IS Chartered Accountant Journal

JULY 2021

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focus

INFORMATION SYSTEMS RISK MANAGEMENT

Considerations For A Heightened Digital Threat Landscape

ISCA INSTITUTE OF SINGAPORE CHARTERED ACCOUNTANTS

Dear members,

IN RECENT MONTHS, there has been an increasing number of cyber crimes ranging from attacks on global supply chains to theft of personal data, denial of access to systems and data, and more. This is hardly surprising in light of the acceleration in digital transformation, Industrialisation 4.0, and intensified telecommuting and remote work practices. As organisations are now more susceptible to cyber threats, there is a need for them to rethink the focus of their risk management plans. Instead of trying to minimise the damage after a cyber incursion, they need to be more proactive and place emphasis on how to detect cyber breaches sufficiently fast, so that containment action can be taken before the damage snowballs. In this respect, accountancy and finance professionals are well positioned to help their organisations and their clients to finetune their risk management approach for this new era of Everything 4.0.

As highlighted in the cover story, "Information Systems Risk Management", cybersecurity is a risk and part of an organisation's enterprise risk management (ERM). Already, professional accountants are contributing to effective ERM as gatekeepers of financial information. They can do more to help their organisations and their clients, such as by analysing the threats that arise, including the liability for product misuse or unintended use, as well as risks related to the increased connectivity within or outside the organisation.

Simply put, to add value, accountants need to be seen as risk experts who are outward looking and provide valuable insights to help organisations manage risks, respond to uncertainty, and achieve their objectives. Members should therefore continue to upskill themselves so that they can step up as risk experts, and find their fit in this time of accelerated digitalisation. To support members in this regard, the Institute has launched the ISCA Information Systems Risk Management Certificate, which covers essential knowledge for non-IT professionals to gain more insights into information systems risk management.

When ISCA member Wong Kar Ling proposes that Finance has a unique perspective of a business which can in turn add tremendous value to the organisation, she is speaking from experience. The Managing Director of South East Asia and Head of Strategy and Global Operations at The Ascott Limited, who shares that curiosity underlies her career trajectory, is the featured member in the Member Profile column. As she explains in "The Power Of A Curious Mind", the "whys" are important because "it's about raising a question, finding the answers and then sharing that understanding" with others. Similarly, today's accountancy and finance professionals are expected to grasp the whys, align the financials with organisational goals, and partner management to develop and drive business strategy. By doing so, accountancy and finance professionals can carve a niche as they equip themselves for the dynamic and complex business environment.

As members upgrade and upskill to navigate the future, do consider that you can also sharpen your skills through volunteering. In May, the Institute had signed a Memorandum of Understanding (MOU) with the Ministry of Culture, Community and Youth's Singapore Cares Office to grow skills-based volunteerism in the accountancy profession. The MOU paves the way for our members to contribute their skills by providing pro bono audit services or assist in accounting and compliance matters at non-profit organisations, among other opportunities. Find out how you can hone your professional capabilities and do your part for the community in the article, "Contribute Your Wealth Of Professional Skills And Expertise For A Meaningful Cause".

As we cross into the second half of the year, think about what you need to do, to find your fit in the new normal in the wake of a global pandemic and technology-driven economy and business environment. Remember, ISCA has a wide selection of Continuing Professional Education courses designed to support your professional aspirations.

In An Era Of Everything 4.0, How Do You Fit In?

Kon Yin Tong
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Singapore Retains Top Spot in Elite Quality Index

SINGAPORE'S BUSINESS ELITES ARE BY FAR THE HIGHEST VALUE CREATORS IN THE WORLD, according to the Elite Quality Index 2021 (EQx2021). The value creation stems largely from the city-state's strong positions on Economic Value, including its free trade stance and openness to businesses and foreign direct investment. Singapore also ranks at the top of venture capital investment and availability to entrepreneurs, enabling the rapid creation of new elites.

Additionally, Singapore's strong institutions, political stability, and low levels of corruption help in translating the creation of economic value to broad social and economic benefits for the population, as reflected in its high-ranking scores for institutional quality and governmental responsiveness to change. Overall, the Index shows that with the aid of strong political and social institutions, Singapore elites have built business models that are exceptional in their inclusiveness and value creation.

This is the second consecutive year that Singapore has snagged the top position in the international political economy ranking.

The EQx2021 study examined 151 countries (up from 32 in the inaugural report last year) and broadened the data range to look at 107 component indicators (up from 72). The research, which was led by the University of St Gallen and Singapore Management University, along with international academic partners and the St Gallen-based Foundation for Value Creation, provides unique insights into sustainable value creation by elites across the world.

The research assessed four conceptual areas to determine the quality of the elites, namely, economic power, economic value, political power, and political value.

For EQx2021, Singapore and Switzerland have retained their one-two positions, with the United Kingdom in third place. Germany ranks 15th this year, falling from its third spot in 2020. Israel has made the largest gains in the latest Index with its seventh position, up from 16th in 2020.

The performance of elites in relation to the management of the Covid-19 pandemic is relevant to the current public discourse, says the report, as higher-quality elites in places like Singapore, Switzerland, Israel, Norway and New Zealand (13th in 2021) have been better able to protect their countries from the health and economic impacts of Covid-19.

EQx Country Ranking 2021 and 2020

2021	Country	2020
1	Singapore	1
2	Switzerland	2
3	United Kingdom	4
4	The Netherlands	Not part of the study
5	United States	5
6	Sweden	10
7	Israel	16
8	Norway	11
9	Australia	6
10	Denmark	Not part of the study

PHOTOS SHUTTERSTOCK

Finance Leaders Must Balance Risk Management and Productivity When Using RPA

AS ROBOTIC PROCESS AUTOMATION (RPA) MOVES FROM THE TESTING PHASE TO FULL ADOPTION IN FINANCE DEPARTMENTS, controllers must optimise their governance processes to balance risk management processes without stifling the productivity that the technology provides, says Gartner Inc. The topic was flagged by analysts as a key issue facing finance leaders, at a recent virtual Gartner CFO and Finance Executive Conference.

Gartner's research has found that enterprise-wide adoption of RPA will grow from 55% of organisations in 2019 to 90% by 2022. As RPA processes expand, so will the inclination to implement new controls and heavier governance. However, the productivity gains offered by RPA could be stifled in a heavily controlled environment that is too reliant on manual oversight.

"We have reached the point where formalised controls are catching up to RPA, but the risk of overcontrolling is wasted effort that reduces the effectiveness of the technology and team capacity," says Hilary Richards, Research Vice President of the Gartner Finance practice. "By choosing the correct governance model for RPA and creating clear, rules-based systems to manage the biggest risks upfront, stakeholders can design an effective governance approach without blunting the efficiency gains that made RPA attractive in the first place."

Optimising risk management for RPA

Initial risk management assessments of deploying RPA bots have focussed on the risks that could emerge in an environment that is too lightly controlled. These risks, such as the development of shadow IT, compliance violations, bot failure and related business continuity concerns, have gradually necessitated organisations to move to a heavier and more formalised governance system for the technology.

Ms Richards explains that some organisations have invested significant time and capital to deploy RPA, yet their bot utilisation rate is around 30% of what is actually available due to an overly burdensome control environment.

Designing effective RPA governance

To get the most out of RPA investments, without compromising on essential risk controls, Gartner recommends that RPA stakeholders focus on setting a single governance model for the technology, controlling for segregation of duties (SOD) risk and creating guidelines to assess Sarbanes Oxley (SOX) impact of RPA use cases.

- **RPA governance model selection**
The right governance model for enterprise-wide RPA adoption will be decided by stakeholders' overall comfort with the technology and the need to balance centralised controls with use case flexibility among business units. Organisations new to RPA could start with a centralised governance model, where enterprise standards and procedures are set by a central body, while mature organisations can move to a federated model that provides more business unit flexibility while still maintaining coordinated control of policies.

- **Managing SOD risk**
In a lightly regulated SOD environment, bot-enabled fraud and human access duties are too broad. In a more heavily regulated environment, bot capacity remains underutilised, and budget is wasted on unused bots. Instead of segregating each process and dedicating one bot per process, organisations can segregate the duties of the humans interacting with the bots, while allowing more processes to be run by a single bot. By separating the development, supervision and process owner roles managed by human employees, organisations can better manage SOD risk while consolidating processes under fewer bots and increasing their utilisation rates.

- **Assessing RPA's SOX impact**
Screening every RPA use case for potential SOX impact is a time-intensive, manual activity. A more efficient approach involves creating guidelines for business unit owners to flag new RPA proposals for further review if these proposals automate existing SOX controls or will have an impact on SOX-related processes. RPA proposals with no potential SOX impact can proceed for approval without review by a SOX compliance team.

PHOTOS SHUTTERSTOCK

Singapore Workers Embrace Digital Skills

A NEW PWC SURVEY[1] OF 32,500 WORKERS IN 19 COUNTRIES – one of the largest-ever studies of the global workforce – paints a picture of a global workforce that sees the shift to remote working as just the tip of the iceberg. Reflecting the fact that the pandemic has accelerated a number of workforce trends including digitalisation, 65% of respondents in Singapore (compared to 60% of global respondents) are worried that automation is putting many jobs at risk; 64% (48% globally) believe "stable, long-term employment won't be around in the future", and 50% (39% globally) think it is likely that their job will be obsolete within five years.

Among the pandemic's positives, 51% of Singapore workers (40% globally) say their digital skills have improved through the prolonged period of lockdown, and claim they will continue to embrace training and skill development. Eighty-one per cent (77% globally) are "ready to learn new skills or completely retrain", and 79% (74% globally) see training as a matter of personal responsibility. Encouragingly, 80% (also 80% globally) are confident they can adapt to new technologies entering their workplace. In addition, 52% (49% globally) of respondents are focused on building entrepreneurial skills with an interest in setting up their own business.

However, the PwC survey also registered disparities in access to upskilling opportunities. While 39% of Singapore respondents (46% globally) with postgraduate degrees say their employers give them many opportunities to improve their digital skills, just 22% of people with school-leaver qualifications (27% globally) say the same. Some 75% of unskilled manual workers say that there are no opportunities for digital upskilling at all.

"If we want to shift to a model of high productivity, innovation and growth, open collaboration, transparency and inclusion are crucial factors that government and business leaders need to collaborate to ensure are translated into the workplace in the form of equal opportunities," says Martijn Schouten, Workforce Transformation Leader, PwC South East Asia Consulting. "People in the most at-risk industries and groups may need additional interventions to ensure that existing gaps are addressed."

That Singapore workers are enhancing their digital skills during this time is also noted by Microsoft Corp, which reveals it has helped over 200,000 people in the city-state gain access to digital skills during Covid-19[2]. Through online courses from GitHub, LinkedIn and Microsoft, people are preparing themselves for in-demand roles including project management and data analysis. "Skills will be the new currency in the post-pandemic world," says Kevin Wo, Managing Director, Microsoft Singapore. "For us to emerge stronger from the pandemic, reskilling needs to be at the centre of our economic reset." The company will continue to offer free LinkedIn Learning and Microsoft Learn courses and low-cost certifications that align with in-demand jobs.

In Singapore, the company is helping to close the skills gap and enhance employability through government and industry-leading partnerships. These include SkillsFuture Queen Bee programme, #GetReadySG, Enterprise Skills Initiative and Microsoft Learn for Educators.

[1] The "Hopes And Fears 2021: The Views Of 32,500 Workers" survey presents what comes next for the global labour force.

[2] Smith, Brad. "Building A More Inclusive Skills-Based Economy: The Next Steps For Our Global Skills Initiative". 30 Mar 2021. Official Microsoft Blog.

Contribute Your Wealth Of Professional Skills And Expertise For A Meaningful Cause

Ⓐ Minister for Culture, Community and Youth & Second Minister for Law Edwin Tong (centre) witnessed the MOU signing between ISCA President Kon Yin Tong (left) and MCCY Deputy Secretary Dr Ang Hak Seng

ISCA SIGNED A MEMORANDUM OF UNDERSTANDING (MOU) with the Ministry of Culture, Community and Youth (MCCY)'s Singapore Cares (SG Cares) Office on May 10 to grow skills-based volunteerism in the accountancy profession. The MOU was signed by Kon Yin Tong, President of ISCA, and Dr Ang Hak Seng, Deputy Secretary of MCCY, and witnessed by Edwin Tong, Minister for Culture, Community and Youth & Second Minister for Law.

With this partnership, ISCA will serve as a key national-level intermediary to grow skills-based volunteerism within the accountancy sector. ISCA will work closely with the SG Cares Office and the SG Cares Volunteer Centres across the island to nurture a pool of regular skills-based volunteers to serve the community within each town. ISCA members can look forward to contributing their skills by providing pro bono audit services as well as assisting in accounting and compliance matters at non-profit organisations; they can also share essential financial skills with vulnerable families.

ISCA members who wish to serve as volunteers can email ISCA Cares at volunteer@iscacares.org.sg or scan the QR code to register your interest.

"Skills-based volunteerism is one of the important ways that we can help to build a more caring and inclusive home for all. The partnership between ISCA and SG Cares Office will further grow skills-based volunteerism and make a larger collective impact to the wider community. For example, imparting essential financial skills to vulnerable families can help them manage household budgets well, and serve their families' needs better. I commend ISCA for stepping up to support the SG Cares movement and would like to encourage more organisations to partner us in growing the culture of care in Singapore."

Edwin Tong, Minister for Culture, Community and Youth & Second Minister for Law

"ISCA is pleased to partner with SG Cares in promoting skills-based volunteerism in the accountancy profession. With their breadth and depth of skills and expertise, our members are well equipped to make a difference by using their professional capabilities in service to the community."

Kon Yin Tong, President, ISCA

"The SG Cares movement encourages Singaporeans to give back to the community in any way they can. One avenue of giving is through skills-based volunteerism which plays a critical role in our culture of care. While the people sector is primarily equipped with skills to address cause-related issues, they require accountancy expertise to uphold strong governance and accountability. We want to encourage more professionals to step forward and contribute their skills to the people sector. This will strengthen the capabilities of the people sector and enable them to optimise their resources to effectively meet needs."

Dr Ang Hak Seng, Deputy Secretary, MCCY

MARK YOUR CALENDAR

NEW!

23 JUL

Mid-Year Technical Update for Auditors 2021 (Live Webinar)

This programme provides an overview of the recent changes in the areas of the Ethics Pronouncements, Companies Act, FRSs, SSAs and how these changes will affect the external auditor.

Designed with the experienced external auditors in mind, the seminar will provide practical guidance on how to implement and address these changes in the course of their statutory audits.

NEW!

26 JUL

Financial Tools to Evaluate Project Viability (Live Webinar)

At the end of the programme participants should:

- Know the various types of projects and be able to identify the risks associated with them
- Be able to identify cash flows of a project and evaluate its financial viability
- Be able to compare the value of money at different times and appreciate the purpose of doing this

NEW!

27 JUL

Updates to Personal Data Protection (Amendment) Act 2020

Course attendees will be able to get an update on the new Personal Data Protection (Amendment) Act 2020; Fulfill compliance to the amendments and additions of PDPA DPOs are well-versed to update their company PDPA Policies & Procedures.

NEW!

02 & 03 AUG

Python: Its Applications and its Implementation for Accounting and Finance Professionals (Live Webinar)

This course is structured as a 2-day course to optimise your learning experience with Python and application of the code post-course.

Sustainability & Trust: Taking Centre-Stage in a New Era of Business (Live Webinar)

Our annual PAIB Conference is making its way back on 19th August 2021 with a more exciting line-up featuring industry hot topics for both the public and private sectors.

Taking a leaf from Singapore's Green Plan 2030, this year's virtual conference aims to shine the spotlight on accountants who will take centre-stage in the new era of business, especially in Sustainability and Trust. The virtual conference will feature keynote speakers who will dispel any misconceptions that sustainability is a distant aspiration and explain the roles that finance professionals need to play to empower businesses to capitalise sustainability opportunities.

