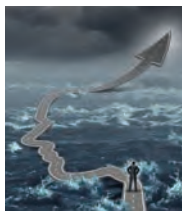




**The Future
of Work
is Now**

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**Corporate
Strategy
in a "VUCA"
World**

Page 38



**BOD Survey
2017 - Trends
in Board Focus
and Practices**

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The new world of work. Are you in touch?

The Future of Work is now, and business sentiment from our recent global survey shows a threefold increase in work automation levels expected over the next three years. At the heart of how firms embrace the Future of Work is to understand the risks and prepare for change as technology becomes a critical factor in the workplace. It remains vital for Singapore boards and executives to remain informed and invested in this opportunity.

Contact us for a briefing session which is complimentary for SID members: FutureOfWork@WillisTowersWatson.com

What Does the Future Look Like?



By **WILLIE CHENG**
Chairman, SID



DIRECTIONS

The truth is, no one really knows what the future holds. While different people will have a multitude of views, there is, in general, broad agreement on certain precepts about the future.

The first is that the only constant is change. Not just change, but accelerating and, more likely, disruptive change, fomented especially by exponential technologies that are creating a “fourth industrial revolution”.

The second is that the operating environment is increasingly becoming more interconnected and complex. The myriad of interdependencies is such that a small change in one part of the ecosystem can ripple through and have huge effects on the rest of it.

The third is that we live in a less certain and more ambiguous world – one in which black swans are less rare, and the unpredictable “unknown unknowns” will keep surprising us.

In this issue, we bring together several practitioners and pundits to share their perspectives on the challenges of the future, and where it might be heading in specific areas.

Peter Ho leads off with a discussion about how companies can better manage the increasing complexity of the business environment by engaging in foresight thinking – think scenario planning and horizon scanning. These approaches are about making better decisions that can help shape the future, as opposed to merely predicting it.

Several prominent industry practitioners and experts also share their views on the future of the digital economy, money, work, capital markets, and specific industries such as manufacturing, logistics and the professions.

We also reach out to two social sector leaders for their take on the subject. Patsian Low describes the emergence of “zebras”, hybrid businesses that combine commercial sustainability with social and environmental missions; whilst Bill Drayton shares his energising vision of a world in which everyone is a changemaker.

Of course, Mr Sid, our resident geek, does not miss the chance to wade in with timely advice to a director who is struggling with these new disruptive changes.

We also bid adieu to last year’s “Sustainability” column, and welcome a new column helmed by Robert Chew, “Globalisation”, which is also the theme of this year’s SID Directors Conference.

Not surprisingly, 2018 promises more changes for directors.

Boards will have to address the upcoming revisions to the Code of Corporate Governance and Listing Rules. Audit committees have to ensure that SFRS (I), the new accounting framework, and related standards are properly implemented. SID is rolling out new courses for startup directors and family businesses. The list goes on.

Happy New Year. ■

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PUBLISHER

Singapore Institute of Directors

168 Robinson Road #09-06/07
Capital Tower
Singapore 068912
Tel: +65 6422 1188
Fax: +65 6422 1199
Email: secretariat@sid.org.sg
Website: www.sid.org.sg

EDITOR

Adlena Wong

EDITORIAL COORDINATORS

Joyce Koh
Sue Anne Kuek

DESIGN

Epiphany Design

PRINTER

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Managing Complexity

By PETER HO



The increasing complexity of the business environment is creating great uncertainties for companies and their boards. Companies can better deal with black swans and the unknown unknowns by engaging in futures thinking to make better decisions that can help shape – rather than seek to predict – the future.



The operating environment today is complex, and that complexity is increasing because of globalisation, urbanisation, and technological change.

Complexity creates the conditions for disruption, surprise and shock.

Companies that are unprepared to deal with the challenges arising from complexity will lose ground to more nimble and adaptable competitors. A McKinsey study of companies (*Creative Destruction* by Foster and Kaplan) came to the sobering conclusion that 75 per cent of the Standard & Poor's 500 in 15 years will be companies whose names we do not know today.

For companies that aim to stay viable over the long term, it is essential for their management and the company directors to understand what complexity is, what impact it has on their business, and how it can be managed.

Complexity

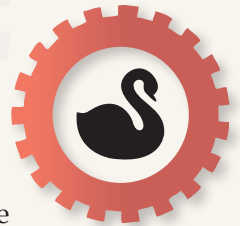
What is *complexity*?

A complex system contains a large number of autonomous parts – agents – connected to one another, and interacting in a great many ways. All human systems are complex, including companies. Cities and countries are complex, as are political systems. The world as a whole is complex. This means that not only are companies complex, but their operating environment is also complex.

There are many definitions of complexity, but all of them agree that complex systems are characterised by the property of *emergence*. The connections and interactions among the many agents in a complex system lead to outcomes

that are inherently unpredictable *ex ante*, and that are only revealed when they actually occur. So, often when something happens, we are surprised.

In other words, complexity is the reason for black swans and unknown unknowns.

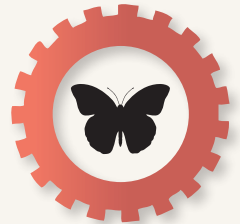


A black swan is an unpredictable or unforeseen event, typically with extreme consequences. The term was popularised by author Nassim Taleb in his book of the same name. He cites the 9/11 terrorist attack, rise of the internet, and dissolution of the Soviet Union as examples of black swans.

The phrase “unknown unknowns” was used by former US Secretary of Defence Donald Rumsfeld to refer to “things we don’t know we don’t know”.

The butterfly effect

The complexity of our world owes a lot to its highly-interconnected nature. What happens in one part is going to affect other parts – the so-called “butterfly effect”, which postulates that the flap of a butterfly’s wings in Brazil can set off a tornado in Texas.



It is the idea that small changes in initial conditions can produce large effects in a complex system. Not surprisingly, it was in weather forecasting that scientists gained a lot of insights into this phenomenon. The butterfly effect tells us that it is not possible to insulate a country – or an organisation – from developments that may occur far away.

The Tohoku Earthquake

A vivid example of the butterfly effect is the Tohoku earthquake that occurred more than six

years ago. Japan is one of the most seismically active regions in the world. So why was the calamity that befell Japan on 11 March 2011 such a big surprise?



Was it because of the scale of the disaster? Indeed, the Tohoku earthquake and tsunami was a huge catastrophe for Japan. It killed around 18,000 people and resulted in direct material damages estimated by some at well over US\$250 billion for Japan, making it the most expensive natural disaster in history.

But an equally important reason is the butterfly effect – the chain of events, beginning with the earthquake, which triggered a large tsunami, which then damaged the Fukushima nuclear power plant, causing a meltdown and radiation leakage. Its impact was felt far beyond Japan, like the hypothetical Texan tornado. It brought the safety of civilian nuclear power into question, not just in Japan, but around the world, and led one major economy half a world away from Fukushima – Germany – to forswear its use.

The Fukushima nuclear disaster was the result of complex interconnections and interdependencies, combined in this case with significant human failures. The reality is that it is extremely difficult to estimate the cumulative effects of such complex events. It makes preparing for unforeseen situations an exercise fraught with difficulty. You can look backwards in time to understand why something happened. That is hindsight. But hindsight does not necessarily translate into foresight. That is the problem. We cannot predict the future.

Human nature

Adding to the challenge of complexity is our own human nature. All human beings are afflicted with cognitive biases or blind spots.

Many disruptions – natural disasters, pandemics, even financial crises and political upheavals – can now be assigned probabilities because of advances in science. Despite this, precautionary measures are often not taken.

In his bestseller, *Collapse*, the scientist and polymath, Jared Diamond, alludes to the inability to read trends or to see behind the phenomenon of *creeping normality*. Things get just a little bit worse each year than the year before, but not bad enough for anyone to notice. It is like the proverbial frog in boiling water.

Indeed, people often have a hard time properly ascertaining the present value of events that will take place in the future. They are more comfortable focusing on the here and now, rather than thinking about the long term. In companies, this is compounded by quarterly reporting requirements that accentuate the focus on the short term.

This tendency to discount the future – to place less emphasis on future risks and contingencies, and instead to place more weight on present costs and benefits – is a common cognitive bias known as *hyperbolic discounting*.

