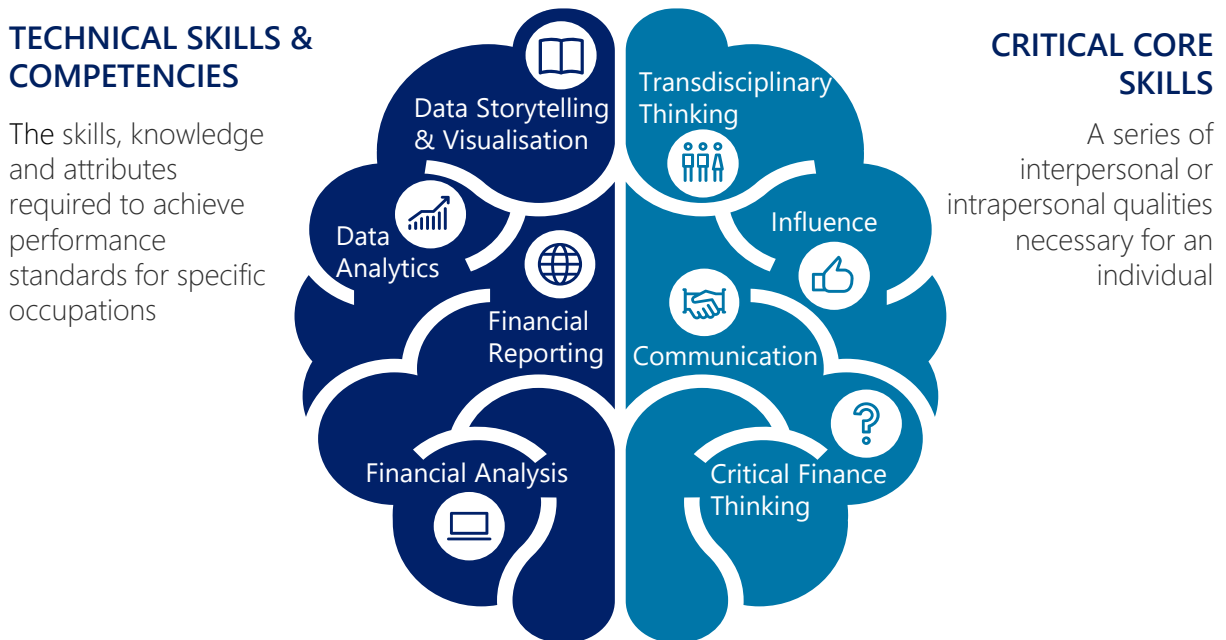
The skills map under the SFw for Accountancy formed the baseline for the skills analysis of each F&A job role. There are a total of 105 technical skills and competencies (TSCs) and 16 critical core skills (CCSs) identified from the SFw for Accountancy.

The analysis of each job role takes into consideration how the job scope and tasks will change based on the SM defined in the previous phase along with the corresponding skill requirements. The impact could be an increase in proficiency of existing skills, new skills required, or a combination of both.

Job posting data over a 5-year horizon was analysed to understand the skills expectation and demand for F&A job roles in Singapore and globally. The future skill sets identified were then corroborated with Deloitte Global Finance Transformation Leaders.

An additional **7 TSCs and 3 CCSs** identified based on this analysis. As a result, a **standardised and forward-looking 'skills library' was created for F&A professionals** (see Appendix 6.3).

Figure 5.9 : Definition and examples of TSCs and CCSs under the SFw for Accountancy



Once the skills library was developed, a job canvas was then created for each job role, documenting the results of the analysis (see Appendix 6.4). The job canvas outlines the impact on the tasks within a job role and the future skills that would be needed, along with adjacent and emerging roles (illustrated in steps 2.3 and 2.4 respectively) that F&A professionals could transition to.

In this way, the job canvas provides a single holistic assessment that could be used to assess the skills and proficiencies that F&A professionals may need in the future.

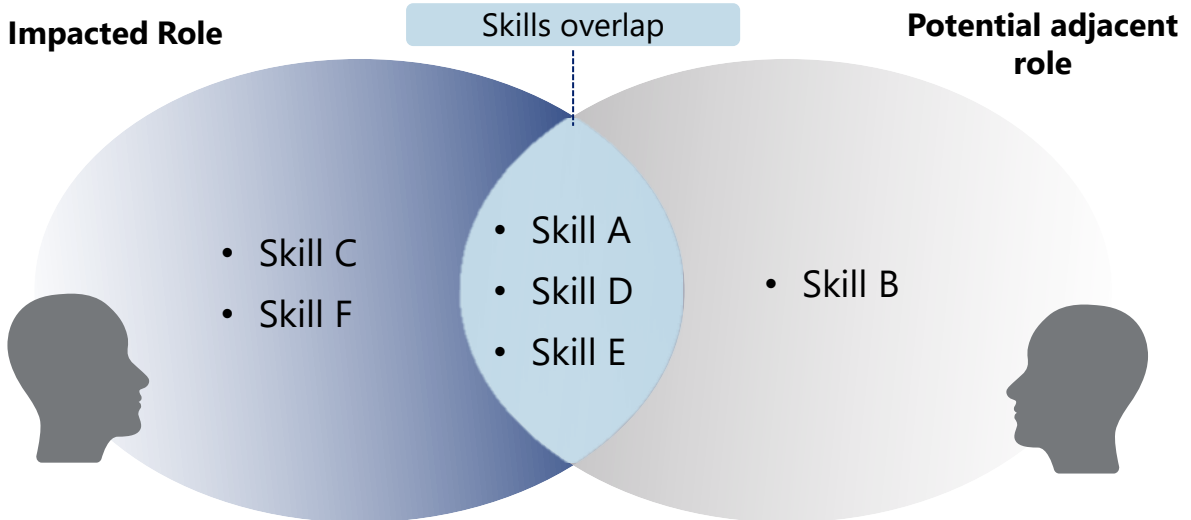
Step 2.3 Adjacent job roles

For F&A job roles with a high level of impact, potential job adjacencies within and outside F&A functions were identified to provide an insight into alternate career pathways.