Register now to enjoy 20% off before early bird ends on 19th July: https://isca.org.sg/PAIB2021Reg

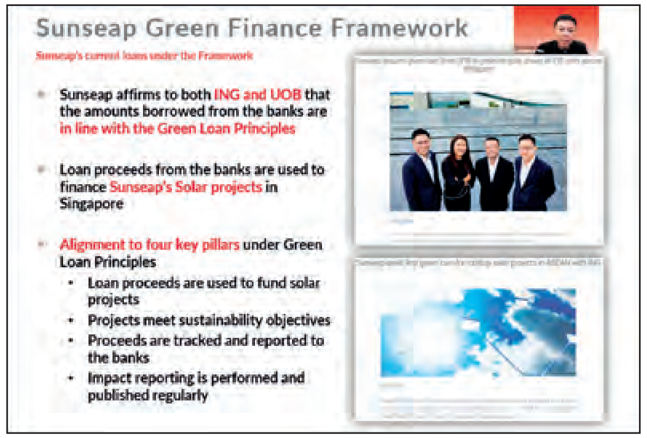
Get updated on Evolution of Risk Management, Strengthening Corporate Governance in a New World as well as Financial Reporting Challenges and Hot Button Issues.

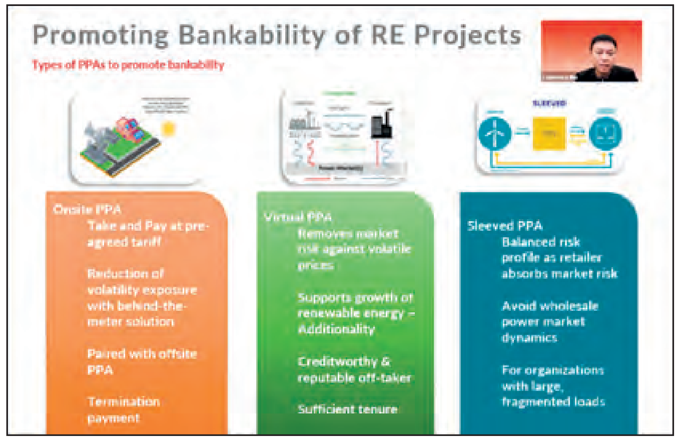
Participants will also enjoy **FREE** access to ISCA Digital Library of resources on latest business trends and updates till 31 December 2021.

Dates and events are subjected to change without prior notice.
For more details, visit www.isca.org.sg

isca breakfast talk

Facilitating Asia Economies' Shift To A More Sustainable Future With Green Financing





"GREEN FINANCE IS ANY STRUCTURED FINANCIAL ACTIVITY THAT HAS BEEN CREATED TO ENSURE A BETTER ENVIRONMENTAL OUTCOME," said Lawrence Wu, quoting the World Economic Forum definition. Mr Wu, President & Executive Director of Sunseap Group, was speaking to a virtual audience of almost 400 accountancy professionals at the ISCA Breakfast Talk on May 5.

In Singapore, the government is leading the push for green finance with the Singapore Green Plan 2030 – the national agenda to build a green economy with various initiatives and targets in green finance. As the most established clean energy solutions provider in Singapore, Sunseap is committed to drive green financing.

During the live webinar, Mr Wu provided an overview of green financing developments in Singapore and the region, dissected Sunseap's Green Finance Framework and delved deeper into the bankability of renewable energy projects.

Green financing developments in the region

Mr Wu shared that the US, China and France are the three biggest issuers of green bonds at present. In Singapore, which is now ASEAN's largest green finance market, Monetary Authority of Singapore (MAS) is taking active steps to promote sustainable financing in the financial sector as part of the country's Green Finance Action Plan. MAS does this namely by:

(1) Strengthening financial sector resilience to environmental risks;
(2) Developing markets and solutions for a sustainable economy, and
(3) Building knowledge and capabilities in sustainable finance.

The government had announced in Singapore Budget 2021 that it would issue green bonds for $19 billion worth of public infrastructure projects, marking the nation's commitment to be the leading green finance hub in Asia and beyond. Green finance is seen as the solution to achieve economic growth and environmental sustainability simultaneously, and only with joint efforts from the public and private sectors will the effectiveness be realised.

Sunseap Green Finance Framework

Mr Wu explained that Sunseap's Green Finance Framework aligns with the four core components of the Green Bond Principles 2018 and Green Loan Principles 2018. Under this framework, Sunseap will be able to raise green financing instruments including green loans, green bonds or other debt instruments. The proceeds can then be used to finance or refinance green projects in these eligible areas: renewable energy, energy efficiency, and green-roof systems. Some instances of eligible green projects are rooftop solar, energy-efficiency projects like smart grids, and LED lighting retrofits, as well as rooftop greenery projects.

In 2019, Sunseap secured green loans from ING and UOB for its rooftop solar projects, enabling it to continue generating clean energy and contribute to the region's transition to renewable energy sources. To both loaners, Sunseap affirms that the amounts borrowed are in line with the four key pillars under the Green Loan Principles, which are:

- Loan proceeds are used to fund solar projects;
- Projects meet sustainability objectives;
- Proceeds are tracked and reported to the banks, and
- Impact reporting is performed and published regularly.

Bankability of renewable energy projects

Mr Wu went on to describe the various types of Power Purchase Agreement (PPA), which is an agreement between the energy buyer and seller, and how their structures help drive the bankability of each project. He also advised that to attract financing, renewable energy projects should reduce the risks for investors as much as possible.

BY STEVEN SIM

INFORMATION SYSTEMS RISK MANAGEMENT

Considerations For A Heightened Digital Threat Landscape

SINCE COVID-19 LOCKDOWNS STARTED, there have been increased attacks not just on video-conferencing tools but also on Virtual Private Networks (VPNs), fake mobile applications (including contact tracing applications), as well as those targeting wireless routers and Internet of Things (IoT) used in smart homes. The elevated threat landscape is primarily due to more telecommuting, acceleration of digital transformation[1] and Industrialisation 4.0. The heightened exposure to the digital world has also lowered the barriers of entry and made the general public more susceptible to hacking.

Besides a more-than-30-fold spike in phishing scams, including new phishing scams relating to Covid-themed emails[2], and a 33% increase in ransomware payments[3], there has also been a recent spate of supply chain attacks due to either breaches in the logistical supply chain or breaches with third-party services engaged by an enterprise.

Third-party services providers, including cloud security providers (CSPs), are increasingly falling prey to ransomware and data breaches. Related attacks on the cloud are also on the rise. More businesses are also either getting disrupted due to denial-of-service (DoS) attacks or getting their data leaked due to misconfigured cloud setups.

At the time of writing this article (in early June), you would have heard of major supply-chain breaches of a global scale happening close to home within a short span of three months, namely, the SolarWinds software breach[4], Singtel Accellion data breach[5], SIA KrisFlyer data breach[6] as well as the NTUC's e2i data breach[7].

As a result, elevated concerns about third-party breaches in the vendor supply chain are spotlighted in recent times and accorded the highest level of scrutiny. This is especially so in the wake of all kinds of cyber breaches as digitalisation accelerates in a world where everything is moving towards 4.0, including the accountancy profession[8]. We will cover third-party supply chain risks and cloud adoption risks in the later sections of this article.

Accountancy professionals can help their organisations and their clients analyse the risks that arise, including the liability for product misuse or unintended use, as well as risks related to the increased connectivity within or outside the enterprise. However, the enterprise risk management process has oftentimes not really caught up with the new risks that might arise due to this connectivity and the associated complexities. Complexities arise with increased adoption of emerging technologies such as the cloud, IoT, blockchain and artificial intelligence as part of the digital transformation journey.

A decade ago, the cybersecurity industry described cybersecurity in the context that "it is not a matter of if but when cyber breaches will happen". It has since evolved in recent years into the common notion of "whether you know you are breached or you do not".

PHOTO GETTY IMAGES

[1] Touhill, Gregory J. "Guest Editorial: Digital Transformation Insight For 21st Century Organizations: Managing Risk". 1 Sep 2018. ISACA Journal.

[2] "Police Warn Of Phishing Scams After Nearly 30-Fold Spike In Cases". 9 Jun 2020. Channel NewsAsia.

[3] Siegal, Bill. "Ransomware Payments Up 33% As Maze and Sodinokibi Proliferate in Q1 2020". 29 Apr 2020. Security Boulevard.

[4] Baker, Pam. "The SolarWinds Hack Timeline: Who Knew What, And When?". 4 June 2021. CSO ASEAN.

[5] Spencer, Leon. "Info Of 129,000 Singtel Customers Stolen After Accellion Hack". 18 Feb 2021. Channel Asia.

[6] "About 580,000 Singapore Airlines Krisflyer And PPS Members Affected By Data Security Breach". 5 Mar 2021. Channel NewsAsia.

[7] Spencer, Leon. "Singapore's e2i Tightens Security After Third-Party Data Breach". 6 Apr 2021. Channel Asia.

[8] Hart, Lea. "How Industry 4.0 Will Change Accounting". 25 Sep 2017. Journal of Accountancy.

Figure 1 ISACA Risk IT Framework[9]

However, before we can even approach this risk conversation, it is important to internalise the basic axiom that there is no 100% cybersecurity. Attacks are asymmetric in nature. A decade ago, the cybersecurity industry described cybersecurity in the context that "it is not a matter of if but when cyber breaches will happen". It has since evolved in recent years into the common notion of "whether you know you are breached or you do not".

With Covid-19 lockdowns and intensified telecommuting, corporate perimeters are extended to home and telecommuting networks. Cyber threats will therefore have to be remodelled to account for the expanded exposures. Risks have to be recomputed in the new normal. Existing measures have to be revisited for effectiveness, and new measures have to be implemented to lower the risks to acceptable risk appetites or levels.

To add value, accountants need to be seen as risk experts who are outward-looking and provide valuable insights to help organisations manage risks, respond to uncertainty, and achieve their objectives.

CYBERSECURITY IS ESSENTIALLY A RISK GAME

Cybersecurity is a risk game. As an enterprise, whatever the cybersecurity deployments, they cannot deviate from the business goals to stay afloat and profitable. Enterprise risk management (ERM) needs to be part of the professional accountants' mindset and makeup.

Professional accountants contribute to effective ERM as gatekeepers of financial information through their roles as auditors, Chief Financial Officers (CFOs), controllers and managers within finance functions[10]. To add value, accountants need to be seen as risk experts who are outward-looking and provide valuable insights to help organisations manage risks, respond to uncertainty, and achieve their objectives. Contract management, terms and conditions, responsibilities and boundaries will all see changes. Accountants will be crucial in helping companies understand new value streams and new business streams coming from the transmission of all data.

As businesses face rapid changes and increasing uncertainties, three ways in which accountancy and finance leaders and accounting and finance teams can enhance their contribution to ERM are[11]:

- Align risk management with value creation and preservation;
- Drive insights and enable decisions through the provision of risk modelling and analytics, data governance and identification of organisational risk appetite, and
- Enable integration and interconnectivity by breaking down siloes across the organisations to share information.

In the doctrine of risk management, many professionals speak about risk reduction and mitigation. However, in practice, the discussions and workplace deliberations do not have enough focus on risk optimisation. You may be wondering – why optimisation? This is because, in the world of cybersecurity, it is not a matter of if but when a breach will occur. The truth of the matter is that there are no silver bullets. Data breaches have taken place in government agencies, multinational companies, and small and medium-sized enterprises in the past, and will likely take place in the future too. I believe that SingHealth's breach incident is still fresh in everyone's mind. The mindset of the inevitability of a breach must be in place to drive sound risk management processes. Future-proofing risk management in the new age of Everything 4.0 is not about preventing a breach from occurring as much as it is about being able to detect a breach fast enough for sufficient containment before business impact snowballs.

Future-proof risk management:

- Detect a breach quickly
- Mitigate the damage sufficiently
- Don't allow business impact to snowball

Risk governance has taken centrestage in this new normal. Now, what exactly is risk governance? As explained in ISACA's COBIT2019 Framework (Control Objectives for Information and Related Technologies Framework) and familiar to those who have taken the CRISC certification programme, the purpose of risk governance is to ensure that IT risk management principles and practices are embedded in the enterprise, enabling it to secure optimal risk-adjusted returns (where the business is able to generate optimum returns for its risk appetite and tolerance). It has an integration with ERM. It establishes and maintains a common risk view and allows the risk owner who holds the purse strings to make risk-informed business decisions.

Risk governance is supported by risk evaluation and risk response. In risk evaluation processes, IT-related risks and opportunities are identified, analysed and presented in business terms. What follows are the adequate risk responses to ensure that IT-related risk issues, opportunities and events are addressed in a cost-effective manner and are in line with business priorities.

For risks to be adequately identified, analysed and treated, phases 2 to 6 (below) need to be completed to ensure end-to-end treatment, driven from enterprise risk to IT risk and eventual IT deployments. The organisation must:

1) Adopt a good IT risk framework and manage it well;
2) Perform adequate threat modelling as part of the risk identification process;
3) Adopt key principles to ensure the security of systems – security-by-design, security-by-default and secure-in-deployment;
4) Adopt a robust cybersecurity framework (such as COBIT2019, which amalgamates all other cybersecurity frameworks, and
5-6) Translate security requirements into specific key security controls and actual deployments in information systems, technology and solution architectures.

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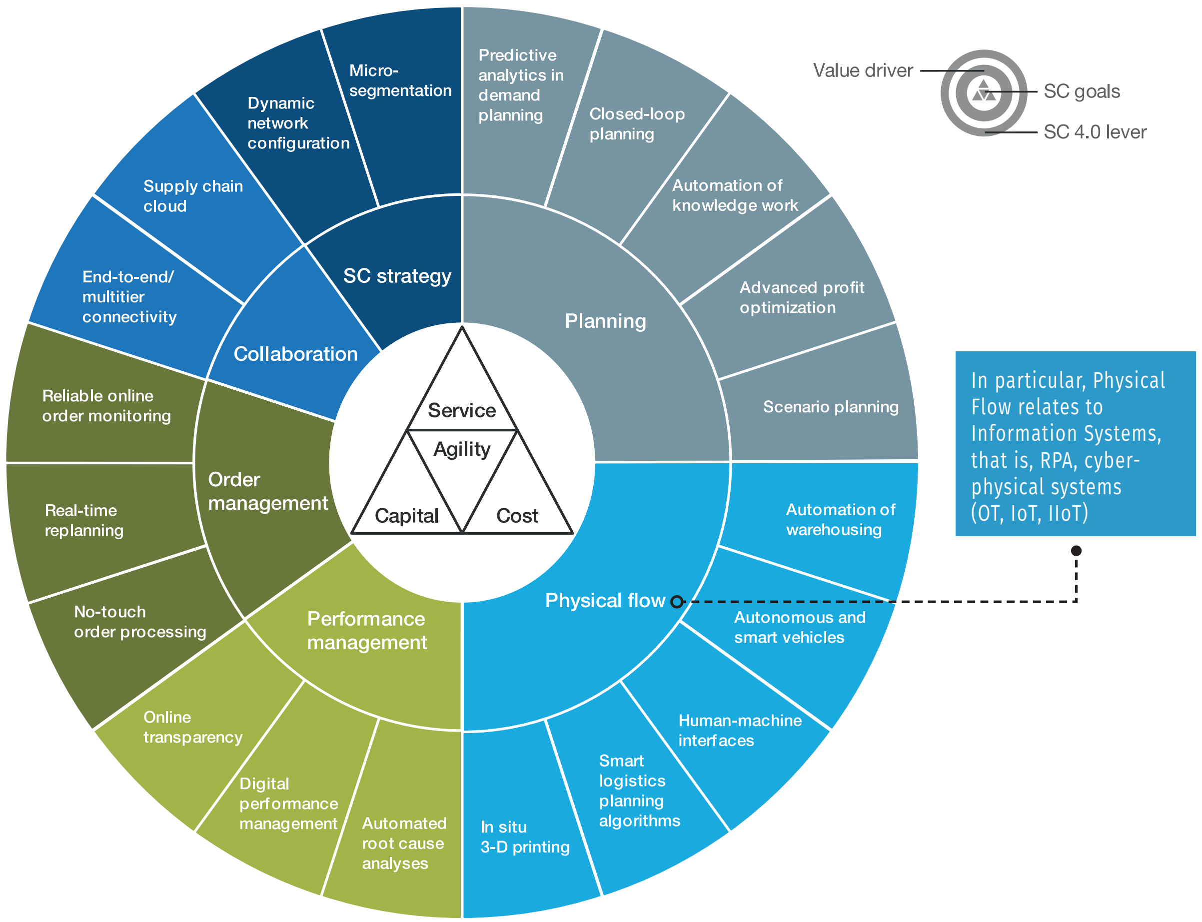
[9] ISACA. "Risk IT Framework, 2nd Edition". 18 Jun 2020. ISACA USA.
[10] Hart, Lea. "Enabling The Accountant's Role In Effective Enterprise Risk Management". 7 Jan 2019. International Federation of Accountants.
[11] ISACA. "Risk IT Framework, 2nd Edition". 18 Jun 2020. ISACA USA.