But herein lies the conundrum. How do you make plans for the long term, knowing that changes in the operating environment are likely to occur within a shorter time frame, and that they will inevitably impact or even negate these plans?

There will inevitably be changes in technology, and disruptions to the strategic environment. How does a company factor in these changes, many of which cannot be foreseen, into plans designed to last for a long time?



Foresight or futures thinking

As prediction is not possible, the better approach is to think about the future in a systematic way.

There are methods and processes that help us to reduce the frequency of strategic surprise, and when the inevitable shock occurs, to reduce the amplitude or intensity of its impact. Some call this *foresight*, or *futures thinking*. The goal is to make better decisions today that can help shape the future, rather than to predict the future, which would be futile anyway.

Scenario planning

One of the most important of the foresight methodologies is the famous *scenario planning* method, which was developed and pioneered by Shell. In fact, by using scenario planning, Shell famously avoided the impact of the oil shock after an Arab oil embargo imposed in 1973 after the Yom Kippur War.

Used intelligently, scenarios make people – and companies – aware of problems, uncertainties, challenges and opportunities that such an environment would present – opening up their imagination and initiating learning processes.

The big benefit of scenario planning is that it helps to overcome our cognitive biases by surfacing hidden assumptions and challenging mental models. It helps planners and decision-

makers to move out of their comfort zones start thinking the unthinkable, and be more willing to explore fresh strategies. Scenario planning helps to inculcate an *anticipatory mindset* in planners and decision-makers so that they instinctively raise what if questions on the issues they deal with. It helps them to overcome their blind spots.

Horizon scanning

Notwithstanding these enormous benefits, scenario planning also has some limitations.

Scenario planning is not very useful in locating the black swans and unknown unknowns that are lurking over the horizon.

There are other tools available to address this deficiency, even if only partially. There are other foresight tools for *horizon scanning* that try to identify the big game-changers by looking for emerging issues and trends, and delving into them to see where the threats and opportunities are.

The dangers of reductionism

Efforts to understand our complex world often rely on reductionism.

It is the belief that complex phenomena can be analysed in component – and simpler – parts. The assumption is that after these parts have

been analysed separately, it is then possible to understand the properties of the whole in terms of the properties and the interactions of these components. This assumption has led to the tendency to dissect the complex world into smaller and less complex parts, and to favour explanations framed at the lowest level of scale.

But despite the enormous importance of this approach, it gives the false impression that looking at complex problems at a holistic level is less informative than investigating the properties of the components.

Indeed, outside the realm of science, reductionism has not been as effective in explaining phenomena in such areas as economics.

One way to counter the problems inherent in the reductionist approach is for the planner or decision-maker to look at situations more holistically. This is important because in our complex world, “everything is connected to everything else.” If we look at each issue from a narrow perspective, we will miss the woods for the trees.

In contrast, an organisation that breaks down vertical silos is actually promoting the spontaneous horizontal flow of information, which in turn improves the chances that connections otherwise hidden by complexity, as well as emergent challenges and opportunities, are discovered early.

At heart, this is an argument in favour of enlarging our field of vision to see how economics, demographics, societal issues, issues of environment and of technology, interact with each other to produce the complexities of the operating environment – the same complexity that generates black swans and unknown unknowns.

This is a more interdisciplinary and a counter-reductionist approach.

Rising to the challenge of complexity

The rise of complexity in the world today throws up enormous challenges for all organisations, including companies. The practice of foresight or futures thinking will help companies better deal with complexity and its challenges, by anticipating organisational needs, sensing opportunities, providing the flexibility to respond to surprises, and adapting to changes over time.

One thing that companies ought to have is a small but dedicated group of people to think about the future. Their job is to look for challenges and opportunities emerging over the horizon.

The skillsets for thinking about the future – which is inherently uncertain and unpredictable – are quite different from those required to deal with short-term volatility and crisis. Also, those charged with thinking about the future should be allocated the bandwidth to focus on the long-term without getting bogged down in the *minutiae* of day-to-day routine.

Of course, this will not eliminate shocks. But by improving the ability to anticipate such shocks, companies can reduce their frequency and impact. In turn, this will help make these companies more resilient and improve their chances of staying ahead of the competition over the long term. ■

*Peter Ho is Senior Adviser to the Centre for Strategic Futures, SG Office. This article is adapted from a lecture that he delivered in April 2017 when he was the Institute of Policy Studies' S. R. Nathan Fellow for the Study of Singapore. The content of the four lectures in the series can be found in the book, *The Challenges of Governance in a Complex World*, published by World Scientific in December 2017.*

Thriving in the Emerging Ecosystems of the Digital Economy

By **MIKLOS DIETZ**
Managing Partner, McKinsey & Company Vancouver

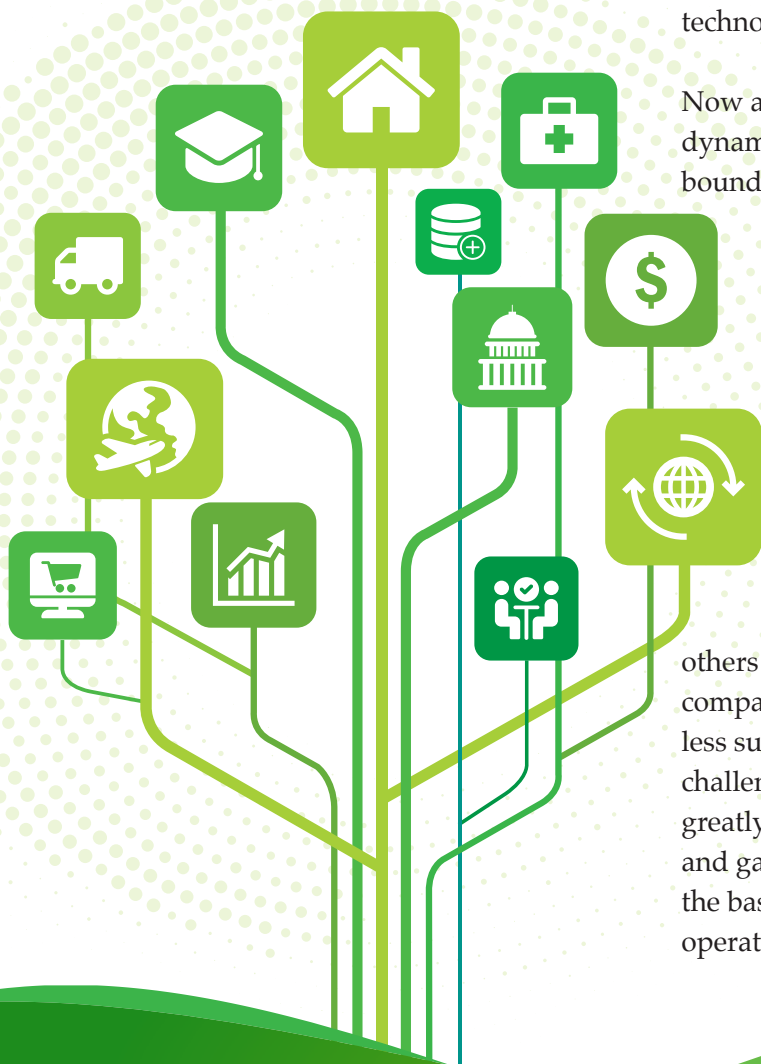
DIAAN-YI LIN
Managing Partner, McKinsey & Company Singapore

Singapore's companies are in a strong position to succeed as sector boundaries dissolve and new ecosystems emerge. But they must have a plan.

For some time, the directors of companies headquartered in Singapore and elsewhere have had to grapple with the vexing strategic challenges posed by the digital economy. One such challenge, which the McKinsey Global Institute has described, is that profits are shifting toward asset-light, idea-intensive sectors such as pharmaceuticals, media, finance and information technology.

Now another, potentially more disruptive dynamic is coming to light. The conventional boundaries between sectors are eroding as digital innovations allow companies to move rapidly into adjacent sectors and provide customers with seamlessly integrated products and services.