1. First, the skills map under the SFw for Accountancy and for adjacent sectors – such as Financial Services and Engineering Services – were referenced, to identify the skills and competencies required in each job role. A skills similarity analysis (see Figure 5.10) was then performed.
2. Job roles of the same career levels within and outside F&A functions were compared to identify the skills overlap.
3. Further analysis was undertaken on the practicality and viability of the transition by assessing whether the job role is expected to be displaced in the future, and the difficulty of developing the new skills required.

The job canvas outlines the **top 3 adjacent roles that are most compatible with** the impacted F&A job role. In addition, it highlights the **skills overlap** and **skills to be developed** in adapting to each adjacent role.

Figure 5.10 : Skills similarity analysis to identify skills overlap



Step 2.4 Emerging F&A job roles

As organisations advance up the levels of sophistication, emerging roles may emerge to anticipate new future requirements. Deloitte Global Finance Transformation Leaders were consulted to develop **preliminary hypotheses of in-demand job roles** that are important to F&A functions, based on key megatrends as well as their observations of large leading F&A functions. These emerging roles were then validated **against job postings found on the market and through engagements with corporate F&A leaders.**

Emerging roles personas (see Appendix 6.5) were developed to depict a day in the life of each emerging role, along with the skills required. Potential transitions from the 20 F&A job roles to the emerging roles were also mapped, based on a compatibility assessment, and documented in the job canvas.

The job canvas outlines the **applicable emerging roles most relevant** to each F&A job role. It also highlights the **additional skills to be developed** in moving to these emerging roles.



Phase 2 output



- ✓ Skills library
- ✓ Job canvas
- ✓ Emerging roles persona

3 Industry validation

Step 3.1 Industry validation with F&A leaders, F&A professionals and professional organisations

3 groups of stakeholders were engaged to validate the findings from phases 1 and 2:

1. Corporate F&A leaders (such as CFOs, and Finance Directors) across SMEs, LLEs and MNCs
2. Institutes of higher learning (IHLs) and professional bodies (PBs)
3. F&A professionals (such as Finance Managers and Accounting Executives).

To encourage corporates and professionals to undertake transformation, 36 case studies were developed featuring (1) corporates that successfully transformed their in-house F&A function, and (2) F&A professionals who had mastered skills or successfully transitioned to adjacent or emerging job roles.

Figure 5.11 : Overview of engagements with 3 groups of stakeholders


	1. Corporate F&A leaders	2. IHLs and PBs	3. F&A professionals
Objectives	<ul style="list-style-type: none"> Validate megatrends, SM and impact on skills of F&A job roles and emerging roles Conduct online surveys to understand F&A functions and current sophistication levels Understand how companies have embedded technology in their F&A function Discover transformation journeys, challenges and benefits to capture as corporate case studies 	<ul style="list-style-type: none"> Understand changes in demand for skill sets of F&A professionals Validate existing courses available to upskill or reskill F&A professionals Uncover challenges in achieving course enrolment targets and how can IHLs further support in-house F&A functions 	<ul style="list-style-type: none"> Capture how companies support their staff in upskilling and/or reskilling Discover the career journeys of various F&A professionals who have progressed up their F&A career or successfully transition into new roles, and capture these as individual case studies
Mode	<ul style="list-style-type: none"> One-on-one interviews Focus group discussions Online surveys 	<ul style="list-style-type: none"> One-on-one interviews 	<ul style="list-style-type: none"> One-on-one interviews

 **65** corporates participated

 **10** IHLs participated
7 PBs participated

 **21** case studies gathered from corporate F&A leaders

 **15** case studies gathered from F&A professionals

 **Phase 3 output** = Validate phase 1 and 2 findings
 Corporate case studies
 Individual case studies



4 Call to action

Using the findings from phase 1 to 3, 2 separate sets of self-assessment questionnaire (SAQ) for use by F&A functions and F&A professionals respectively will be created and made available in Q4 2021. The objective is to allow respondents to make an independent and objective assessment of their levels of F&A sophistication and to identify possible efforts to progress to the next level(s) of sophistication.

Step 4.1 Self-assessment questionnaire for F&A functions

To guide organisations in transforming their F&A functions, a SAQ will be developed to help corporate F&A leaders assess their current levels of F&A sophistication and identify possible efforts to progress to the next levels. The tool will provide recommendations on areas of priority as well as existing programmes and initiatives available to support the transformation journey. The SAQ for F&A functions serves as a starting point for corporate F&A leaders to develop or refine their F&A transformation strategy.

Step 4.2 Self-assessment questionnaire for F&A professionals

Similarly, a SAQ will be developed to help F&A professionals to assess their personal skills and competencies, taking into account their current job role and functional tasks. The tool will include recommendations on training courses based on the skills F&A professionals have selected, as well as existing programmes and initiatives available to support the upskilling and/or reskilling journey. This SAQ will help F&A professionals understand the impact on their job role and the skills required for the future, and discover the potential adjacent and emerging roles they could explore.