Figure 2 Supply Chain 4.0's improvememt levers map to six main value drivers[12]



ADDRESSING SUPPLY CHAIN 4.0 RISKS HOLISTICALLY

Supply chains can be defined as either the direct business supply chain or third-party vendor supply chain. The risks of these types of supply chains must be addressed holistically. Most of the time, we utilise supply chains for non-core business functions. However, with all the breaches in recent months, there is a need to address the oversight function.

Fundamentally, the governance processes remain unchanged. For crown jewels, first of all, determine why they are the crown jewels of the enterprise. Is it due to data sensitivity or the need for high availability? The enterprise should go through the process of business impact analysis, threat modelling and risk assessment to determine the appropriate controls to be put in place.

Some common information system threats contextualised to the supply chain components, as listed in Table 1, are used as part of the "Perform Threat Modelling" step of the risk governance six-step process as shared in the previous section.

ISACA believes that cybersecurity is not simply a key business enabler but, more importantly, a key business differentiator. Good governance is about realising maximal business benefits while optimising risks and resources. You cannot run a business without taking risks. Hence, securing the crown jewels to the level of risk appetite acceptable by the enterprise is an important goal.

As part of security-by-design, focus on building cybersecurity requirements into tender specifications and requirements, getting the security posture right at commissioning time and maintaining oversight into the posture on a continual basis. For instance, in cybersecurity incident management, breach notification requirements should be built into the contractual terms and conditions, that is, the specified reporting timelines for customers to be kept timely and accurately apprised of what has happened, impact to the customers due to the breach, and steps the vendor has taken to control or contain the breach situation and prevent future recurrences.

Future-proofing risk management in the new age of Everything 4.0 is not about preventing a breach from occurring as much as it is about being able to detect a breach fast enough for sufficient containment before business impact snowballs.

Beyond assurance reports such as the continual audit, vulnerability assessment, penetration testing and SOC 2 reports[14], third-party posturing tools should also be utilised to provide an outside-in independent assessment.

Table 1 Cyberthreats of supply chain processes[13]

Cyberthreat	File/Code/Access Type	Scoring	Comment
Unauthorised remote access/authentication bypass	Login authentication, VPN access, etc.	5	This gives direct access to a network, although the score should be defined according to its given credentials.
Malware insertion	Media gateway, P2P, etc.	4	It is recommended to distinguish between levels of policies such as connectivity platforms that grant the transfer of executable files (e.g., .exe, .bat) and those that transfer lower-risk files (e.g., .txt).
Compromising P2P databases using SQL injection/web service attacks	Data-driven applications, integrated web-based applications using open standards	3	Due to third parties frequently using these platforms, it is relatively common and easy for hackers to compromise these databases.
Embedded backdoor malware	Software/Hardware implementation	2	While this cyberthreat is usually a risk to nation-state agents, it has increased for other groups recently due to deliberately implemented backdoors by worldwide IT enterprises.
DoS attack using P2P services	P2P gateway, integrating web-based applications using open standards	1	This is a rare threat due to a lack of interest and accessibility on the part of adversaries.

[13] Eitan, Ofir. "The Missing Link In Assessing Cyberrisk Factors Through Supply Chains". 1 Mar 2018. ISACA Journal, Issue 2018 Volume 2.
[14] Chaudhary, Ashwin. "SOC Reports For Cloud Security And Privacy". 18 Dec 2019. ISACA Journal, Issue 2019 Volume 6.

CONSIDER CLOUD ADOPTION RISKS

As cloud adoption accelerates due to Covid-19, CSP risks are also part of common supply chain risks. Clouds can either be set up privately on-premises or they could be off-premises, deployed in virtual private clouds or public clouds. An enterprise needs to address different degrees of shared responsibility with the various cloud environments but it will have to remain accountable for all these environments.

It is always a shared responsibility model between the CSP and the enterprise. Therefore, due diligence must ensue during the tendering and procurement phase to check that security posture is not only established upfront but continually maintained. All too often, one of the greatest fallacies an enterprise can fall into is to give the green light during system deployment – without adequately verifying that the cybersecurity posture is sustained on a continual basis.

The convergence of on-premises and off-premises cloud also means that processes need to be streamlined and integrated. This ranges from asset management, architecture reviews, security event detection and monitoring to incident response, etc., across the cybersecurity governance framework.

Let us just take architecture reviews as one such example. Architecture reviews entail the review of the business, information system and technology architectures, including how the network of systems is designed as well as how security is being integrated into the architecture[15]. Architecture reviews need to include an assessment of the integration between on-premises and cloud solutions, and how the application programmable interface (API) calls are protected in a zero-trust approach. This goes beyond simply assessing on-premises and cloud environments as independent setups. In fact, regardless of which model of cloud adoption it is, be it software-as-a-service (SaaS), platform-as-a-service (PaaS) or infrastructure-as-a-service (IaaS), one should always complete the whole nine yards with vendors, expecting them to assure us of their security posture down to the protection of the CSP's own internal assets.

[15] Baker, Pam. "The SolarWinds Hack Timeline: Who Knew What, And When?". 4 June 2021. CSO ASEAN.

PHOTO GETTY IMAGES

... auditors and accountants need to upskill themselves in information systems risk management as it increasingly plays a pivotal role in enterprise risk management in this era of increased threats from the acceleration of digitalisation and Everything 4.0.

We often say that data is the new oil. How do we ensure integration of security-by-design and privacy-by-design in the architecture setup? For example, if you are using public cloud services to analyse your website traffic, how do you ensure that privacy is still being preserved while allowing data to be analysed without losing intrinsic data attributes for effective analytics? This is where technological solutions such as privacy-preservation technologies including homomorphic encryption solutions come into the picture. These technologies maintain the confidentiality of personal identifiable information yet allow it to be stored and processed to serve business analytical needs.

Is there a risk that your data is commingled with other enterprise data, which could be revealed to competitors through a misconfiguration mistake at your CSPs? This and many other areas must be taken into consideration during risk assessment and management.

The general rule of thumb is not to go cloud-first for the sake of it, without being fully aware of the risks and benefits. If the cybersecurity posture degrades when a system moves from on-premises to the public cloud, then the risk owner must seriously decide, apprised by both cybersecurity and risk teams, whether the benefits warrant the risk delta.

CONCLUSION

Auditors and professional accountants need to step up their game and be risk experts who can provide valuable insights to help organisations manage risks, respond to uncertainties, and achieve their objectives.

To realise that, auditors and accountants need to upskill themselves in information systems risk management as it increasingly plays a pivotal role in enterprise risk management in this era of increased threats from the acceleration of digitalisation and Everything 4.0.

They do not need to be able to understand the technical intricacies of risk treatment plans, but they should at least be aware of the right information security risk management approaches that need to be put in place to make well-informed risk-based decisions, therefore allowing cybersecurity to be a key differentiator and not a showstopper for their enterprise and business. ISCA

ISACA provides thought leadership, credentialling, education and guidance for IT security, assurance, risk and governance professionals and has been serving more than 150,000 members in 224 chapters of 188 countries.

The ISACA Singapore Chapter (https://www.isaca.org.sg), best regional non-profit organisation award winner at The Cybersecurity Awards 2019, engages close to 3,200 members in Singapore.

ISCA Information Systems Risk Management Certificate

ISCA, with the support of the Singapore Accountancy Commission, has worked with IT risk experts to develop the ISCA ISRM Certificate. The course covers essential knowledge for non-IT professionals to get more insights into information systems risk management.

For more information, please refer to the ISCA website (https://isca.org.sg/learn-connect/cpe-courses/certification-programmes/isca-information-systems-risk-management-(isrm)-certificate/).

*Note: The above information is not part of the written article.

Steven Sim is President, ISACA Singapore Chapter.

THE POWER OF A CURIOUS MIND

"MY MOTIVATION ALWAYS GOES BACK TO THE QUESTION: 'WHY AM I DOING WHAT I'M DOING?'," REVEALS WONG KAR LING. Ms Wong, Managing Director for Southeast Asia and Head of Strategy and Global Operations at The Ascott Limited, has a penchant for asking questions and chasing down answers. It is this natural-born sense of curiosity that has propelled her from being an auditor at the start of her career to spending 13 years at Starwood Hotels and Resorts Worldwide, Inc, to a three-year stint at Sheares Healthcare, and now, back to the hospitality sector with The Ascott Limited. The result is an impressively diverse portfolio few can boast of.

Wong Kar Ling, CA (Singapore), Managing Director SEA, and Head, Strategy and Global Operations, The Ascott Limited

She shares that it was not out of a burning desire to become an accountant that she has come so far but rather, a deep passion and affinity for numbers. "In school, you pursue what you do well. Maths was one of my strongest subjects," recalls Ms Wong. "Back in my days, we didn't have much career guidance, so it was more of a process of elimination; but I've never regretted that I ended up in this field." She enrolled at Nanyang Technological University, which was the only university offering Accountancy at that time. Ms Wong's next move after graduating in 1996 was to follow the "standard" path. "It was a natural decision, because that's what you do after university – you work." She began her career as an auditor at the now defunct Arthur Andersen, where she stayed for four years, providing assurance services to clients from the retail, manufacturing and financial sectors. "My motivation has evolved over the years," the mother-of-two divulges. "But most of the time, I wake up feeling good and excited about work because I could make an impact at the workplace."

Ms Wong explains that she is always curious about what is behind the numbers, and that is what keeps her going. "When you audit the financials, you work to find out what the value of the revenue is. I like to go on-site to a client's place, to get closer to the heartbeat of the organisation. So I would say that my career today has undergone an evolution – I have a passion for numbers, and this passion is built on strong technical accounting knowledge."

ENTERING A NEW WORLD OF BUSINESS

In 2000, Ms Wong made a major switch from auditing to join the commercial side of the business. It was in part serendipity, she says – a manager who had worked with her before recommended Ms Wong for the role. One door led to another, and she subsequently found herself joining the Starwood Group in 2004. There, Ms Wong was promoted to Senior Director in 2007, Vice President in 2010 and Chief Financial Officer (CFO) and Senior Vice President in 2014. "They were looking for someone from outside the industry," she recalls. "It was primarily a finance role, but with connecting dots across the business. It was not a traditional finance position but one that sat in business planning."

> **"Finance has a unique view of a business. Everything boils down to profit and loss. Use your understanding and share it with the management. Also apply what's happening in the world to provide scenarios and insights and correlate that to what you're doing today."**

CAREER HIGHLIGHTS

1996 to 2000
Auditor, Arthur Andersen

2000 to 2001
Assistant Manager, Corporate Finance, Asia Pulp & Paper

2002 to 2004
Head, Value Creation Team and Manager, Business Development – International, Singapore Power Ltd

2004 to 2017
SVP Finance and CFO Asia Pacific, Starwood Hotels & Resorts Worldwide, Inc (acquired by Marriott International, Inc in 2016)

2017 to 2021
Group CFO, Sheares Healthcare Group

2021 to Present
Managing Director SEA, and Head, Strategy and Global Operations, The Ascott Limited

> "A lot of the time, you need to question why you do what you do because things are never static. It's all about raising a question, finding the answers and then sharing that understanding."

Starwood proved to be a great fit for the ever-curious Ms Wong, who to this day is grateful for the generosity of her colleagues at the organisation. "I'm thankful to my bosses who became my mentors. They gave me great opportunities to learn, and I had good staff," she shares.

It was during her 13 years at Starwood that Ms Wong honed her curiosity into an asset. "I asked lots of questions, such as, 'Who are my consumers?', and 'Who am I competing with?'". During her time there, one of her constant goals was to embark on a task outside of her job scope. So, when she wondered, "How do you decide when a hotel can open?", she arranged with the team conducting the hotel review to follow them on-site and observe the conditions that would determine its readiness for launch. "You need bosses who allow you to do that," she states. "Starwood has a culture that allows you to learn, and you get opportunities to learn even more. That impacted me greatly."

TACKLING GREATER CHALLENGES

In 2017, Ms Wong stepped up to take on what she now describes as the "most exciting" career move she has made so far, when she joined Sheares Healthcare as its Group CFO. "Healthcare is a very technical industry," she affirms. "Ideally, you need some medical training to fully understand how it works. If you focus solely on things from a P&L perspective, you might only see which departments drive profitability. But healthcare is about human lives. And because it is deeply personal, you want to do the right thing. So you need to have a certain attitude and compassion in your work; tolerance for mistakes must be zero."

Ms Wong's initial focus was to set up the finance infrastructure and team and support the mergers and acquisitions (M&A) activities at Sheares. Beyond the work, she began asking herself what impact she could bring to her new role. "Healthcare is shifting from acute to chronic care as we are now seeing more issues like diabetes and high blood pressure," she explains. "It quickly became clear that we must deliver healthcare differently. Being a consumer of healthcare myself, I would ask, 'How does the consumer benefit from what we do?' Ultimately, it goes back to impact. It was a new and complex industry to me; I didn't see it as a challenge but as an opportunity to learn."

Earlier this year, Ms Wong was offered the opportunity to return to the hospitality sector as The Ascott Limited's Managing Director for Southeast Asia. It is an industry she loves, but at present, it is facing unique challenges due to the current Covid-19 situation. "I'm a firm believer that most people still want to go out, travel and see the world; they want to see friends and family, and to experience other cultures," she says. "The desire for the connection and experience will not change even after the pandemic. I'm optimistic that with the rate of vaccination in Singapore and across the world, and the stepping up in testing, the industry is positioned to recover."

What others may see as a difficulty, Ms Wong views as an opportunity for growth. Safety and cleanliness are top priorities and Ascott has adopted "innovations such as contactless services and also collaborated with International SOS to offer telehealth services at our properties", she explains.

KEEP ASKING, KEEP LEARNING

Ms Wong sees ISCA as a "good one-stop resource for keeping myself up to date as standards keep changing". She currently serves on ISCA's CFO Committee and is also overseeing one mentee. "Having benefitted from good mentors, I believe in paying it forward and making an impact." She says that her most memorable experience in this area was mentoring young associates at Starwood who were looking to start a family.

"Read a lot, ask questions, and walk the floor" is Ms Wong's advice to young finance professionals. When hiring, curiosity is a trait she looks for. "Don't just take the numbers at face value," she asserts. "You must have passion for the industry, and you must be curious to learn. You must also be able to articulate your point of view about the industry."

Strength in numeric literacy is a must, she insists, but it pays to complement this with a sense of curiosity. "Finance has a unique view of a business. Everything boils down to profit and loss. Use your understanding and share it with the management. Also apply what's happening in the world to provide scenarios and insights and correlate that to what you're doing today," she adds. "A lot of the time, you need to question why you do what you do because things are never static. It's all about raising a question, finding the answers and then sharing that understanding." ISCA

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BY MAXIMILIAN STALLKAMP

AFTER TIKTOK:

International Business And The Splinternet

TIKTOK, A MOBILE APP FOR SHARING SHORT VIDEOS, appeared to be a global success story for its Beijing-based parent company ByteDance, and a prime example of Internet-based internationalisation. In little over two years, the app picked up hundreds of millions of users worldwide, with nearly 100 million in the United States alone[1]. However, in July 2020, the US government announced plans to ban the app from the American market, citing national security concerns due to potential Chinese government influence over ByteDance. TikTok, previously the poster child for the seemingly boundless global business opportunities of the digital economy, suddenly became a cautionary tale illustrating the re-emergence of national borders in the digital economy.