It is true that industry definitions have seldom remained tidy and stable for long. For example, today's large financial institutions perform services – money exchange, merchant banking, savings banking, safety-deposit services and others – that used to be handled by separate companies. And some companies are inherently less susceptible to disruption by digitally-enabled challengers than others. Digital technology can greatly increase efficiency and safety for oil and gas companies, but it cannot do away with the basic physical activities of drilling wells, operating rigs and transporting fuel.



Nevertheless, the features of the digital economy, such as ubiquitous data connectivity and powerful artificial intelligence applications, are making it possible for new challengers to enter nearly any sector where incumbents have been devoting a substantial portion of their time and resources to distribution.

That is because digital technology allows companies to build customer-centric platforms where users can easily access a wide range of products and services offered by a diverse ecosystem of businesses. Platform builders will win by establishing relationships among ecosystem members and governing payments and other transactions, services, and access to data.

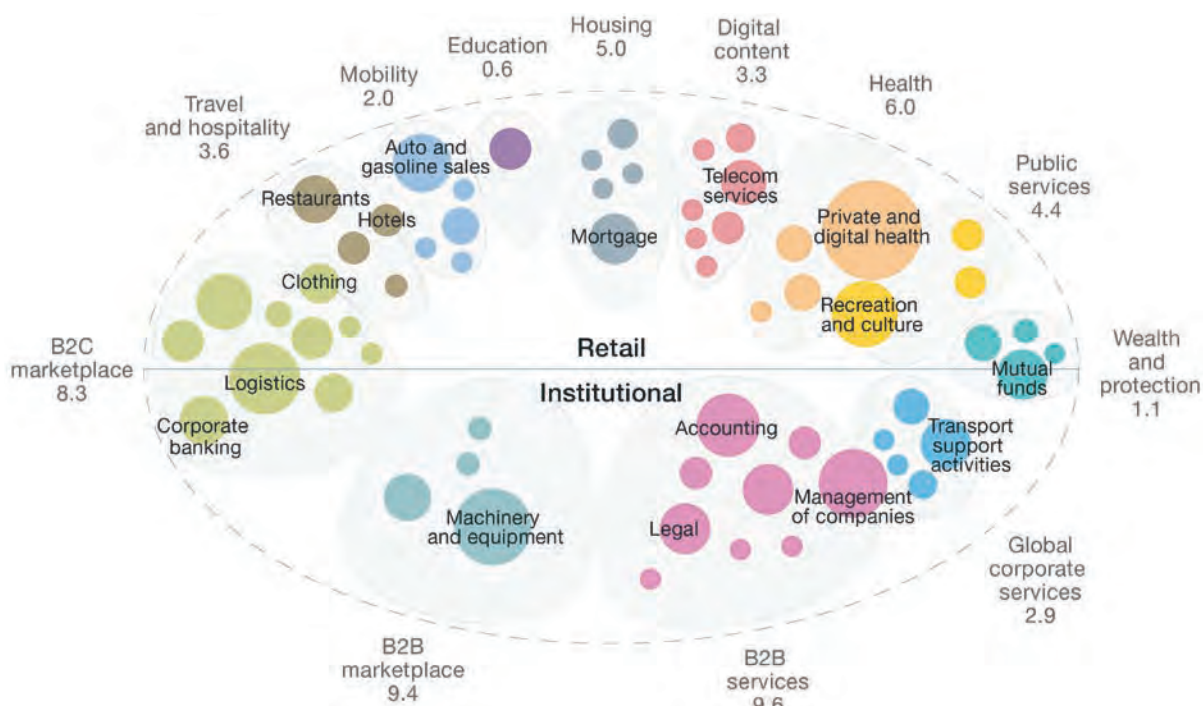
The push to broaden the value proposition for customers, by delivering an ever-increasing

number of products and services through a single portal, is evident in some of the strategic moves by tech-enabled companies in recent years. Chinese e-commerce giants Alibaba and Tencent, for example, have moved into the financial services business, offering consumer finance solutions and small business loans. Telecom companies like Telstra and Telus are now moving in on the health ecosystem. Starbucks streamlined its customer experience by enabling customers to place orders and pay for them using their mobile phones.

We expect that within about a decade, 12 large ecosystems will emerge in the retail and institutional spheres of the global economy. While their final shape is hardly a given, we think they could take something like the form shown in the diagram “New Ecosystems Replacing Traditional Industries”.

New Ecosystems Replacing Traditional Industries

Ecosystem illustration, estimated total sales in 2025, ¹ \$ trillion



¹ Circle sizes show approximate revenue pool sizes. Additional ecosystems are expected to emerge in addition to those depicted; not all industries or subcategories are shown.

Source: IHS World Industry Service; Panorama by McKinsey; McKinsey analysis

How much value could shift as sector boundaries move around or disappear? The World Bank projects that global businesses will generate more than US\$190 trillion within a decade.

If digital distribution (combining B2B and B2C commerce) should make up about one-half of the non-production portion of the global economy within that time frame, then the revenues that could be redistributed across traditional sectoral borders in 2025 would exceed US\$60 trillion – about 30 per cent of total revenue for that year.

The sheer value that will be in play as companies make incursions into new sectors, build

platforms, and join ecosystems should give corporate executives and directors ample reason to consider the future shape of the economy, and their companies' positions in it.

Of the 300 CEOs in 37 sectors worldwide, whom McKinsey recently interviewed about advanced data analytics, a third had cross-sector dynamics at the top of their minds. Many echoed one CEO's concern that "companies from other industries have clearer insight into my customers than I do."

We have also seen highly diversified companies begin to set up enterprise-wide consumer data

PLANNING FOR AN ECOSYSTEM WORLD

Adopt an Ecosystem Mindset

The first step for most Singaporean companies will be broadening their view of competitors and opportunities so it is both global and multi-sectoral. They will need to identify the ecosystems where change will happen quickly and understand the expectations of their expanding consumer base.

In essence, directors and executives must ask such questions as: "What surprising, disruptive boundary shifts can we imagine – and try to get ahead of?" Singtel demonstrated an ecosystem mindset when it acquired the security-services provider Trustwave to broaden its range of cyber security offerings, which complement the company's other telecommunications services.

Follow the Data

Competing in a borderless world requires collecting large amounts of data and extracting useful business insights from it. A critical goal for most companies is to amass data from diverse sources – including business partners – so they can segment customers more finely and spot opportunities in more ecosystems.

Deep data sets allow companies to turn promising ideas into winning business propositions. Better data can also help companies to rigorously explore scenarios for how ecosystems will evolve, where the company can create value and what assets will be needed to compete effectively.

lakes, and integrate databases so they can optimise their products, services and insights.

What should Singapore companies do?

Those are positive moves. But to thrive in a world of sectors without borders, companies need a plan.

Directors of companies in Singapore can help to jump-start the right planning by asking executives to focus on the four priorities set out in the chart below, “Planning for an Ecosystem World”.

In certain respects, Singapore's companies are in a strong position to succeed as sector boundaries

dissolve. They already have the advantage of being headquartered in a country that the McKinsey Global Institute has ranked as the most connected in the world, based on its flows of goods, services, finance, people and data.

Now companies in Singapore can capitalise on new alliances and ecosystems of the digital economy, by adopting a more inclusive outlook on their markets, their customers, their competitors and their partners. Those that do this will be well-positioned not only to capture outside shares of the global economy's broader, deeper value pools, but also shape the world's digital future. ■

Build Emotional Ties to Customers

Companies that lack strong customer connections run the risk of disintermediation, and even of becoming commodity providers of products and services, with limited room to collect premium margins.

Data (to customise offerings), content (to capture customers' attention), and digital engagement models (to create seamless, satisfying customer journeys) can all help a company build stronger connections with customers and attain advantageous positions in ecosystems.

DBS, the Singapore-based financial services group, has gained recognition for efforts to “embed ourselves in the customer journey,” to quote CEO Piyush Gupta. The company recently opened an innovation facility, known as DBS Asia X, where employees will be able to concentrate on refining customer journeys.

Change Your Partnership Paradigm

Given the opportunities for specialisation that an ecosystem economy can create, companies need more and different kinds of partners.

Regardless of a company's core industry and data readiness, directors can start by asking what white spaces it needs to fill, what partners can best help with those gaps, and what exchanges might be mutually beneficial. In one example, Ascendas-Singbridge and Sembcorp Development formed a joint venture to develop the commercial centre of Amaravati, the capital of the Indian state, Andhra Pradesh.

Directors can also think about how to open the flows of data, ideas and services between their companies and their partners.



The Future of Work is Now

By

DARRYL PARRANT

Country Leader, Talent & Rewards, Singapore
Willis Towers Watson

The digital economy will fundamentally change the way that people and organisations work. Singapore's Smart Nation initiatives are paving the way on this front and business leaders are urged to follow suit in order to prepare everyone for the brave new world of work.

We are witnessing a blurring of lines between the physical, digital and biological worlds. Technological breakthroughs like artificial intelligence and robotics are leading the change in the world, a change that is so disruptive it is affecting business models, and therefore how services and products are delivered.

This change, or digitalisation, is also transforming the nature of work and unearthing opportunities for organisations to change. On one hand, jobs that

we once knew are evolving, requiring new skillsets. On the other hand, new occupations are emerging, displacing the old ones, giving rise to significant challenges for organisations.

The impact of these changes and attendant risks to human capital is summarised in the box, "Towards the Future of Work". Successful organisations will be those that are the first to understand the risks and prepare for change as technology increasingly becomes a critical factor in how work gets done.

Towards the Future of Work

Our world is changing...



Always online



Connected



Ready access to information



Everything is personal



Technology is everywhere

Human capital risks have emerged...



AI and robotic automation are fragmenting jobs



Talent shortages are forming for in-demand and newly emerging skills



Talent surpluses are forming for discounted, routine skills



Skills are becoming obsolete and job scopes are rapidly changing



Employees have never been more empowered to find work outside of their organisation

What the future of work will look like

The future of work is about how talent and employment relationships will change. There are three broad themes in the future-scape of work:

- **Anywhere, Anytime**
Digital technologies have opened up new business models and novel opportunities for where, when, how and by whom work gets done. Many jobs can be done anywhere, at any time. This is changing the nature of the employee-employer relationship.

On a larger scale, higher work flexibility is helping to equalise and globalise work opportunities for people living in remote areas, those who are less mobile, or living in countries with less developed or struggling economies.

- **Think Tasks, Not Jobs**
Jobs themselves are changing as digital media and advances in automation enable work to be increasingly fragmented into discrete tasks that can be performed more efficiently and effectively.
- **Work-Life Balance**
Beyond enhanced productivity, the greater flexibility afforded by digital media allows for better work-life integration.

Singapore as a Smart Nation

The Smart Nation agenda will see Singaporeans, businesses and government support the better use of technology by having smarter ideas, applications and solutions.

Additionally, we know that the growth of Singapore’s workforce will slow from four per cent year-on-year and by 2025, the growth of manpower will be “zero”. So, for every one person joining the workforce, one person will be retiring.

It is vital for Singapore to break its manpower bottleneck with productivity gains to offset a

manpower lean economy. Looking at alternative ways to get work done will be critical to close the skilled worker deficit.

The nation has a number of well-publicised initiatives underway to prepare for this future state, which will importantly accelerate us towards the future of work. These are summarised in the box, “Preparing for the Future of Work in Singapore”.

Preparing for the Future of Work in Singapore

Workforce Singapore (WSG)

WSG is a statutory board (reconstituted from Workforce Development Agency) that will focus on the redesign of jobs across industry, and the improvement of HR practices so that the function can better enable the adoption of less manpower-centric business models.

Job tasks that are manual and routine (i.e. administrative in nature) are more likely to be automated. However, this sets up the opportunity to free up time for more value-added activities to enhance the customer experience or increase the amount of human interaction with customers. Sectors like healthcare and finance will be driving this transformation.

On the other end of the scale are roles that are complex and where talent is hard to find, such as software engineers. This is where talent platforms can be used to find talent to complete work. The key is to identify the routine and complex job tasks, and develop a work strategy to ensure effective integration within the business and operational processes.

SkillsFuture Singapore (SSG)

SSG is a new statutory board which will operate with a mandate to develop new skills frameworks for the future including new and emerging skills. Advanced technology and automation integration will be the focus areas.

Being prepared for the future of work requires the identification of new and emerging skills. In the context of automation for example – how will automation affect jobs and tasks, and how will humans interact with machine learning to achieve enhanced business outcomes.

Enabling Technology

WSG and SSG also combine with a S\$2 billion government commitment for technology enablement, and a Techskills Accelerator (TeSA) to help Singapore develop a world-class ICT workforce.

This initiative will help enable Singaporeans to develop the technology skills and competencies needed to embrace the future of work environment, as well as ensure Singapore closes the “skills and talent gap” to support the digital economy as it continues to impact every industry.

What business leaders need to do

Singapore boards and business leaders need active accountability to educate themselves and their workforce on the advantages of technology and take more proactive steps to capitalise on the government's manpower initiatives. It is vital that business leaders are actively involved in adopting the new skills future framework for their industry, and where possible, get involved in the shaping of these critical projects.

Digital disruption and the future of work will impact the structure, infrastructure, systems and processes, people, and culture of every business, at different speeds, and this is not going to stop.

To prepare for change, the following are the critical success factors that business leaders should hold themselves and their teams accountable to:

- **Acknowledge the past.** Start the transformation process by appreciating, admiring and acknowledging the past. People need to be recognised for their contribution to where the business is today.
 - **Inspire the future.** Carefully find ways and stories to connect the dots to the big picture and build a sense of belonging through and across the business at all levels. A key part of the preparation for the future of work will be to “educate” employees on what is in it for them.
 - **Establish the goals.** A transformation scorecard that cascades down at the varying organisational layers will be critical to ensuring accountability and alignment.
- Digital, leadership, cultural, and operational activities and projects that drive the change agenda will be essential components for the future of work.
- **Co-Create.** Buy-in from the people is critical and their voice and input is a key success factor. Leaders need to seek input from their teams on what is needed so they align to the change process and do their part to execute. A change plan on what value add and new skills are needed with input and insights from employees will be fundamental. Business leaders need to start to engage, enable, and energise employees and seek input as early as possible.
 - **Lead the change with passion and conviction.** Fully embrace the digital transformation and find ways to humanise disruption. For example, share human/machine integrated success stories, drive the people and technology capability developments in parallel, and maintain the communications around human interaction, and customer value add. Artificial intelligence and the increasing speed and impact of digital technologies on businesses will require business leaders to be fully committed and be prepared to embark on the change agenda.
- As Peter Drucker said, “The greatest danger in times of turbulence is not the turbulence; it is to act with yesterday’s logic.” It is thus prudent for us to plan for the different future scenarios taking into consideration risk, capability, and costs, and to respond swiftly. The future may be coming sooner than we anticipate. ■

Future of Manufacturing Industry

Embracing Manufacturing Opportunities for the Future

By

PROFESSOR TAN SZE WEE

Executive Director, Science and Engineering Research Council, Agency for Science, Technology and Research (A*STAR)

Convening platforms to drive innovation and catalysing technology adoption for the future of manufacturing will help increase the competitiveness of companies and the manufacturing industry at large.

There has been a global paradigm shift in manufacturing. In the smart factory of the future, ICT and digital technologies such as intelligent systems and sensors will be combined with the use of data analytics and micro processes to fundamentally change manufacturing operations.

Manufacturing is and will continue to be a major pillar of Singapore's economy, with the sector expected to contribute 20 per cent to GDP. Furthermore, the growth in this sector will provide spill-over impact to adjacent sectors such as services and logistics.

To anchor high-value manufacturing activities in Singapore and drive growth, the Committee on the Future Economy has emphasised the need to develop deeper innovation and digital capabilities, as well as for the industry to adopt Future of Manufacturing methods and technologies. In line with this, the government has pledged continued support. For example, for the period 2016-2020, it has committed S\$3.2 billion to grow R&D in the advanced manufacturing and engineering domain.

Manufacturing for the Future

To help Singapore keep pace with major developments in manufacturing, A*STAR launched three new initiatives: Tech Depot, Tech Access and Model Factories. These

initiatives will allow companies to experience the latest manufacturing technologies and experiment with them before adoption, or to collaborate with others to co-develop innovative process solutions.