Over the past decade, governments around the world have increasingly asserted their sovereignty over the digital domain, imposing local laws and regulations on digital transactions. This accelerating trend is replacing the open, lightly regulated, and globally connected Internet with a fragmented digital reality – often referred to as the splinternet[2].

In this article, I review the main forces driving this fragmentation and discuss the major consequences for the international strategies of digital firms, that is, firms selling purely digital products. As the importance of the digital economy continues to grow, it is crucial for practitioners and scholars of international business to understand the changing nature of the Internet and its implications for business.

THE EARLY INTERNET AND INTERNATIONAL BUSINESS

The early Internet, as a decentralised and globally connected network, seemed to be inherently location-agnostic and borderless. Many Internet pioneers subscribed to Barlow's famous Declaration of the Independence of Cyberspace[3], which argued that governments did not have the right – nor the technical ability – to enforce their national laws on the Internet, proclaiming that "cyberspace does not lie within your borders". In hindsight, Barlow's views might charitably be described as idealistic. And yet, with the exception of China and a handful of authoritarian countries, the early Internet and the emerging digital economy were mostly characterised by a laissez-faire attitude among regulators[4]. As late as 2013, former Google CEO Eric Schmidt called the Internet "the world's largest ungoverned space" and "an online world that is not truly bound by terrestrial laws"[5].

Digital firms benefitted greatly from this open, global Internet. Digital products and services, such as apps, games, and social media platforms, could be distributed remotely over the Internet, giving companies instant access to potential users around the world (with the exception of China and a few other countries). By serving foreign markets virtually from a distance, digital firms could avoid or postpone costly foreign direct investments, which allowed even small startups to internationalise rapidly[6]. As many regulators and tax authorities were unprepared to handle intangible digital services and unfamiliar digital business models, digital firms were often able to extend their user base in foreign markets with little regard to local rules.

This is not to say that internationalisation became trivial or inevitable. For many digital firms, issues such as cultural differences, customer preferences, and different languages remained formidable market entry barriers[7]. However, the open nature of the Internet at least allowed digital firms to make their products globally available at minimal costs, which represented a major departure from traditional international business.

The move towards smartphones and tightly controlled app stores has given digital firms the tools to actively manage the geographic distribution of digital products. As a result, digital firms can and should make deliberate strategic choices about which markets to enter, and which ones to avoid.

[1] Sherman, A. "TikTok Reveals Detailed User Numbers For The First Time". 24 Aug 2020. CNBC.

[2] Lemley, M. A. "The Splinternet". 2020. Stanford Law and Economics Online Working Paper #555.

[3] Barlow, J. P. "Declaration Of The Independence Of Cyberspace". 1996. Electronic Frontier Foundation.

[4] Hill, J. F. "The Growth Of Data Localization Post-Snowden: Analysis And Recommendations For US Policymakers And Business Leaders". 2014. The Hague Institute for Global Justice, Conference on the Future of Cyber Governance.

[5] Schmidt, E. and Cohen, J. "The New Digital Age: Transforming Nations, Businesses And Our Lives". 2013. Knopf Doubleday Publishing Group.

[6] Monaghan, S., Tippmann, E. and Coviello, N. "Born digitals: Thoughts On Their Internationalization And A Research Agenda". Journal of International Business Studies 2020, 51(1): 11–22.

[7] Shaheer, N. A. "Reappraising International Business In A Digital Arena: Barriers, Strategies And Context For Digital Internationalization". 2020. AIB Insights, 20(4).

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By insisting that digital firms follow local rules and respect national policies, governments are effectively restoring the role of national borders in the digital economy.

SPLINTERNET: THE FRAGMENTATION OF THE INTERNET

Over the past decade, there has been a sharp increase in regulation of the Internet, especially with respect to cross-border digital transactions[8]. By insisting that digital firms follow local rules and respect national policies, governments are effectively restoring the role of national borders in the digital economy. While there are many different motivations for such restrictive measures, four broad concerns account for a large proportion of digital fragmentation: privacy and data protection, taxation, censorship, and national security.

- *Privacy and data protection*

Most digital firms collect vast amounts of data on their users. In response, privacy concerns are growing around the world, especially after revelations of rampant state and private espionage, such as the Snowden and Cambridge Analytica scandals[9]. Over 120 jurisdictions have now passed legislation governing data protection and the digital privacy rights of their citizens[10]. The most influential example is the European Union's 2018 General Data Protection Regulation (GDPR), which grants extensive privacy rights and imposes stringent obligations on companies to safeguard data[11]. There has also been a surge in data localisation laws, which restrict cross-border data flows and require certain data be stored on domestic servers[12]. Data protection and localisation regulations are not necessarily discriminatory against foreign companies, as they apply to domestic and foreign companies alike. However, much like regulatory non-tariff barriers in conventional trade, they create entry barriers and increase costs for foreign companies, which now face a complex array of different host-country regulations[13].

- *Taxation*

The growth of the digital economy has fuelled concerns about the ability of governments to effectively tax digital transactions, as their intangible nature facilitates tax avoidance[14]. However, facing budget shortfalls and public pressure, governments are intensifying efforts to tax digital transactions. While multilateral proposals under the auspices of the OECD, the EU, and the G20 made little headway, 38 countries had implemented or announced their own national digital taxes by early 2021[15]. For example, Britain imposed a tax on revenues generated from digital services attributable to British users. It is levied on revenues, rather than profits, to reduce tax avoidance. Like data protection rules, taxation of digital services is not inherently discriminatory against foreign companies, but the development of a nation-based patchwork of digital taxes introduces substantial uncertainty and compliance costs for digital firms seeking to offer their services internationally.

- *Censorship*

One of the defining features of the early Internet was the free flow of information. Any content posted to the web could be accessed by Internet users anywhere. This is no longer the case, as governments increasingly restrict which content is accessible and which digital apps are available from within their national territory. The most well-known censorship scheme is the Chinese Great Firewall, which not only blocks many foreign-owned digital services but leverages advanced surveillance technologies to remove sensitive content. Although determined individuals may find ways to circumvent digital censorship, the Chinese approach is generally effective and has prompted similar initiatives in other countries. While content filtering and restrictions on foreign apps were initially mostly used by authoritarian governments, many democratic countries now debate to what extent objectionable or harmful content (for example, extremism, misinformation) should be suppressed[16]. As more countries wall off "their" Internet and impose restrictions on content, users located in different parts of the world increasingly see different versions of the Internet. For companies producing digital content, products, and services, this creates new barriers to serving foreign markets.

- *National security and geopolitics*

As the TikTok example shows, some government interventions are motivated by national security. Given the extensive data collected by many software applications and the far-reaching influence of social media, governments are justifiably concerned about foreign espionage and the ability of foreign powers to exert political influence. Responses range from targeted measures designed to protect domestic data to wholesale bans of foreign apps and services. Moreover, governments may block foreign apps as a tactical manoeuvre in broader geopolitical disputes, as was reportedly the case with India's ban in September 2020 of over 100 Chinese apps[17]. As governments are beginning to view the digital economy through the lens of national security and geopolitics, digital firms are increasingly exposed to political risks.

- *Other policy objectives*

Many other social and economic considerations can motivate policies contributing to digital fragmentation. For example, governments routinely impose sector-specific regulations on industries such as gambling, finance, or healthcare. Moreover, the official policy objective may serve as a disguise for protectionist measures designed to shield domestic companies from foreign competition.

WHAT DOES ALL THIS MEAN FOR DIGITAL FIRMS?

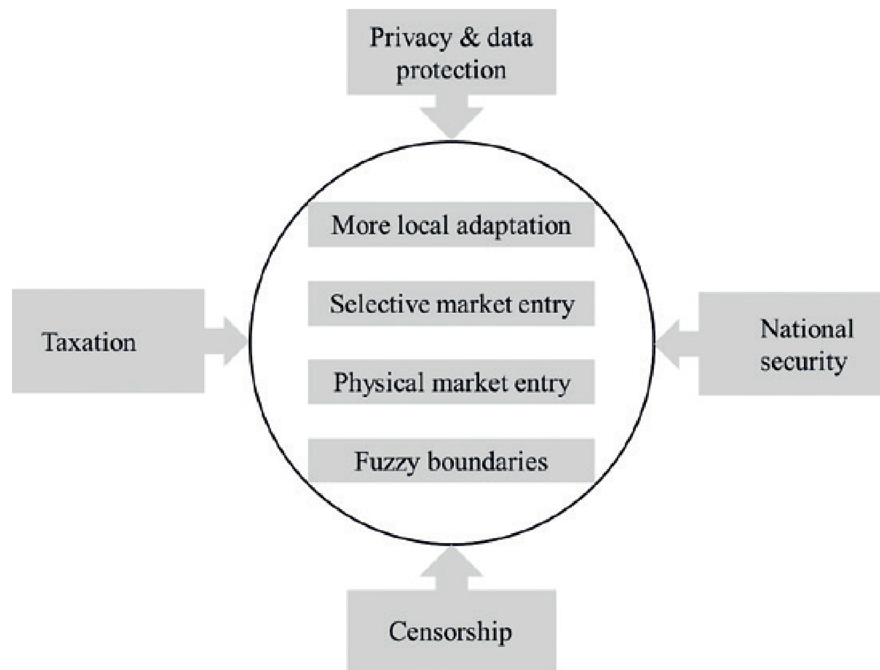
The Internet is undergoing an important shift from largely "ungoverned space" to a patchwork of regulations that reflect the diverse policy priorities of different countries and regions. This digital fragmentation or "splinternet" poses new challenges for digital firms operating internationally. Below, I discuss four major business implications, summarised in Figure 1.

(1) More local adaptation

A central concept in international business is the tension between global standardisation and local adaptation. Global standardisation, that is, offering the same product in all markets, minimises complexity and reduces costs. This strategy is especially attractive for digital firms because digital products generally exhibit economies of scale (once developed, they can serve any number of users at minimal marginal cost). However, the fragmentation of the Internet forces firms to adapt their products for different countries, limiting their ability to reap the benefits of standardisation.

To meet legal obligations and social expectations in foreign markets, digital firms often need to revise not just consumer-facing aspects of their products (for example, content, user interfaces) but also back-end processes and business models (for example, with respect to data collection, storage, and monetisation). The cost of complying with foreign regulations such as GDPR can amount to millions of dollars per company[18]. In addition to one-off adaptation costs, the need for ongoing monitoring of evolving legal frameworks in multiple countries adds to the cost (monetary and in terms of management attention) of operating internationally, which can impose a substantial burden on smaller startups.

Figure 1 Forces driving digital fragmentation and international business implications for digital firms



[8] US International Trade Commission. "Global Digital Trade 1: Market Opportunities And Key Foreign Trade Restrictions". 2017. Publication Number: 4716.

[9] Hill, J. F. "The Growth Of Data Localization Post-Snowden: Analysis And Recommendations For US Policymakers And Business Leaders". 2014. The Hague Institute for Global Justice, Conference on the Future of Cyber Governance.

[10] Congressional Research Service. "Digital Trade And US Trade Policy". 2019. Report #44565.

[11] Kaelin, M. "GDPR: A Cheat Sheet". 2019. Tech Republic.

[12] Chander, A., and Lê, U. P. "Data Nationalism". 2014. Emory Law Journal, 64: 677–739.

[13] US International Trade Commission. "Global Digital Trade 1: Market Opportunities and Key Foreign Trade Restrictions". 2017. Publication Number: 4716.

[14] Ting, A. and Gray, S. J. "The Rise Of The Digital Economy: Rethinking The Taxation Of Multinational Enterprises". 2019. Journal of International Business Studies, 50(9): 1656–1667.

[15] KPMG. "Taxation Of The Digital Economy: Developments Summary". KPMG. 2021.

[16] Hill, J. F. "The Growth Of Data Localization Post-Snowden: Analysis And Recommendations For US Policymakers And Business Leaders". 2014.The Hague Institute for Global Justice, Conference on the Future of Cyber Governance.

[17] Kastrenakes, J. "India Bans PUBG Mobile, Alipay, Baidu, And More Chinese Apps". 2 Sep 2020. The Verge.

[18] PwC GDPR Series. "Pulse Survey: US Companies Ramping Up General Data Protection Regulation (GDPR) Budget". 2017. PwC.

(2) Selective entry

With the renewed salience of national borders and improved technologies for pinpointing the locations of users, it can no longer be assumed that digital products are globally available by default. On the one hand, governments can block access to digital services, as threatened in the case of TikTok. On the other hand, companies themselves can choose not to make their digital products available in certain geographies for strategic reasons. If the compliance costs of operating in a country are deemed too onerous, companies may prefer to avoid (or postpone) market entry. For example, when the GDPR came into effect in 2018, Europeans found that many non-European news websites were suddenly no longer accessible – rather than comply with GDPR, several large news organisations instead blocked their content in the EU. The move towards smartphones and tightly controlled app stores has given digital firms the tools to actively manage the geographic distribution of digital products[19]. As a result, digital firms can and should make deliberate strategic choices about which markets to enter, and which ones to avoid.

(3) Physical entry into foreign markets

One of the unique attributes of digital firms is their ability – at least in principle – to serve foreign markets virtually from a distance, simply by making their digital products available over the Internet. However, digital firms face growing pressure to establish a physical presence in at least some of their markets. Local data centres may be required to comply with localisation laws, while stakeholder relations teams need to be on the ground to effectively manage regulatory and political risks. Social media companies like Facebook and TikTok employ large numbers of local content moderators to filter out offensive or censored content. Moreover, alliances and joint ventures between foreign and local companies are becoming increasingly important, as digital firms seek local partners to help them navigate complex foreign markets. In sum, the splinternet is forcing many digital firms to think beyond purely virtual market entry modes.

[19] Hestres L.E. "App Neutrality: Apple's App Store And Freedom of Expression Online". International Journal of Communication 7 (2013), 1265–1280.

[20] Mozur, P. "Zoom Blocks Activist In U.S. After China Objects to Tiananmen Vigil". 11 June 2020. The New York Times.