Tech Depot provides a collection of easy-to-adopt technological solutions developed or pre-qualified by three organisations: A*STAR, the Info-communications Media Development Authority of Singapore, and SPRING Singapore. These solutions can help enhance businesses' operations such as asset tracking processes, supply chain management and planning processes. An example is the web-based FITPRISE Business Process Automation and Tracking System, a highly customisable Enterprise Resource Management solution that supports end-to-end business workflows. Companies can potentially achieve at least 50 per cent reduction in time by digitising and streamlining processes with FITPRISE.

Tech Access is an initiative that allows companies access to A*STAR's base of advanced manufacturing facilities, equipment and expertise. The aim is to help companies, especially SMEs, build capabilities in advanced manufacturing through the use of advanced machine tools, new processes, prototyping and testing. These companies can then go on to acquire their own equipment to capture



new business opportunities. Singapore Manufacturing Federation and Singapore Precision Engineering and Technology Association will be promoting Tech Access to their members.

Stronger Through Collaboration

Two Model Factories at the Singapore Institute of Manufacturing Technology (SIMTech) and the Advanced Remanufacturing and Technology Centre (ARTC) will help facilitate public-private partnerships for the future of manufacturing. These platforms allow companies to experience advanced manufacturing technologies first-hand in a learning environment, and to collaborate with stakeholders to run trials and co-develop innovative solutions for their processes.

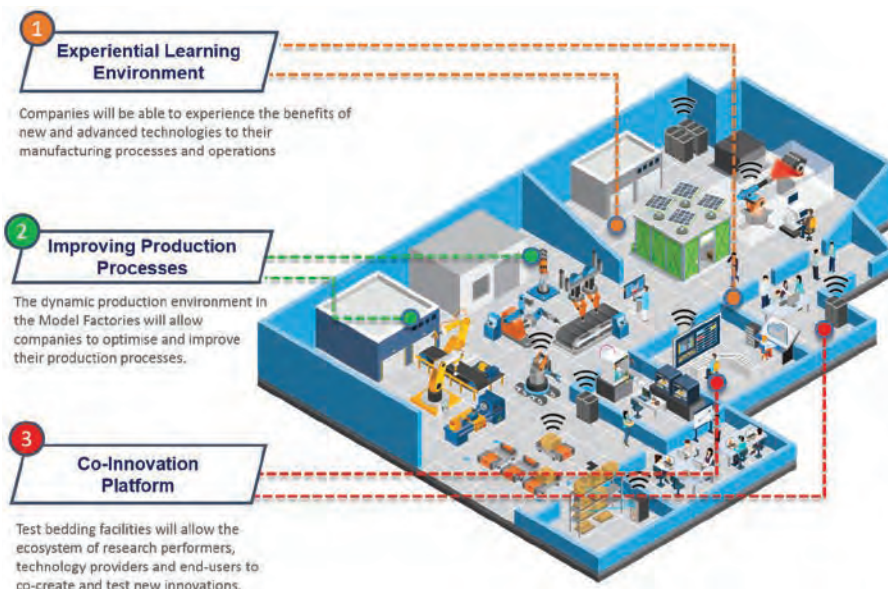
The Model Factory@SIMTech was officially opened on 5 October 2017. This new facility features a live pilot-scale production line. Modelled after the concept of an airport control

tower, the Model Factory will employ SIMTech’s Manufacturing Control Tower to demonstrate how these technologies operate in a real-life production environment.

The Model Factory@ARTC will be officially launched in 2018.

Notwithstanding new technological advances, having a critical mass of talent and skills will be the key to the success of our manufacturing sector and companies, and the development of relevant skillsets will undergird our innovation and technology development efforts. One such effort is the Digital Capability Centre which is led by McKinsey & Company and ARTC. It aims to provide local entities with joint training sessions on emerging technologies. In addition, ARTC is working with Workforce Singapore to provide master classes in areas such as advanced robotics, additive manufacturing and big data analytics. ■

Model Factories@SIMTech and @ARTC



The Model Factories@ARTC and @SIMTech are public-private partnership platforms where companies can jointly develop and test-bed advanced manufacturing technologies and solutions. Companies are able to experience the benefits using technologies first-hand and can begin their journey to adopting them.

Source: Agency for Science, Technology and Research.

Future of Logistics Industry

A Global Leading Hub for a Future-Proof Industry

By

DR ROBERT YAP

Executive Chairman, YCH Group

With the support of local enterprises to create value-add worth as much as S\$8.3 billion, Singapore is gunning to create 2,000 PMET jobs by 2020 and a logistics industry that is known for operations excellence and trailblazing in innovation.

Logistics enables the Singapore economy like no other can. In 2016, the World Bank ranked the industry's performance first in Asia. Singapore's strategic location accounts for the strong base of both global and local logistics players here.

The way logistics connects suppliers and manufacturers to consumers and merchants is unparalleled and impacts our everyday lives in more ways than we can imagine.

In 2015, the transportation and storage sector (which logistics is part of), contributed 7.4 per cent to Singapore's gross domestic product (GDP) and employed over eight per cent of the country's workforce.

Given logistics' crucial role in shaping a competitive overall business environment for Singapore, it is therefore critical that the industry's leadership position is sustained.

To achieve this, the Committee on the Future Economy (CFE) developed an Industry Transformation Map (ITM) for the Logistics Industry (see the diagram "Vision for Logistics"), which envisions Singapore of becoming a leading logistics hub at the national, industry and enterprise levels.

The Logistics ITM also identifies global trends-driven opportunities that the industry can tap on. These trends include Asia's rise to prominence, emerging business and manufacturing

developments such as additive manufacturing and omnichannel retail, as well as the advent of new technologies; and challenges that the industry will face in securing sufficient land and labour, and competition from regional and global levels.

At the national level, the Logistics ITM will improve Singapore's domestic logistics system so that resources for enterprises and the public are optimised. The initiative encompasses projects such as the deployment of federated lockers, consolidation logistics at malls, and a possible integrated goods mover system.

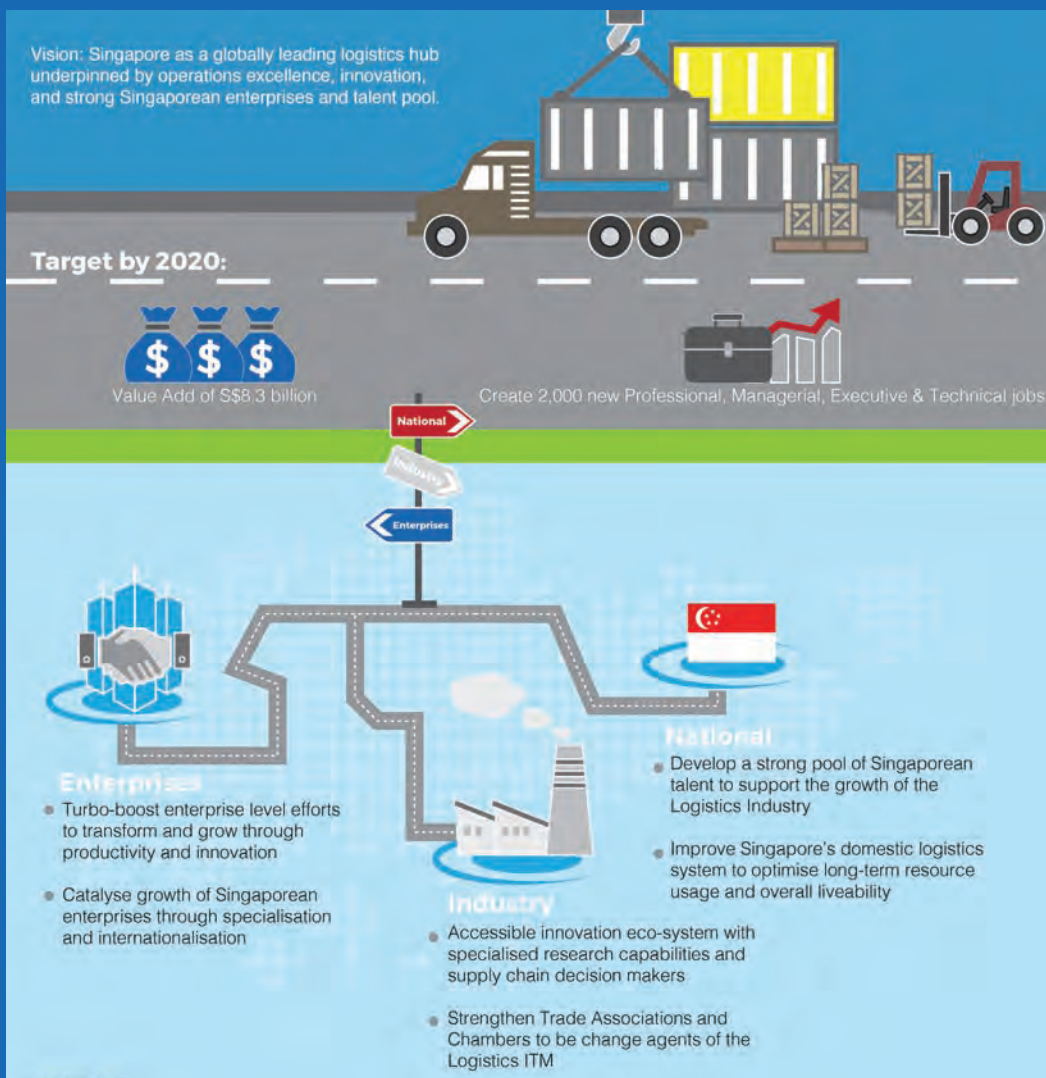
Nationwide initiatives include developing a strong pool of local or Singapore-based talent for the logistics industry through the Logistics Professional Conversion Programmes and the Industry Catalyst Programme by Workforce Singapore, and the Logistic Skills Framework by SkillsFuture Singapore.

Trade chambers and associations such as the Singapore Logistics Association will then come in to amplify the impact of those talent programmes through projects that improve resource utilisation among industry players. Their active participation will also ensure that more companies will get acquainted with and take advantage of the national initiatives.

At the enterprise level, there will be initiatives to support the growth of logistics firms through



Vision for Logistics



Source: EDB Singapore and Committee for the Future Economy (CFE)

productivity and innovation, as well as specialisation and internationalisation.

An example is Supply Chain City, a two million sq ft state-of-the-art-facility where YCH introduced a slew of supply chain innovations to facilitate the increasing complexities of logistics amidst rising manpower and land costs. They include:

- 50 metre-tall cranes that boost warehouse storage;
- Robotics to perform repetitive and time-

consuming tasks resulting in process efficiency gains of more than 80 per cent; and,

- Sophisticated dock management systems to facilitate operations planning and just-in-time cargo-loading.

Such thriving innovation-led productivity improvements are proof that we intend to be future ready and maintain our economic relevance as a leading logistics hub. ■

Future of the Legal and Accountancy Professions

Raising the Bar and Accounting for the Future

By

CHALY MAH

When Singapore develops its talent, harnesses the power of innovation, internationalises its firms and collaborates with others, it can become the undisputed leader in providing professional services of the highest standards for the region and the world.

Advancements in digital technology are redefining businesses and globalisation today. However, there are growing concerns about the displacement of jobs as one of the repercussions of digitalisation – and the legal and accountancy professions are not spared.

While Singapore's accountancy and legal sectors have seen strong growth in revenues and value added over the past decade, the evolution of the economic and digital landscape necessitates a rethinking of strategies that will increase and sustain the growth.

Vision for the professions

The Committee on the Future Economy (CFE) envisions Singapore as a trusted global exchange for financing, brokering, structuring and dispute resolution for international commercial transactions. However, to step up to this role, Singapore needs to establish a strong global market position for high value, specialised and cutting edge accounting and legal services.

The CFE's working group on legal and accountancy services identified nine high growth areas for accounting and legal services: Dispute Resolution, Intellectual Property, Business Valuation, Internal Audit, Finance, Projects and Infrastructure, Corporations, Restructuring, and Risk Management and Corporate Governance.

Work has begun in some of these areas. For instance, amendments to the Companies' Act were introduced in May 2017 to enhance Singapore's debt restructuring regime by incorporating the best features from other hubs.

Such work reflects the following four key thrusts that were established to equip the sectors to capture demand in these nine areas.

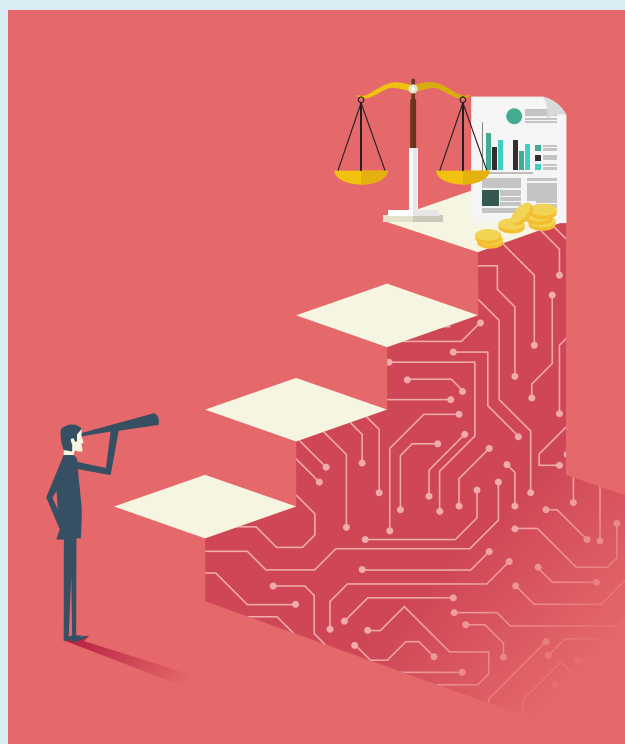
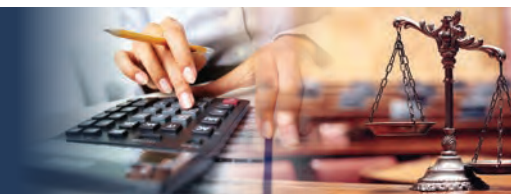
1. Strengthen global market position

As companies expand to serve the growing regional markets, they will require professional services that match their internationalising footprint. Singapore can encourage global firms to locate more of their centres of excellence here, to concentrate expertise and gather the best minds to come up with the latest and best tools and methodologies that would be used to address emerging problems.

Small and medium-sized practices (SMPs) should be more ambitious by looking for ways to expand their reach to serve the growing market, for instance, by taking on more work with a regional remit. SMPs can position themselves as the choice for smaller corporates in the region, doing so through the development of niches in areas of growth, or by forming alliances with like-minded firms to take on regional projects.

2. Transform the sectors

To handle the challenges of the future economy, companies must innovate in order to compete



and grow. Those that leverage technology will reap benefits in terms of productivity and being able to provide clients with new products and services.

Today, the Big 4 accounting firms have started to deploy artificial intelligence, analytics and robotics in their accounting and advisory services. Efforts are also being made to help smaller accounting and legal firms to adopt and invest in technology.

Beyond technological innovation, business model innovation is important too. Can firms organise themselves differently to serve clients better? This may include joining forces with technology companies and startups to enhance their service offerings.

3. Equip professionals to be future-ready

Our professionals must have the right skills to meet the demands of new markets and future challenges. There is more to being trusted advisers than just having a good grasp of technical knowledge. Lawyers and accountants that add real value to clients' businesses are those that can shape strategies using business skills and market insights they acquired as well as a good understanding of analytics.

Professional competency frameworks such as the Skills Framework for Accountancy and secondment programmes are useful structures to help develop specialist expertise. Professional qualification frameworks such as the Singapore Chartered Accountant Qualification further enable our talent pool to develop professional skills that are recognised by global accounting bodies.