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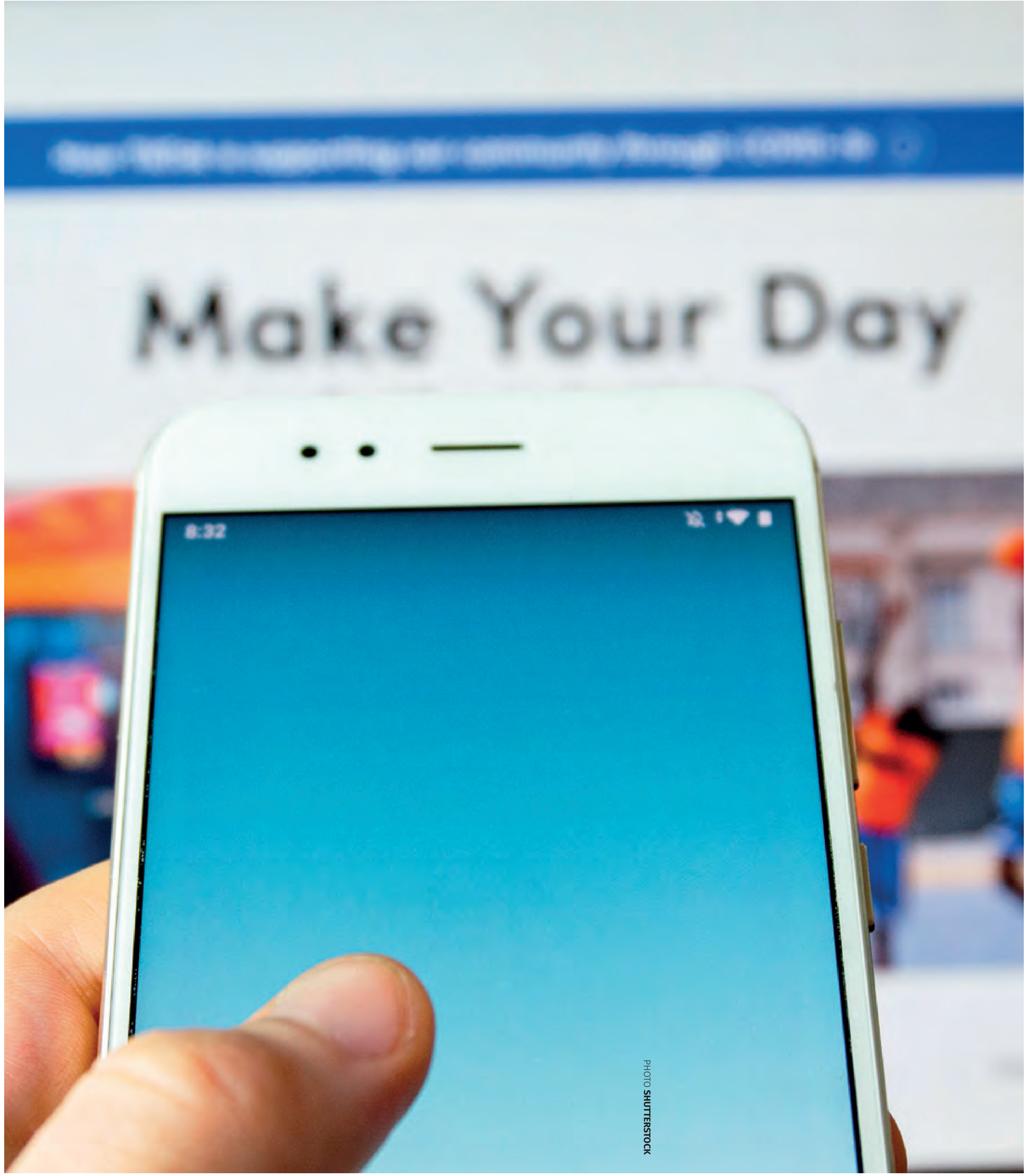
[22] Verbeke, A. and Hutzschenreuter, T. "The Dark Side Of Digital Globalization". 2020. Academy of Management Perspectives.



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... digital fragmentation will continue to increase the cost, complexity, and risk of entering and operating in foreign countries. This adds to various competitive challenges related to user adoption and monetisation faced by digital firms in foreign markets.

(4) Managing fuzzy boundaries

Despite increasing digital fragmentation, it would be a mistake to treat countries as if they were completely independent. Information eventually spreads around the world through digital and other channels. This creates additional challenges for digital firms as they must navigate diverging regulations and social expectations in multiple countries, without alienating stakeholders elsewhere. For example, the communication platform Zoom became the target of international criticism for complying with Chinese censorship requests, both *inside* and *outside* of China[20]. Conflicting laws with respect to free speech, privacy rights and the banning of objectional content will inevitably lead to disputes. This is further complicated by disagreements over the territorial reach of many Internet-related regulations: Can a French regulator force Google to remove a search result from the non-French versions of its search engine? Can authoritarian governments enforce censorship outside of their national borders? Digital firms operating internationally will face intense scrutiny and will need to manage these tensions carefully.

CONCLUSIONS: LIVING WITH THE SPLINTERNET

The trend towards digital fragmentation is unlikely to be reversed any time soon. As societies, economies, and businesses increasingly depend on digital technologies, it is unsurprising – and necessary – that governments take a more active role in regulating the digital domain and enforcing national policies. The diversity of political systems, policy priorities, and cultural values across countries means that rules will differ from place to place. As with any international business transaction, this tends to generate friction in the cross-border flow of digital products and services. Multilateral agreements, such as the OECD efforts to harmonise taxation, could help limit such frictions but they are notoriously difficult to negotiate. Regional solutions, such as the digital provisions of the new North American USMCA trade agreement, may prove easier to implement but still contribute to region-based fragmentation and the emergence of digital trade blocs. It is possible that national or regional rules (such as GDPR) could become de facto global standards, which would facilitate the international operations of digital firms.

In the meantime however, digital fragmentation will continue to increase the cost, complexity, and risk of entering and operating in foreign countries. This adds to various competitive challenges related to user adoption[21] and monetisation faced by digital firms in foreign markets[22]. Consequently, there is an urgent need for practitioners and scholars of international business to think more strategically about the international expansion of digital firms.

In the early stages of digitalisation, there was a tendency to view digital firms as operating in a borderless "digital space" and competing globally by default. Many international business challenges and practices from the brick-and-mortar era began to appear antiquated. Today, it is becoming increasingly apparent that many of these traditional international business issues – market selection, entry modes, local adaptation, trade barriers, bargaining with host-country governments, to name a few – remain highly pertinent for digital firms.

Fortunately, a wealth of international business theories, strategies, and analytical tools has been developed to address these issues. The challenge for international business practitioners – and scholars – is to apply these tools to the digital context and, where necessary, adapt or reinvent them. ISCA

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BY SANJAY RUGHANI

EMPOWERING CFOS TO DRIVE CLIMATE ACTION

Four Key Areas Of Focus

DEALING WITH CLIMATE CHANGE IS NON-NEGOTIABLE FOR BUSINESS. A transition to low-carbon economies is underway with politicians, regulators, institutional investors and asset managers rapidly committing to net-zero emissions by 2050. My company, Standard Chartered Bank, has committed to reaching net-zero carbon emissions from our operations by 2030, and from our financing by 2050. As part of our Transition Finance Imperative, we have already started working closely with companies to help them reduce their emissions and reach their own net-zero goals.

Every organisation needs to steer toward net zero. To succeed, CEOs need to empower their CFOs to ensure that the organisation and its investors have the information needed to deliver a business model that is ultimately compatible with a net-zero economy. The mainstreaming of climate as a systemic risk with potentially enormous financial consequences has led to investors scrutinising climate risk. The result is that companies will increasingly position climate and sustainability under the CFO's oversight to mainstream climate risk within business (see *Financial Times'* "Acciona calls on finance chief to make sustainability add up").

At IFAC's recent Professional Accountants in Business Advisory Group meeting, which I chair, we discussed with KPMG the role of accountants and finance leaders in delivering on climate change (see IFAC's report, "Enabling Purpose Driven Organizations"). The main challenge for the capital markets is that companies and their investors typically lack robust climate impact insights to understand how it will affect business resilience and long-term value creation.

Currently, climate risks and opportunities have not been fully taken into account in valuations because companies are generally not adequately reflecting the actual and potential impacts of climate change in their financial reporting. Company valuations in a two-degree Celsius or lower world will be very different given the potentially significant implications on future cash flows.

With climate being a significant financial concern and threat to long-term value creation, CFOs need to provide actionable information and insights on the opportunities and risks, and potential financial impacts. With the right insights and understanding of climate risks and opportunities, companies can steer towards decarbonisation and tell their story to investors.

For CFOs, there are four key areas of focus to be able to oversee the climate response in your organisation:

(1) Know your emissions

Emissions arise from the business model related to products and services, and fixed assets. Both absolute emissions reduction and carbon intensity provide a benchmark for targeted actions for decarbonisation. Assumptions about emissions affect accounting estimates and asset values. CFOs need to monetise emissions data to include in financial analysis and planning, and in financial reporting (see IFAC's "Carbon Quotient: Accounting for Net Zero").

Establishing a reliable carbon footprint for an organisation or for a product can be a complex task but is critical. A carbon footprint (or GHG emissions inventory) measures the energy consumption of an organisation's activities and the GHG emissions associated with the business model. A huge challenge for companies and investors is understanding the absolute emissions arising from its business model including across its value chain (that is, beyond its Scope 1 direct emissions and Scope 2 electricity indirect emissions).

Collecting robust data of Scope 3 or other indirect emissions is challenging but gaining importance for many organisations. Scope 3 data ties to emissions in their supply chain and how customers use their products, which represent significant risks and opportunities to reputation and licence to operate. Consequently, more large corporates are working closely with customers and suppliers to help them address emissions in the consumption and supply parts of the value chain.

- Both absolute emissions reduction and carbon intensity provide a benchmark for targeted actions for decarbonisation.
- Companies should set KPIs that address emissions in the consumption and supply parts of the value chain.

With climate being a significant financial concern and threat to long-term value creation, CFOs need to provide actionable information and insights on the opportunities and risks, and potential financial impacts.

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Setting KPIs that improve performance and linking these to incentives is also critical. For example, an airline might be reducing its emissions per passenger mile travelled, but its overall emissions might be increasing because of an increased number of passengers. CFOs need to ensure that GHG management plans are in place so they can prioritise carbon reduction projects, quantify them, and place numbers on cost savings, carbon savings, and implementation costs.

(2) Integrate climate information into strategy and risk management

Understanding and incorporating climate risks and opportunities in strategy and risk analysis is the foundation for decision making that leads to decarbonisation.

A comprehensive understanding of climate risk assessments and scenario modelling supports robust analysis of opportunities and risks in relation to different transition pathways. Scenario analysis is a critical element in bridging risk management and strategy, and provides useful insights into how resilient strategies and business models are, in the context of physical and transition climate risks.

- Scenario analysis is a critical element in bridging risk management and strategy.
- Risk assessments help to quantify climate impacts and their potential financial impact.
- Climate risks need to be embedded in strategic decision-making processes.

Risk assessments help to quantify climate impacts and their potential financial impact in relation to revenues, expenditures, assets and liabilities under various climate scenarios. The adaptive capacity of the business model in different scenarios is highlighted by the extent to which weather events and increasing carbon costs impact expected cash flows and asset valuations.

In turn, information on climate risks needs to be embedded in strategic decision-making processes such as capital investment. Existing physical assets such as buildings, machinery and equipment, and vehicles are stores of future emissions which will continue over their remaining use. Climate risks and opportunities are likely to have important implications for capital investment decisions. Asset impairment and replacement costs of various existing assets, and the appraisal of new assets, will be a fundamental part of achieving net zero. The quantification of climate risks and events helps to drive medium- and long-term planning, and improves financial-related information about profits and valuations.

(3) Understand your decarbonisation options

Decarbonising a business requires knowledge of climate financing and new ways of doing business. A business with a decarbonisation strategy and plan can respond and adapt to the opportunities and challenges around different approaches to achieving net-zero emissions reduction.

In terms of business models, it is important to be familiar with various options for permanent carbon reduction and removal, and their associated costs and benefits. Investments in low-carbon and novel solutions can often appear economically unviable because of high upfront capital costs, so measuring economic returns and other potential benefits over a longer period become important. Investments in R&D and innovation can be directed at enabling greater resource and energy efficiency, migration to circular business models, avoiding use or production of virgin materials (for example, using bio-based raw materials like mycelium leather), and diversification into other energy forms.

CFOs need to ensure that GHG management plans are in place so they can prioritise carbon reduction projects, quantify them, and place numbers on cost savings, carbon savings, and implementation costs.

- Be familiar with various options for permanent carbon reduction and removal.
- Climate finance can unlock resource mobilisation and capex decisions to finance low-carbon investments and products.

Decarbonising future capital expenditures needs money. Climate finance is the key to unlocking resource mobilisation and capex decisions to finance low-carbon investments and products such as electric fleets or renewable energy generation. Mobilising equity or debt finance to support new technologies and processes is usually critical to changing business models and supply chains. Options for green finance have significantly increased over recent years through green bonds such as the bond and sukuk issuances we use at Standard Chartered, and sustainability-linked loans, for example, Virgin Money has launched such loans in Europe. Companies will need a credible transition plan in order to access finance.

(4) Tell the story

Communicating how your company is becoming compatible with a net-zero economy is going to be part of a CFO's conversation with boards, investors and other key stakeholders. This involves being able to explain the business risks and opportunities from emissions, targets and KPIs being used to track progress, where capital investment is prioritised to support the transition of the business model, and the financial impact of climate change.

When it comes to financial impact, the assumptions and estimates used in planning and capital allocation need to be consistent with those used in financial reporting. Qualitative information on risks and opportunities should flow through to accounting judgements on asset valuations and useful lives. Investors ultimately need to know how climate matters relate to their own forecasts of cash flows and risk.

The current valuation challenge exists because companies are generally not incorporating material climate-related matters in financial reporting under existing IFRS Standards. As the transition risk escalates with new taxes and regulations and changing consumer behaviour, climate change will likely have a material effect on financial performance and position particularly for high-emissions industry sectors. The CFO is the person to explain how the strategy and risk management on climate change relates to the accounting estimates and judgements used in the preparation of financial statements and reports.

For climate to move beyond a marketing exercise to one that provides the information that boards and investors need to enable economies to decarbonise, CFOs need to be part of the equation and be empowered by their CEOs. ISCA

Sanjay Rughani is CEO, Standard Chartered Bank in Tanzania and Chair of the IFAC Professional Accountants in Business Advisory Group.

VIETNAM COMES OF AGE

Opportunities For Enterprising Singapore Companies

AS THE COVID-19 PANDEMIC AND CHINA-US TRADE TENSIONS WREAK HAVOC ON GLOBAL SUPPLY CHAINS, Vietnam has emerged as a favoured destination for businesses and investors looking for a safe haven amid the heightened uncertainty. And while the country itself, like the rest of the region, has seen a spike in infections in recent months, its long-term potential remains intact.

According to a report by DBS Senior Economist Irvin Seah[1], the Southeast Asian nation benefits from favourable demographics, a productive labour force, much-improved infrastructure, and stable political situation. He also cites Vietnam's geographical position in the regional supply chain and its extensive network of free trade agreements (FTAs) as key competitive advantages. Reflecting its continued attractiveness, Vietnam received US$4.1 billion in foreign direct investment (FDI) in the first three months of 2021, up 6.5% from a year earlier, according to government data.

DBS estimates that Vietnam has the potential to grow by about 6 to 6.5% in the medium term. "If it can sustain that pace of growth, Vietnam's economy will be bigger than that of Singapore's in 10 years' time," stated Mr Seah in his report. He added that rising domestic demand in Vietnam is expected to be driven by rapid wage growth and reformative government policies that aim to encourage private-sector investment. The country's government has also implemented tax and other incentives to promote foreign investment in sectors they consider important. These include areas such as infrastructure, high technology and agricultural processing, as well as manufacturing projects that are labour-intensive or located in remote areas. Generally, investments in such sectors or locations would qualify for significant incentives, such as four years of corporate income tax exemption.

A MAJOR MANUFACTURING HUB

Singapore companies have long recognised Vietnam's potential. This year marks the 25th anniversary of the establishment of the first Vietnam-Singapore Industrial Park (VSIP) – VSIP Binh Duong, established in 1996. The Singapore-Vietnam Strategic Partnership will mark its 10th anniversary in 2023. Singapore is one of the top foreign investors in Vietnam, with a cumulative investment of over US$56 billion in more than 2,600 projects[2]. Last year, Singapore was Vietnam's top investor with total investment capital of US$9 billion, which accounted for 31.5% of overall investment, according to statistics compiled by Vietnam's Ministry of Planning and Investment.

As of December 2020, Vietnam's total foreign investment capital was US$28.5 billion. Other key foreign investors in the country include Korea, China, Japan, Taiwan and Hong Kong. The scope of investment is diverse, ranging from real estate, infrastructure and banking to telecommunication and manufacturing. Among the sectors, manufacturing is the main draw for investors, particularly in the electronics segment.

... rising domestic demand in Vietnam is expected to be driven by rapid wage growth and reformative government policies that aim to encourage private-sector investment. The country's government has also implemented tax and other incentives to promote foreign investment in sectors they consider important.