4. Build thought leadership

Singapore can be recognised as a thought leader across the legal and accounting sectors through promulgating standards and research. Examples include the certification frameworks under the Chartered Accountant of Singapore and Chartered Valuer and Appraiser. We can also continue to promote the adoption of Singapore law and Singapore's dispute resolution offerings. ■

Chaly Mah is Chairman of the Singapore Accountancy Commission. He was co-chair of the Working Group for Legal and Accounting Services, set up under the Growth Industries Sub-Committee, Committee on the Future Economy, which was established in 2015.

Blockchain: The Future of Money and More?

By

SAM LIEW

Managing Director and Technology Lead, ASEAN, Accenture

DANIEL GUNAWAN

Managing Director and Advanced Technology Architecture Lead, Accenture

Blockchain is an open, distributed ledger, implemented in a peer-to-peer network that sits on top of the internet. With the success of Bitcoin, which pioneered the use of blockchain technology, many companies and regulators are seeking to better understand and work towards the effective and innovative use of this foundational technology to transform business as well as economic, social and political systems.

Eight years ago, Laszlo Hanyecz bought two pizzas at the price of 10,000 Bitcoins, marking the first-ever purchase made with Bitcoins. At the time of writing, those two pizzas would have cost well over US\$25 million!

Stories like this one puts into perspective the record-breaking growth of Bitcoin, the father of all cryptocurrencies, and even more so, the underlying technology – blockchain.

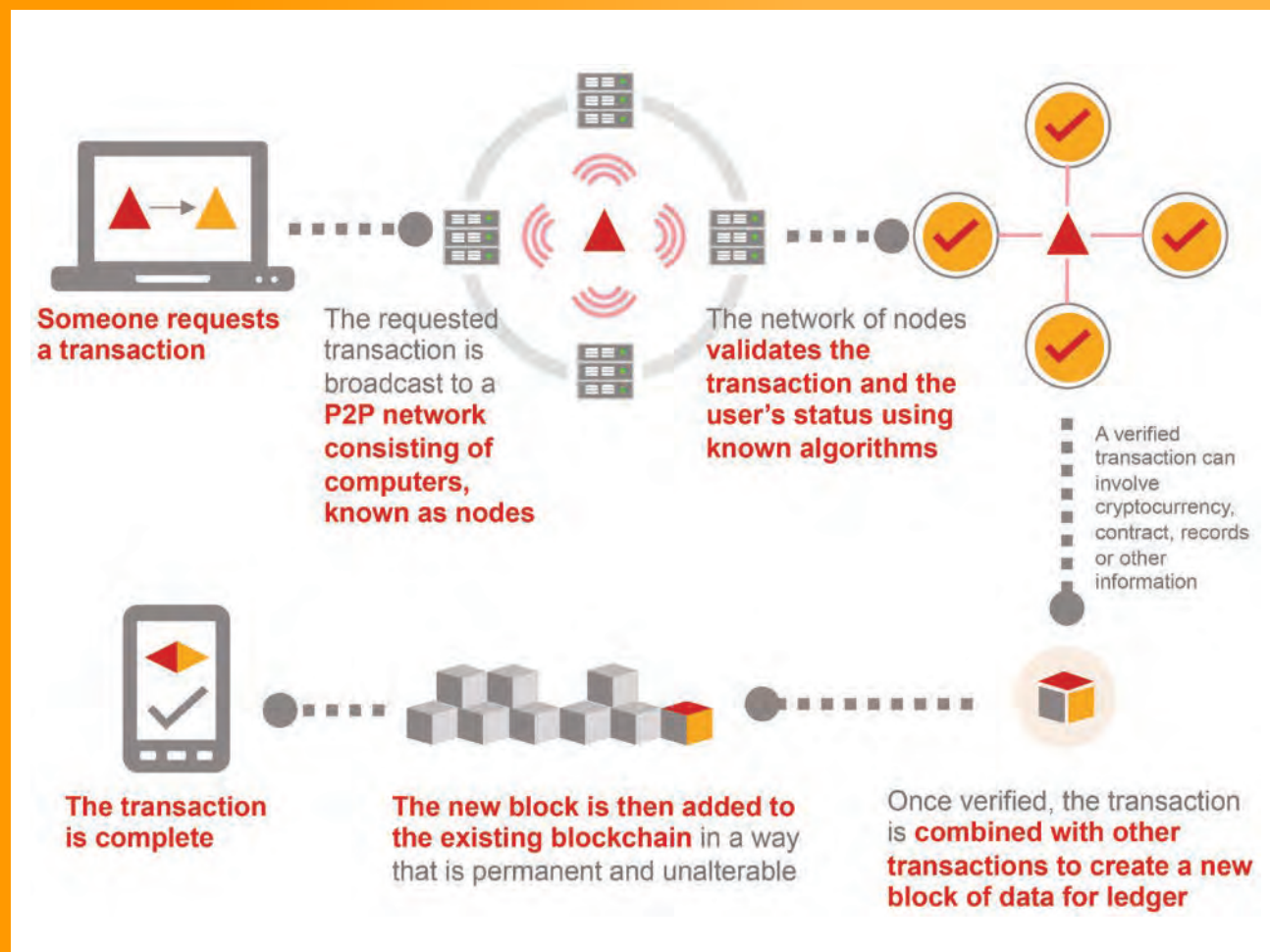
What is blockchain?

In brief, blockchain is a distributed ledger

technology for securely transmitting any type of information without control from a central authority.

Traditionally, due to the lack of trust between organisations, third parties or middlemen are employed to facilitate transactions between them. But this results in many delays and an increase in the cost of the transactions. Blockchain technology removes the need for a single or group of intermediaries, providing a means for true peer-to-peer value exchange over the internet.

How Blockchain Works



The techniques employed at the core of the technology include secure peer-to-peer communication, advanced cryptography, and distributed multi-party consensus algorithms. In simple terms, a blockchain can be thought to be an immutable database or ledger for recording transactions within a network where all participants have a single and localised view of the ledger.

Like conventional databases, blockchains can also be public or private. The Bitcoin network is an example of a public blockchain,

where anyone with the required application installed can read or write to the ledger. In the case of private blockchains, the participants would need to be authenticated before they can perform any read or write operations. Participants in private blockchains may come from the same organisation or different organisations within the same business network.

An illustration of how a blockchain transaction works is in the diagram, "How Blockchain Works".

Evolution of blockchain

Since the advent of the Bitcoin in 2009, some 800 other cryptocurrencies have been created. It is estimated that Bitcoin has about 48 per cent of the global cryptocurrency value, followed by Ethereum with about 40 per cent market share. Other major cryptocurrencies include Ripple, Litecoin, and Dash.

The popularity of cryptocurrencies has led to Initial Coin Offerings (ICOs). Unlike IPOs, these are unregulated means by which funds are raised for a new cryptocurrency venture. It is used by startups to bypass the rigorous and regulated capital-raising process required by venture capitalists or banks. In the offering, a percentage of the cryptocurrency is sold to early backers of the

project in exchange for legal tender money or other cryptocurrencies (usually Bitcoin).

Beyond cryptocurrencies, there have also been initiatives to further build on the underlying blockchain technology in other industries and application areas (see next section).

Multiple blockchain platforms have emerged from the need for purpose-built ledgers catering to specific use-cases, each offering certain advantages such as faster transaction times, better scalability and extended capabilities. The box “Blockchain Platform Examples” highlights four such platforms.

The many blockchain platforms may be focusing on specific use cases with different functionalities

Blockchain Platform Examples



Ethereum is an open-source public blockchain project which enables participants to write their own “smart contracts”.



Ripple is a blockchain solution targeted for global payments and promising low-cost financial settlement solutions.



R3 Corda is a distributed ledger platform designed for financial services. It is inspired by and captures the benefits of blockchain systems, without the design choices that make blockchains inappropriate for many banking scenarios.



The Hyperledger project is a collaborative effort involving the top leaders in technology, finance, manufacturing and others, to advance cross-industry blockchain technologies. Its aim is to provide a modular blockchain framework that is able to support and serve various use cases and industries.

but the fundamental blockchain concepts remain constant across all. For example, blockchain data is digitally distributed across all participants in near real-time removing the need for central authorities or intermediaries.

Another core concept is that the participants validate the transactions and reach a consensus to ensure the integrity of the ledger where all participants have an identical copy of the “truth”. Advanced cryptography and digital signatures are used to achieve non-repudiation between parties in the blockchain network.