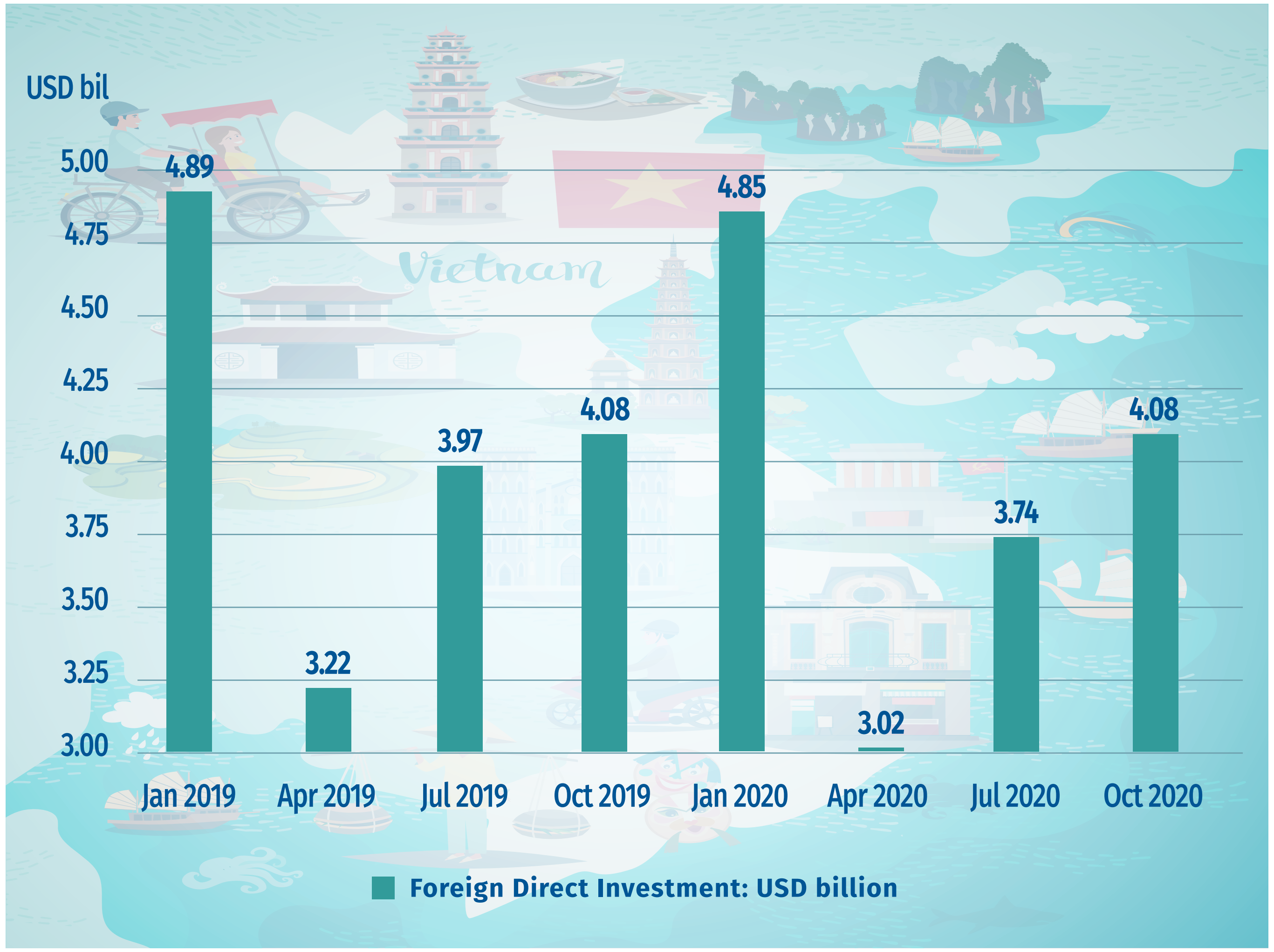
PHOTO SHUTTERSTOCK

Ho Chi Minh City, Vietnam

[1] Seah, I. "Understanding Vietnam: The Rising Star". 28 May 2019. Economics & Strategy, DBS Group Research.

[2] Remarks by Minister for Foreign Affairs Dr Vivian Balakrishnan, ASEM High-Level Policy Dialogue. "ASEM At 25: Strengthening Asia-Europe Partnership In A Transforming World". 22 June 2021. Hanoi, Vietnam.

Figure 1 Vietnam FDI: January 2019 to October 2020[3]



"We see all of these sectors as being of potential interest to Singapore investors. In fact, many Singaporean companies already have a presence in Vietnam in these areas," says Cuong Dinh Tran, Country Managing Partner at EY Vietnam. Among the more prominent of these are real estate group CapitaLand, energy and urban development company Sembcorp Industries, as well as technology firm Grab.

The trade war between China and the US over the past few years has also shone a spotlight on Vietnam's potential as a manufacturing hub. Multinational corporations (MNCs) looking to diversify their production out of China were drawn to the country's competitive wages and manufacturing costs to set up alternative production bases. Meanwhile, Vietnam's network of FTAs, including the Comprehensive and Progressive Agreement for Trans-Pacific Partnership and the Regional Comprehensive Economic Partnership, strengthens its position as a manufacturing export hub. Singapore companies can look to provide MNCs with supporting services such as access to water and power, as well as logistics infrastructure and services. Also worthwhile to note is the fact that there are currently about 325 industrial parks in Vietnam. Of these, nine are integrated Vietnam-Singapore projects that Singapore manufacturers can leverage to enter the market (Figure 2).

Some of the key challenges that investors need to be aware of when entering Vietnam include the unfamiliar business and regulatory landscape, and the need to identify local partners who understand the business culture and market dynamics.

[3] Statistics from ceicdata.com; accessed June 2021

NAVIGATING THE CHALLENGES

Some of the key challenges that investors need to be aware of when entering Vietnam include the unfamiliar business and regulatory landscape, and the need to identify local partners who understand the business culture and market dynamics. For instance, while setting up a company in Vietnam has become easier and faster in recent years, the process still remains more complicated and time-consuming than in other countries. "For example, it is not possible to simply set up a company in Vietnam and then look for business opportunities," Mr Tran explains. "The company itself is established through a licensing process which allows it to do only those activities for which it is specifically licensed to do." He adds, "Despite this, most companies coming into Vietnam have a very clear project or business opportunity in mind and the setting-up process usually takes place smoothly."

While most sectors in Vietnam are open to majority or full foreign ownership, Singapore enterprises should consider working with reliable Vietnamese partners who have strong local networks and are able to help them navigate the local business landscape, and minimise language barriers. Investors should also be aware that transactions in Vietnam must be undertaken in the local currency – the Vietnamese Dong (VND). The value of the VND to the US Dollar (USD) often means that very large numbers are involved in everyday transactions. That said, the USD-VND exchange rate has been stable for some time, reducing the foreign exchange risk, Mr Tran clarifies. "Provided the relevant tax obligations, registrations and other administrative and documentary procedures have been met, we generally do not see companies experiencing difficulties in paying money out of Vietnam in the form of interest, repayment of principal, dividends, payments for goods and services, and so on," he says.

REGULATORY CONSIDERATIONS

In recent years, the Vietnamese government has made efforts to amend its regulations to attract foreign investment and increase transparency. For instance, the new Law on Investment 2020, which took effect on 1 January 2021, introduces clearer rules on market access and aims to create a more attractive legal framework for foreign investors. Under this law, certain business sectors such as fishing and security services will be classified as not open to foreign investors, while others will be deemed as open to foreign investors but subject to certain conditions, including auditing, accounting, bookkeeping and tax services. The conditions that relate to auditing and accounting firms involve limits on foreign shareholding, and minimum "charter" capital requirements (refer to blue box on page 39 for details).

Business sectors not on either list will be subject to the same market access conditions as local investors. Another new Law on Enterprise, also effective from 1 January 2021, should reduce the compliance requirements and administrative burden for investors. "That said, there remains a significant number of regulations specific to particular sectors, and foreign investors are advised to seek appropriate advice to ensure they abide by these rules," notes Mr Tran. These include foreign ownership caps on public companies in Vietnam.

In light of the Covid-19 situation, businesses will need to apply for an entry permit when bringing in foreigners to

Figure 2 Integrated Vietnam-Singapore projects

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While most sectors in Vietnam are open to majority or full foreign ownership, Singapore enterprises should consider working with reliable Vietnamese partners who have strong local networks and are able to help them navigate the local business landscape, and minimise language barriers.

work in Vietnam, a process which can take eight to 10 weeks. Upon arriving in Vietnam, foreigners are required to quarantine for 21 days at government-nominated hotels. After serving the mandatory quarantine, the individuals may be under medical surveillance for another 14 days.

GETTING SUPPORT

Singapore businesses looking to enter Vietnam can tap on a number of schemes from organisations such as Enterprise Singapore (ESG) and Singapore Business Federation to help them. These include ESG's Market Readiness Assistance Grant that funds up to 70% of eligible costs, capped at S$100,000 per company per new market, for Singapore SMEs looking to expand abroad.

Beyond taking advantage of assistance schemes, Mr Tran advises first-time entrants to Vietnam to seek good professional advice, pay attention to the details, and keep all relevant records and paperwork. He cautions, "Often, problems arise unnecessarily simply due to a failure to take due care and seek professional advice. For example, borrowers must register loans with a tenure of more than one year with the State Bank of Vietnam. This is a very simple process, but failure to do so could create challenges in the future when the loan is to be repaid." ISCA

CONDITIONS FOR ESTABLISHING A FOREIGN-INVESTED AUDITING FIRM

According to Article 36 of Law on Independent Audit 2011, if a foreign auditing firm would like to set up a foreign-invested auditing firm in Vietnam, such foreign auditing firm must contribute capital together with the existing auditing firm, which has been established and operating in Vietnam, to establish a foreign-invested auditing firm. In which, this foreign-invested auditing firm is required to meet the following conditions, including (i) Requirement of charter capital; (ii) Requirement of ownership ratio, and (iii) Requirement of capital contribution of members as practising auditors.

i) *Requirement of charter capital (Article 5 of Decree No. 17/2012/ND-CP):*

- The required charter capital of a foreign-invested auditing firm in Vietnam is at least VND5 billion.
- During its operation, the auditing firm must keep the equity in balance sheet not less than the required charter capital above. In case the equity in balance sheet is less than the required charter capital above, the auditing firm must supplement its capital in the period of three months as from the end date of the fiscal year.

ii) *Requirement of ownership ratio (Article 6 of Decree No. 17/2012/ND-CP):*

- The member being an organisation are entitled to contribute at maximum 35% of the charter capital of the auditing firm. In case there are many organisations contributing capital, the total capital contributed by these organisations shall be at maximum 35% of the charter capital of the auditing firm.
- A practising auditor who is representative of member being an organisation shall not be permitted to contribute capital to such audit firm with individual status.

iii) *Requirement of capital contribution of members as practising auditors (Article 7 of Decree No. 17/2012/ND-CP):*

- The auditing firm must have at least two members who are auditors having registered for their auditing practice in this firm. As well, capital contributed by practising auditors must account for over 50% of the firm's charter capital.
- The practising auditor shall not be permitted to be the member of two or more auditing firms at the same time.

CONDITIONS FOR ESTABLISHING A FOREIGN-INVESTED ACCOUNTING FIRM

- Under Vietnam's commitments in the World Trade Organisation, the accounting service, like the auditing service, is not restricted to perform in Vietnam. Hence, a foreign-invested enterprise is allowed to provide the accounting service in Vietnam.
- Under Vietnamese regulations, accounting service is a conditional business line in accordance with Appendix I of Decree No. 31/2021/ND-CP guiding some articles of the Law on Investment 2020.

In particular, according to Article 59.4 of Law on Accounting 2015, in case a foreign accounting firm would like to set up a foreign-invested accounting firm in Vietnam, such foreign accounting firm must contribute capital together with the existing accounting firm, which has been established and operating in Vietnam, to establish a foreign-invested accounting firm. In which, this foreign-invested accounting firm must satisfy the following conditions, including (i) Requirement of ownership ratio, and (ii) Requirement of capital contribution of members as accounting practitioners.

i) *Requirement of ownership ratio (Article 26 of Decree No. 174/2016/ND-CP):*

- The member being an organisation are entitled to contribute at maximum 35% of the charter capital of the accounting firm. In case there are many organisations contributing capital, the total capital contributed by these organisations shall be at maximum 35% of the charter capital of the accounting firm.

ii) *Requirement of capital contribution of members as accounting practitioners (Article 27 of Decree No. 174/2016/ND-CP):*

- The accounting firm must have at least two members who are accounting practitioners having registered for their accounting practice in this firm. As well, capital contributed by accounting practitioners must account for over 50% of the firm's charter capital.
- The accounting practitioners shall not be permitted to register their accounting practice in two or more accounting firms at the same time.

PHOTO SHUTTERSTOCK

BY NITHYA VADUGANATHAN, ALLISON BAILEY, SIBLEY LOVETT, FRANK BREITLING, RENEE LAVERDIERE, AND DEBORAH LOVICH

THE HOW-TO OF HYBRID WORK

Best Practices To Guide Companies

HOW CAN WE PRESERVE THE BENEFITS OF REMOTE OR HYBRID WORK as offices reopen without unintentionally institutionalising the downsides of virtual models? That is the question facing many employers today.

Over the past 12 months, many organisations have found unexpected benefits in remote and hybrid work – more digitally enabled operating models, redesigned footprints to support innovation, enhanced means of collaboration – and they are eager to optimise these advantages. These employers recognise they are in a position to build a foundation for near- and longer-term change[1] in the ways that work gets done. Employees, too, are interested in ongoing flexibility in where they work, when they work, or both. These aspirations will redefine ways of working.

But it's not as simple as just extending current remote work options post-pandemic. In the forced transition to remote work, many leaders and organisations had to quickly adjust. While some leaders and companies figured out new ways to build the human connection remotely and to preserve creativity, many organisations struggled in this regard. Within months of the initial shift to remote working, employees who had high levels of social connectedness felt that they had maintained or improved individual productivity relative to their pre-Covid state. Yet, even these socially connected employees found that collaborative tasks were still quite challenging. Furthermore, while many were able to maintain close connections with immediate team members, most found that their weaker connections had deteriorated, putting creativity and innovation at risk. Now, after a year in the largely remote working mode, many employees are feeling real burnout and digital overload: meeting volumes have increased nearly 150%, and 40% of employees report feeling overworked, exhausted, or both.

Employers that seek to sustain remote or hybrid models must do so thoughtfully to capture the upsides of new ways of working[2] while mitigating the risks. We've worked with organisations across sectors – in healthcare, education, finance, consumer goods, and more – and we've distilled the following methodology and emerging best practices for leaders to use when determining and implementing the right work models. While we are still early in this transition and will undoubtedly learn more over the coming months, these practices can serve as guideposts as companies begin the next phase in the future of work.

Now, after a year in the largely remote working mode, many employees are feeling real burnout and digital overload: meeting volumes have increased nearly 150%, and 40% of employees report feeling overworked, exhausted, or both.

[1] BCG. "Business And Organizational Purpose". BCG website. Accessed 23 June 2021.

[2] BCG. "Leading in the new reality". BCG website. Accessed 23 June 2021.

IDENTIFYING THE RIGHT WORK MODELS

Companies are currently experimenting with a wide range of potential work models (Figure 1). Deciding which ones are best for a particular organisation entails understanding the nature of the work being done, the teams involved, and the preferences of individuals. Here is a methodology for assessing these three factors to inform work model choices.

(1) Ground your assessment in the nature of the work being done and core business objectives

Organisations must begin by assessing their remote readiness on the basis of the activities to be performed. They should consider the extent to which activities are relatively more independent or more collaborative, more complex or routinised, to determine their remote readiness.

Relatively independent and routinised activities (as opposed to relatively collaborative and creative ones) tend to be more remote ready (Figure 2). Leaders should contextualise this in the understanding that the nature of work for many functions was already shifting pre-pandemic and will likely evolve further (becoming more digitised, automated, or AI-enabled); these shifts may increase the proportion of work that is remote ready.

Organisations should then determine the key business objectives they are trying to optimise. An organisation seeking to maximise employee choice and flexibility in order to win in a tight talent market may choose a different set of work models than one that is trying to achieve near-term cost savings by reducing its real estate footprint.

(2) Orient at the team level

Looking at the nature of the work that teams do is especially useful in determining the specific subset of work models that are most relevant to an organisation. We recommend making work model choices on the basis of assessments at the team level, rather than the individual level, because the nature of work tends to vary more at the team level. We recognise that teams can be organised in multiple different ways including by department, function or project, and some employees may be part of several teams simultaneously. As such, leaders may need to assess the nature of work being done from a variety of perspectives.

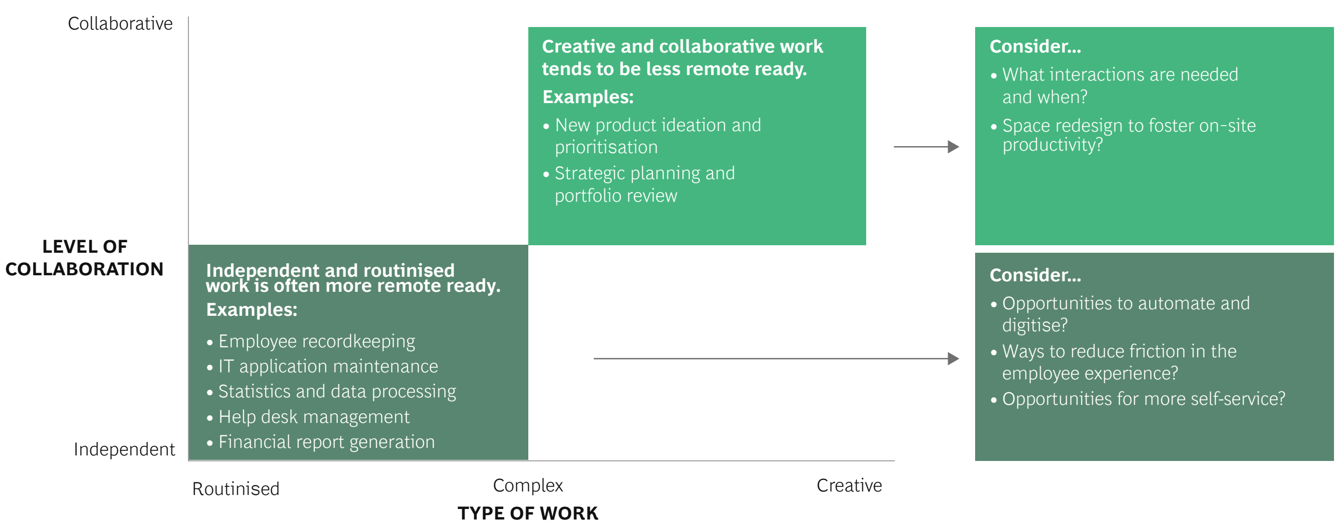
Some emerging practices can help make hybrid teams more effective. For example, encouraging members to

Figure 1 A wide range of potential work models

	Fully on-site		Partially remote		Primarily remote			
Use this model if seeking to maximise...	Access to the worksite		Team collaboration and employee choice		Occasional collaboration with options to preserve employee choice and manage cyclical space needs			
Custom options	**Always on-site** Fully on-site	**A/B** On-site for rotating A/B teams	**Anchor and flex** On-site "anchor" days with team; choice of on-site vs. off-site for "flex" days	**Fixed in and out** Some fixed days on-site; others must be off-site	**Periodic** Majority remote, but on-site once per month or quarter	**Seasonal** On-site vs. off-site depending on season	**Fully fluid** Working location left to employee	**Never onsite** No option for on-site work

Source: BCG Experience

Figure 2 Assess the remote readiness of activities, then seek to optimise them



Source: BCG Experience

Note: This illustrative assessment is most relevant for activities that do not require close proximity to physical assets.

PHOTO SHUTTERSTOCK

align on when they are on-site versus off-site can ensure sufficient in-person collaboration time. Leaders can also conduct "sense checks" across the organisation to ensure adequate overlap of the on-site work schedules of key stakeholders on teams that frequently work together.

(3) Be responsive to individual preferences

After the best-fit model is selected for a team, leaders should try to accommodate differing employee needs and preferences. Doing so can help improve employee satisfaction, drive productivity, and increase retention. While some employees may perceive remote work as a benefit, others may regard it as a burden. Employers should try to be as equitable as possible in responding to employee preferences. For instance, they might consider providing commuting stipends for employees who work on-site to parallel work-from-home stipends for those who work mostly or entirely off-site.

PUTTING NEW WORK MODELS IN PLACE

The transition to remote and hybrid work last year was abrupt and full of uncertainty. But lessons were learned and adjustments were made. Here are some emerging best practices that will help organisations transition to new work models.

- *Experiment, test, and iterate*
The single most important success factor is to instil a mindset of test and learn as organisations navigate the transition. Although a few organisations (including Salesforce and Twitter) have publicly committed to permanent work model changes, many others are hesitant to make definitive changes in the face of an uncertain future. Even so, organisations can move quickly by piloting new models before rolling them out at scale. Where possible, teams should maintain the chosen model for three to six months in order to preserve predictability and allow time for teams to adapt and refine. During that time, team leaders should regularly gauge what is working and what is not, in order to make rapid adjustments to balance and preserve productivity, innovation, and flexibility.
Establishing cross-unit learning forums to share lessons learned and create a living repository of best practices will also help organisations increase their long-term adaptability. Some cross-company learning ecosystems are already in place – for instance, the Flexwork coalition (led by Palo Alto Networks, Box, Splunk, Uber, and Zoom) and the Future Forum (convened by Slack, Fortune, BCG, Management Leadership for Tomorrow, and Herman Miller).
- *Favour simplicity*
One critical emerging best practice is to narrow the set of hybrid work models to the two or three models that are most relevant to the way an organisation operates, given its core business objectives and the nature of the work being done. Avoiding a profusion of work models helps to limit the complexity of managing across teams and to preserve productivity.
- *Design for equity from the start*
Many leaders are concerned about designing models that are fair to both on-site and remote workers. When possible, we suggest arranging for meetings to be entirely on-site or entirely remote to prevent the inadvertent creation of in-groups and out-groups in the hybrid meeting context. Organisations should also consider balancing benefits between on-site and remote employees to mitigate the risks of inequity. Leaders can establish explicit approaches (such as pulse checks or town halls) to understand employees' experiences and to commit to transparently measuring and reporting on the ongoing impact of the transition on subpopulations.
- *Don't forget enabling supports*
In addition to determining the work models themselves, organisations must consider the elements that will support implementation (Figure 3). Five such elements are critical:

i) **Skill development and training** will inevitably be needed as organisations roll out new policies, processes, and platforms. However, the single most important muscle to build is to help leaders to manage in a distributed environment, recognising that coaching, developing, and motivating employees from a distance requires a whole new set of skills and habits. While this may come naturally to some leaders, to many, it is a new muscle that needs to be developed. Organisations are already beginning to tackle this need: UBS created a Ways of Working training platform to upskill managers and employees on its workplace transition, with features to strengthen social connectivity and employee well-being.

ii) **Tools and technology** are critical to facilitate virtual collaboration, foster employee wellness, and increase productivity. Tools range from virtual whiteboards and shared project platforms to scheduling apps that show who is in or out of the office to task- and time-tracking programmes. Knock, a virtual office platform, fosters spontaneous conversations and lets employees signal when they need focus time versus collaboration time by moving to different spaces in the digital office. We suggest that organisations help steer employees, at least at the team level, to a common set of platforms to help preserve productivity. Organisations can also help establish norms regarding meetings (number, length, gap between meetings), communications (expectations on time to respond on email, Slack, and so on), and the like to help further address digital overload.

iii) **Redesigned space** may be necessary to accommodate new models. Many organisations are exchanging individual offices for open hotelling, with delineated collaboration and focus zones. Others are renegotiating leases and adjusting their overall real estate footprints. Google, for instance, decided to add more satellite offices rather than centralising at its headquarter space. While changes to physical space may take time, they are key to ensuring that employees who return to the office are set up for the in-person collaborations that make in-office time uniquely valuable.

iv) **Policy guidelines** must be redesigned to accommodate changes to when and where employees can work, who hiring managers can recruit, and more. These changes impact everything from stipends to compensation and travel norms and must be thoughtfully developed and transparently rolled out. For example, VMWare has announced that it is changing its compensation policy for predominantly remote employees to match the cost of living in their home geographies.

v) **Metrics to track impact** help organisations gauge whether the new models are preserving employees' productivity, innovation, and satisfaction or whether a pivot is needed. By tracking these results to specific work models, leaders can gain insights to guide adjustments to their approaches as they go.

Without such enabling supports, organisations may not fully realise the benefits of new work models. Many have found it helpful to establish a cross-functional team to design and deploy these enablers, in tandem with assessing remote readiness and aggregating learning experiences across the organisation.

- *Engage senior leaders in change management*
After a long year, uncertainty about the future pervades many workplaces. Vocal and visible senior leadership is essential in supporting employees in the upcoming transition. Leaders should also consider engaging employees from all ranks in designing models and clearly articulate the value proposition at both the enterprise level and the individual level. Throughout, leaders must commit to communicating transparently about what is known and what isn't, and about what is working and what is not.

The opportunity presented by the post-pandemic "return" to work is about more than just determining what types of hybrid and remote models will help to retain employees. Organisations rarely have the opportunity to boldly rethink how work gets done; factors such as near-term financial pressures and organisational resistance to change often get in the way. We encourage leaders to take advantage of this unique moment to experiment with new work models that can unleash new sources of productivity, innovation, and value. ISCA

Leaders should also consider engaging employees from all ranks in designing models and clearly articulate the value proposition at both the enterprise level and the individual level.

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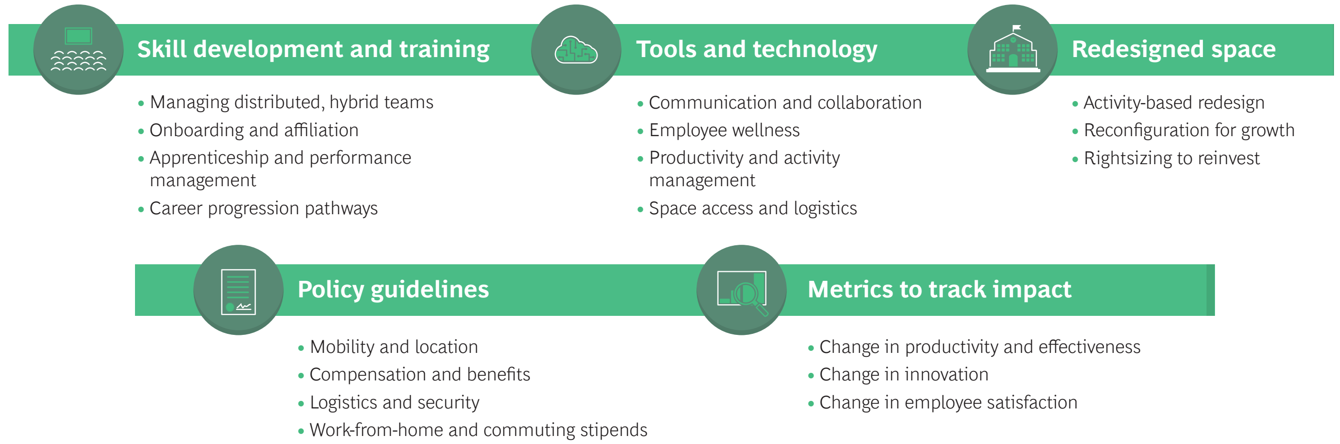
Figure 3 Five types of enablers are essential to support new ways of working



Source: BCG Experience

Nithya Vaduganathan is Managing Director & Partner; Allison Bailey is Managing Director & Senior Partner; Global Leader, People & Organization Practice and former BCG Fellow; and Sibley Lovett is Project Leader, BCG Boston. Frank Breitling is Managing Director & Partner, BCG New York. Renee Laverdiere is Partner, BCG Houston. Deborah Lovich is Managing Director & Senior Partner, BCG Boston. This article was first published on bcg.com.

TECHNICAL HIGHLIGHTS

AUDITING AND ASSURANCE

IAASB QUALITY MANAGEMENT WEBINAR SERIES

The webinar series will take a deep dive into aspects of the recently issued International Standard on Quality Management 1, *Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements*.

For more information, please visit https://www.ifac.org/news-events/2021-06/upcoming-events-iaasb-quality-management-webinar-series-collaboration-ifac

ETHICS

GLOBAL ETHICS BOARD TAKES MAJOR STEP FORWARD IN STRENGTHENING AUDITOR INDEPENDENCE

IESBA issues revisions to the Non-Assurance Services (NAS) and fee-related provisions of the IESBA Code. The revised NAS and fee-related provisions significantly strengthen the guardrails around auditor independence in two important areas (that is, the NAS provided to audit clients, and fees) that have the potential to create incentives influencing auditor behaviour. The revisions are effective for audits of financial statements for periods beginning on or after 15 December 2022. Early adoption is permitted and encouraged.

For more information, please visit https://www.ethicsboard.org/news-events/2021-04/global-ethics-board-takes-major-step-forward-strengthening-auditor-independence

FINANCIAL REPORTING

ISCA COMMENTS ON IASB'S POST-IMPLEMENTATION REVIEW FOR IFRS 10, 11 & 12

As with any principle-based Standards, the lack of "bright lines" in IFRS 10, 11 & 12, particularly for the consolidation criteria, would require management to exercise a high degree of judgement in certain situations. In addition, the industry has developed generally accepted accounting practice to address such situations. Therefore, we do not recommend the Board to make significant changes to these Standards. Nevertheless, in our comment letter, we have shared practical issues faced by the accounting profession in the application of these Standards which require guidance and clarifications for the Board's consideration.

For more information, please visit https://isca.org.sg/docs/default-source/fr-eds-and-comment-letters/iasb's-comment-letter-on-iasb's-pir---ifrs-10-11-12.pdf

WEBINAR ON THE EXPOSURE DRAFT DISCLOSURE REQUIREMENTS IN IFRS STANDARDS – A PILOT APPROACH

IFRS Foundation announces a series of live webinars to discuss the proposals in the Exposure Draft, *Disclosure Requirements in IFRS Standards – A Pilot Approach*. The first webcast, scheduled for 19 May 2021, provided an overview of IASB's proposals. The recording of the webinar can be found on the IASB website and IASB's YouTube Channel.

For more information, please visit https://www.ifrs.org/news-and-events/news/2021/05/webinar-on-ed-disclosure-requirements-in-ifrs-standards/

IASB CLARIFIES THE ACCOUNTING FOR DEFERRED TAX ON LEASES AND DECOMMISSIONING OBLIGATIONS

The amendments clarify that companies are required to recognise deferred tax on transactions such as leases and decommissioning obligations. The amendments are effective for annual periods beginning on or after 1 January 2023, with early application permitted.

For more information, please visit https://www.ifrs.org/news-and-events/news/2021/05/iasb-clarifies-accounting-for-deferred-tax-on-leases-and-decommissioning-obligations/

PHOTOS SHUTTERSTOCK

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BY FELIX WONG

BEWARE THE GST CAROUSEL FRAUD

E-Tax Guide On Due Diligence Checks To Avoid MTF

MISSING TRADER FRAUD (MTF) is a growing concern for tax authorities in jurisdictions with value-added tax systems. This fraud scheme, commonly used by crime syndicates to defraud tax authorities, has caused annual tax losses of around €60 billion to the European Union[1], and has put some S$450 million of public revenue at stake in Singapore[2].

UNDERSTANDING MISSING TRADER FRAUD

MTF often operates under the guise of a series of legitimate business transactions across a supply chain. In a typical MTF arrangement, the seller (the "missing trader") does not account for or pay Goods and Services Tax (GST) (that is, the output tax) charged on goods sold to the intermediary or "buffer" business. There is an immediate loss of public revenue while the buffer businesses continue to make input tax claims on their purchases.

The goods are ultimately exported to an overseas customer, with no GST charged as the supply is zero-rated. The exporter then claims the input tax which it paid on the purchase of the goods. The fraud may be repeated by re-importing and re-exporting the same goods, which gives rise to the term "carousel fraud".

Sometimes, the missing trader inflates the value of counterfeit or lower-quality goods and absconds with the GST charged on the inflated value without accounting the output tax to the tax authorities.

AMENDMENTS TO THE GST ACT

Prior to the enactment of the GST (Amendment) Bill 2020, customer accounting was the primary measure to deter MTF. Under customer accounting, the responsibility to account for output GST on the sale of prescribed goods (such as mobile phones, memory cards and off-the-shelf software) made to a GST-registered customer shifts from the supplier to the customer, akin to a domestic "reverse charge".

"While customer accounting continues to act as a counter measure to MTF in Singapore, it is not without its limitations," shared Accredited Tax Advisor (GST) Koh Soo How, Executive Director, Koh SH & Associates Pte Ltd, at a webinar organised by the Singapore Chartered Tax Professionals. "For customer accounting to be effective, the authorities would have to proactively identify the types of goods that would be the subject of MTF schemes. In reality, the law will always be 'playing catch-up' with the fraudsters."

Parliament has since passed amendments to the GST Act to introduce new measures to better counteract MTF in Singapore.

THE KNOWLEDGE PRINCIPLE

Since 1 January 2021, a taxable person is not entitled to claim input tax on supplies made to him which he "knew or should have known" to be part of any arrangement to cause loss of public revenue, regardless of whether the loss was indeed caused.

Accredited Tax Advisor (GST) Koh Soo How, Executive Director, Koh SH & Associates, highlighted some ways for businesses to avoid being caught in MTF

This rule is referred to as the "Knowledge Principle".

Under the Knowledge Principle, businesses are to conduct proper due diligence of business deals and scrutinise the legitimacy of their purchases more carefully. Businesses are expected to take reasonable steps to ascertain and conclude that the goods or services were not part of an MTF arrangement, this conclusion being one that a reasonable person would have made. Otherwise, the Comptroller of GST can withhold or deny the input tax claims and impose a 10% surcharge on the input tax denied if the taxpayer "knew or should have known" that the arrangement was fraudulent.

> "For customer accounting to be effective, the authorities would have to proactively identify the types of goods that would be the subject of MTF schemes. In reality, the law will always be 'playing catch-up' with the fraudsters."

[1] Europol. "MTIC (Missing Trader Intra Community) Fraud". Europol online.

[2] Tang See Kit. "More Power For Taxman To Seize Goods For Investigations Among Changes To GST Act". 3 Nov 2020. Channel NewsAsia online.

IRAS' GUIDANCE ON MTF

In line with these legislative amendments, the Inland Revenue Authority of Singapore (IRAS) published an e-Tax guide titled "Guide on Due Diligence Checks to Avoid Being Involved in MTF" on 10 February 2021. Emphasising the importance of businesses' role in instituting proper controls to prevent the perpetuation of MTF, the guide proposes a three-pillar approach to applying the Knowledge Principle. More importantly, it provides insights into IRAS' thinking as to the reasonable steps that businesses should take to avoid being caught up in MTF arrangements.

Pillar 1: Identify and Assess Risk Indicators

Before entering into a business transaction, businesses should understand the circumstances surrounding the transaction, look out for risk indicators, and assess whether there is a reasonable risk that the supply made to or by them might be part of an MTF arrangement. Some tell-tale signs and risk indicators that may distinguish MTF transactions from normal commercial practices are:

(a) *Legitimacy of customers and suppliers*
- Is it reasonable for a newly established supplier to offer high-value deals?
- Is the supply within the nature of business ordinarily carried on by the supplier/customer?
- Do the transacting parties share the same address?

(b) *Commercial viability of the business arrangement*
- Are the deals "too good to be true"?
- Is the value of goods transacted unusually high relative to the market demand and price?
- Is the profit margin abnormally high for the relatively low level of commercial risks involved?

(c) *Commercial viability of the payment arrangement*
- Are they cash-only transactions?
- Does the supplier require payments to be made to a third-party or offshore bank account?
- Does the customer make payments through a local paying agent or third-party account?

(d) *Authenticity of the goods/ services transacted*
- Are the source and authenticity of the goods unclear?
- Is there assurance on the quality and condition of the goods which are backed by documented warranties?

Pillar 2: Perform Due Diligence Checks

After the risk indicators have been identified and assessed, businesses are expected to conduct the appropriate due diligence checks and enquiries. The due diligence efforts should take a risk-based approach that is commensurate with the type and level of risks identified.

Essentially, businesses are to verify the legitimacy of the immediate customers and suppliers, ascertain the commerciality of the business arrangement and payment arrangement, and verify the authenticity of the goods and services transacted, based on the risk indicators identified. With a discerning mind, they can avoid being used as buffer companies for MTF arrangements.

Pillar 3: Respond to the Risks and Results of Checks

For each transaction entered into, businesses should maintain proper records to demonstrate that reasonable steps have been taken and that they can reasonably conclude that the supply was not part of an MTF arrangement. The documentation should include the risks assessed, the due diligence checks performed, and the actions and precautions taken by the business in response to the results from the checks.

Ultimately, businesses must maintain records of the measures taken to mitigate the risks and issues identified, and avoid participating in a transaction if it is suspected to be part of an MTF arrangement.

WHAT BUSINESSES CAN DO TO PROTECT THEMSELVES

To avoid getting involved in MTF or being taken for a ride on carousel fraud, businesses should also consider the following to drive the integration of an MTF risk management approach:

(a) *Integrate MTF risk management into existing governance framework*

The business should identify a risk/process owner to be accountable for MTF risk management and mitigate the risks by implementing a process to identify, assess and understand MTF risks.

(b) *Conduct risk assessment*

The business is expected to take reasonable steps to identify any exposure to MTF risks. Current supplier/customer onboarding processes should be reassessed and continuously monitored to mitigate such risks. If the risk assessment suggests potential MTF exposure, more detailed checks must be carried out to determine the appropriate counter measures.

On the question of whether businesses need to perform due diligence checks on existing relationships, Mr Koh suggested that pragmatically, a prospective rather than retrospective approach is due. "If you have already done your proper onboarding as far as your existing vendors are concerned, you should not need to do much more due diligence than what you have already done with them, unless there are red flags signalling a possible connection with MTF arrangements or if there are material changes in the transactions with the vendors. For the most part, it is only when you are onboarding new suppliers that you should consider whether there is a need to expand the scope of your due diligence checks to address potential MTF risks."

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(c) *Document GST policies and periodic GST reviews*

It is good practice for businesses to document their GST policies and procedures. Specifically, they should maintain proper records of the GST treatment of business transactions; procedures for preparing, reviewing, and filing of GST returns, as well as process for escalating errors.

To ensure that GST policies and controls remain robust, businesses should also consider conducting periodic GST reviews on the organisation's risks and controls.

(d) *Awareness and training*

While MTF seeks to exploit the mechanisms of the value-added tax system, it would take more than just the tax and finance departments' efforts to avoid being caught in such arrangements. Regular training should be provided to employees on MTF arrangements, its risk indicators and common errors involved. The awareness training can focus on employees performing governance and compliance functions, as well as those whose roles put them in close proximity to potential MTF transactions (including personnel from procurement, sales, logistics and accounts departments). The goal is to teach employees to be wary of transactions that seem "too good to be true" and identify the red flags of potential MTF arrangements.

While the new GST rules have augmented the standards of compliance for GST-registered businesses, the incorporation of an MTF risk management approach need not necessarily be onerous for businesses with proper frameworks and strong existing controls in place. For other businesses lacking proper frameworks and controls, the latest amendments to the GST legislation are additional reasons why they should finally review their GST compliance – or risk losing their input tax claims. ISCA

Felix Wong is Head of Tax, Singapore Chartered Tax Professionals (formerly Singapore Institute of Accredited Tax Professionals).

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BY RONY LIM, LOW KIN YEW AND TONG YEN HEE

DON'S COLUMN

SIGNIFICANT UNEXPECTED COSTS TO FULFIL A CONTRACT

Impact Of A Cost-based Input Method

IFRS 15 *REVENUE FROM CONTRACTS WITH CUSTOMERS* discusses two types of contract costs and their accounting treatments. The first type of contract costs is incremental costs of obtaining a contract with a customer that an entity expects to recover. The second type of contract costs is costs incurred in fulfilling the contract.

In this article, we discuss the adjustment of significant unexpected costs incurred in fulfilling a contract when measuring progress towards complete satisfaction of contractual performance obligations using a cost-based input method.

COSTS INCURRED TO FULFIL A CONTRACT

Costs incurred to fulfil a contract with a customer are those costs that can be specifically identified as relating directly to the contract and are expected to be recovered, which include costs that are explicitly chargeable to the customer under the contract. For costs incurred to fulfil a contract that are not within the scope of another Standard, IFRS 15 requires these costs to be recognised as either an asset or an expense (para 95 and 98).

More specifically, costs that will be used in satisfying performance obligations under a contract in the *future* should be capitalised as an asset and amortised on a systematic basis consistent with the transfer to the customer of the goods or services to which the capitalised asset relates (IFRS 15 para 99). On the other hand, costs that relate to *satisfied* performance obligations and costs that the entity cannot distinguish whether they relate to satisfied or to unsatisfied performance obligations should be recognised as expenses (IFRS 15 para 98(c) and (d)).

SIGNIFICANT UNEXPECTED COSTS INCURRED TO FULFIL A CONTRACT

IFRS 15 also requires costs to fulfil a contract that were not reflected in the contract price such as costs of wasted materials, labour or other resources (that is, unexpected costs) to be recognised as expenses (para 98(b)). Such costs are charged to profit or loss as contract expenses as they are incurred to fulfil the contract.

For a contract with customer where an entity transfers control of goods or services over time and satisfies any of the three criteria for revenue recognition over time (IFRS 15 para 35), the entity will need to recognise revenue by measuring the progress towards complete satisfaction of the contractual performance obligations. Under IFRS 15 para 41, appropriate methods of measuring progress include both input and output methods. In practice, a cost-based input method is widely used as a measure of progress for contract revenue recognition over time.

In a situation where there are unexpected costs incurred to fulfil a contract, one concern is whether such unexpected costs should be included in the measurement of progress when using a cost-based input method. IFRS 15 para B19 states that a cost-based progress measure may need to be adjusted for significant inefficiencies like unexpected amounts of wasted materials, labour or other resources that were incurred to satisfy the contractual performance obligations (hereafter, "significant unexpected costs"). This is because such costs do not contribute to an entity's progress in satisfying the contractual performance obligations. In fact, as illustrated below, to include significant unexpected costs in a cost-based progress measure may result in a larger amount of contract revenue being recognised when such costs do not contribute to the progress in satisfying the performance obligations under the contract.

ADJUSTING COST-BASED PROGRESS MEASURE FOR SIGNIFICANT UNEXPECTED COSTS

While IFRS 15 advocates that a cost-based input method should be adjusted for significant unexpected costs for the purpose of determining revenue to be recognised over time, the Standard does not explicitly state how a cost-based progress measure should be adjusted. Therefore, this will require interpretation in practice. A common cost-based input method is the cost-to-cost method, which computes the percentage of contractual completion to date as the ratio of total costs incurred to date to the total estimated costs to complete.[1] When the cost-to-cost method is used, three potential methodologies can be used to account for significant unexpected costs in computing percentage of completion:

(A) include these costs in both the total costs incurred to date and the total estimated costs to complete;

(B) exclude these costs from the total costs incurred to date but not from the total estimated costs to complete, or

(C) exclude these costs from both the total costs incurred to date and the total estimated costs to complete.[2]

[1] Total estimated costs to complete = Total costs incurred to date + Additional costs to complete

[2] Methodology (B) is illustrated in a guidance on revenue recognition in the engineering and construction industry issued by PwC in 2017 (https://inform.pwc.com/inform2/content?action=resource&id=0000019463792554.pdf).

Using a simple numerical illustration, we examine the impacts of these different methodologies to compute the percentage of completion and the amount of revenue recognised over time.

Assume a firm has a single two-year construction project at a contract price of $500 that meets the accounting requirement for revenue recognition over time. The only expenditures are significant unexpected costs of $50 in Year 1, and other construction costs of $100 and $150 in Year 1 and Year 2 respectively (assume all amounts are accurately estimated). Using the cost-to-cost method for revenue recognition over time, Table 1 shows the percentage of completion and the contract's revenue, costs, profit and margin in each year depending on whether the significant unexpected costs are included in the total costs incurred to date and the total estimated costs to complete.

As seen in Table 1, under Methodology A Year 1, when the cost-based progress measure is not adjusted for significant unexpected costs, it results in the largest percentage of completion and revenue recognised in the year that those costs are incurred.

> ... to include significant unexpected costs in a cost-based progress measure may result in a larger amount of contract revenue being recognised when such costs do not contribute to the progress in satisfying the performance obligations under the contract.

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The amount of revenue recognised does not actually reflect the extent to which the performance obligation in the contract has been satisfied during the year because a significant portion of the costs incurred relates to wasted materials, labour and/or other resources (that were not reflected in the contract price).

Under Methodology B Year 1, when the cost-based progress measure is adjusted for significant unexpected costs by excluding them only from the total costs incurred to date, it results in the smallest percentage of completion and revenue recognised in the year that those costs are incurred. The percentage of completion has been intentionally understated because the significant unexpected costs are excluded from the total costs incurred to date (even though they are incurred in Year 1) but included in the total estimated costs to complete. Moreover, note that total estimated costs to complete is the sum of total costs incurred to date and additional costs to complete. Excluding significant unexpected costs from total costs incurred to date but including them in total costs to complete would suggest that the significant unexpected costs are additional costs to complete, which is conceptually inconsistent. In addition, under Methodology B, the percentage of completion in Year 2 is

Table 1 Adjustment of significant unexpected costs in cost-based measure of contract progress

	Contract price = $500								
	Year 1			Year 2			Total (over 2 years)		
Significant unexpected costs	$50			$0			$50		
Other costs	$100			$150			$250		
	Percentage of completion = (I) Total costs incurred to date / (II) Total estimated costs to complete								
Inclusion of significant unexpected costs in % of completion	In both (I) & (II)	In only (II)	In neither (I) nor (II)	In both (I) & (II)	In only (II)	In neither (I) nor (II)	In both (I) & (II)	In only (II)	In neither (I) nor (II)
Methodology	A	B	C	A	B	C	A	B	C
% of completion	50%	33%	40%	100%	83%	100%	100%	100%	100%
Contract revenue	$250	$167	$200	$250	$333	$300	$500	$500	$500
Contract costs	$150	$150	$150	$150	$150	$150	$300	$300	$300
Contract profit	$100	$17	$50	$100	$183	$150	$200	$200	$200
Contract margin	40%	10%	25%	40%	55%	50%	40%	40%	40%

computed to be 83%. However, because the contract has been completed, the full amount of the remaining contract price will be recognised as revenue rather than that based on the computed percentage of completion. This methodology increases the volatility of contract revenue and contract profit over time (although contract revenue and profit remain the same over the two-year period in all methodologies).

Under Methodology C Year 1, the cost-based progress measure is adjusted for significant unexpected costs by excluding them from both the total costs incurred to date and the total estimated costs to complete. This results in a percentage of completion, revenue recognised, and contract margin in the year that those costs are incurred that are within more reasonable bounds compared to the amounts in the other two methodologies. Excluding the significant unexpected costs from both the total costs incurred to date and the total estimated costs to complete enhances faithful representation by depicting the percentage of completion measure in a neutral manner.[3] Moreover, in Methodology C Year 2, the computed percentage of completion of 100% is consistent with contract completion.

CONCLUSION

When revenue is recognised over time, IFRS 15 requires significant unexpected costs incurred to fulfil a contract with a customer to be excluded from the cost-based progress measure used to determine the percentage of completion for revenue recognition over time. Using a numerical illustration, we show that it is more conceptually sound to exclude significant unexpected costs from both the total costs incurred to date and the total estimated costs to complete when computing percentage of completion and revenue recognised over a contract period. This methodology results in contract revenue that is more faithfully represented and is subject to less volatility than other methodologies that do not adopt the approach. ISCA

[3] Under the Conceptual Framework for Financial Reporting, faithful representation and relevance are the fundamental qualitative characteristics of useful financial information (para 2.4 and 2.5) and faithful representation requires information to be complete, neutral and free from error (para 2.13).

> ... it is more conceptually sound to exclude significant unexpected costs from both the total costs incurred to date and the total estimated costs to complete when computing percentage of completion and revenue recognised over a contract period.

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