Smart contracts are hailed as the central component of the next-generation of blockchain platforms (see box, “Smart Contracts”).

Applying blockchain

Media coverage on blockchain often revolves around Bitcoin and other cryptocurrencies, leading to a common misconception that blockchain technology is only applicable to the financial industry.

However, a blockchain is only a foundational technology. It is merely a decentralised store for transactions. Hence, its applications are far-reaching and can be applied in a diverse range of applications and industries, including electronic medical records, trade finance, supply chain, online voting, etc.

Transactions within business networks typically involve the exchange of documents along with the

Smart Contracts

A smart contract is a computer protocol intended to facilitate, verify, or enforce the negotiation or performance of a contract. Smart contracts are used primarily in association with cryptocurrencies.

Generally, smart contracts are:

- Little programmes and lines of code.
- Representing business logic and/or terms of legal agreements.
- Stored and executed on a blockchain network.

Being on a blockchain, smart contracts inherit the blockchain’s characteristics of permanence and censorship resistance.

However, because of these properties, it is paramount for implementers of smart contracts to ensure that there are no coding errors or vulnerabilities in the code as they can have disastrous and costly ramifications.

A prime example of such a mishap would be the 2016 attack on “The DAO”, a decentralised autonomous organisation for venture capital funding. The DAO was running on Ethereum and launched with US\$250 million in crowdfunding. A vulnerability in the smart contract was exploited; it was hacked and lost 3,689,577 ETH (about US\$50 million) in three weeks.

terms of the exchange. By applying blockchain, the parties involved can now exchange these documents and terms while maintaining non-repudiation and immutability of all transactions.

With smart contracts, business processes and rules, especially those cutting across organisational boundaries can be automated. This will thereby heavily reduce transactional costs associated with contracting as any middleman previously required for such transactions is effectively cut out.

For large institutions and organisations with multiple entities, instead of storing data in separate records or ledgers, data can be consolidated into a distributed ledger serving as a single source of “truth”, providing a consolidated view of global operations within the institutions. This will undoubtedly allow for better regulatory compliance and efficiency at potentially lower costs.

The introduction of blockchain will also vastly improve clearing and settlement cycles. Blockchain can benefit today’s financial institutions by reducing the dependency on messaging systems (e.g. SWIFT) and a central trusted clearing entity. Blockchain also allows for settlement services to be operational all-day while enabling greater traceability and integrity assurance for participants and regulators alike.

Adoption challenges

The widespread adoption of blockchain technology has been challenged by a number of factors, including:

- **Adverse image**
Being unregulated and anonymous by design, Bitcoin and cryptocurrencies have been known to facilitate certain criminal activities such as money laundering, tax avoidance and even online drug and weapons dealings. Due to the strong association of the term “blockchain” with Bitcoin and cryptocurrencies along with its negative connotations, many institutions and regulators now prefer to refer to it as Distributed Ledger Technology (DLT).
- **Lack of awareness and understanding**
With blockchain being a nascent technology, early adopters will potentially face a slew of issues and obstacles, including the lack of awareness and understanding of the fundamentals. In the case of blockchain, this is especially true in non-financial related sectors. Many organisations are wary to explore and invest in this area due to this widespread lack of awareness.
- **Requires overhaul of conventional processes**
Embracing blockchain technology in an organisation would also potentially require a drastic overhaul of conventional business processes, moving from relying on a powerful trusted central institution to trusting a decentralised network. William Mougayar, special adviser to the Ethereum Foundation, estimated that for an organisation to adopt blockchain, it requires an 80 per cent business process change and only 20 per cent technology implementation. Unfortunately for most organisations, this gives rise to the inertia of adopting the technology.
- **Technology outpacing regulation**
Advancements in technology generally outpace regulation. In fact, circumventing regulation for the sake of improving efficiency

is a core impetus for the creation of the Bitcoin blockchain. Internet law guru Lawrence Lessig described central regulatory entities as “shock absorbers in times of crisis”. Unfortunately, the same might not hold true for decentralised networks if proper assessments are not carried out prior to implementation. Therefore, for many heavily regulated industries, it is paramount for the blockchain to exist within the existing regulated infrastructure and this would require careful examination on the regulators’ part.

- **Guidelines and standards are not established**

In the same vein, there are currently no standards established for writing transactions to a blockchain and there are no guidelines for implementation. This leads to a very fragmented blockchain climate where there are at least three large consortium organisations each defining their own set of standards and code. This is further complicated by the fact that blockchain can be employed in a wide variety of use cases.

Blockchain in Singapore

Closer to home, as part of Singapore’s push to create the world’s first “Smart Nation”, there has been a slew of new blockchain initiatives in recent years to make Singapore the blockchain hub of the world.

Examples include:

- Ngee Ann Polytechnic’s partnership with UOB’s blockchain startup, Attos, to award digital certificates.
- Singapore Power Group’s collaboration with a consortium of global energy players to develop solutions based on blockchain to help save cost.
- Property companies Poperty’s and Averspace’s implementation of digitised property contracts secured by blockchain, and two property startups, FundPlaces’ and Reidao’s creation of tokens backed by real estate for sale to investors.
- The Monetary Authority of Singapore’s (MAS) tie-up with a consortium of financial institutions to explore the feasibility of cross border payments using blockchain technology (Project Ubin).

With that in mind, many firms today are still in an exploratory phase, testing out the technology in the form of proof-of-concepts and various pilot programmes.

The blockchain’s ability for all parties to arrive at consensus on the veracity of transactions without any intermediaries is truly revolutionary and has the potential to save billions of dollars in infrastructure costs alone.

Although there are still several obstacles to be ironed out before there can be mainstream adoption, blockchain will no doubt disrupt the economy of the future. The technology will impact the interactions of both individuals and organisations, change the way how businesses collaborate between one another and allow for transparency of processes.

Overall, blockchain technology will undeniably have a positive effect on the productivity, security and efficiency of the economy. ■

Whither the Stock and Capital Markets?

By

ATIN KUKREJA

Chief Executive Officer, Rippledot Capital Advisers

DERRICK WU

Director, Rippledot Capital Advisers





**DELISTED
COMPANY**

Much ink has been spilled on recent delistings and the relevance of the stock market. A macro understanding of privatisation trends and how companies seek funding points to a healthy capital market in Singapore that provides a range of funding options for companies as they grow, and as shareholders seek value from their investments.



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POs, share issuances and delistings are symbolic of the existence of a healthy, well-developed and well-functioning stock market.

Across the world, the significant monetary value of privatisation transactions has grabbed headlines. In Singapore, high profile delistings such as Osim, Goodpack and SMRT have sparked fevered discussions on the ramifications of the country's financial ecosystem. The box, "Privatisation in Singapore", provides an analysis of Singapore Exchange (SGX) delistings pre- and post- the global financial crisis (GFC).

However, it should be noted that privatisations do not represent a large-scale disruption of the stock exchange or financial system, when looked at in the context of the size of the market. As the data in the table, "Privatisation Value as

Percentage of Exchange Market Capitalisation", shows, delisting activity is but a small part of the total market value of the major exchanges.

Singapore is by no means an outlier in terms of the level of privatisation activity. Post-GFC, the annual average value of privatisations as a percentage of the SGX's market capitalisation averaged 1.7 per cent, largely in line with the ASX (1.5 per cent), the LSE (1.6 per cent) and the NYSE (2.3 per cent). Of all the major stock exchanges, only the HKSE bucks the trend at 0.3 per cent.

Why companies privatise

In general, companies privatise because they can get a better valuation. Major shareholders drive privatisation when they feel that the market has undervalued their company.

Privatisation Value as Percentage of Exchange Market Capitalisation

Annual average for period	SGX	HKSE	ASX	LSE	NYSE
2000-2008 (Pre-GFC)	1.3%	0.5%	3.5%	4.6%	2.7%
2009-2016 (Post-GFC)	1.7%	0.3%	1.5%	1.6%	2.3%
2000-2016	1.5%	0.4%	2.5%	3.2%	2.5%

Source: Bloomberg as of 28 June 2017

Privatisation in Singapore

Listings vs. delistings

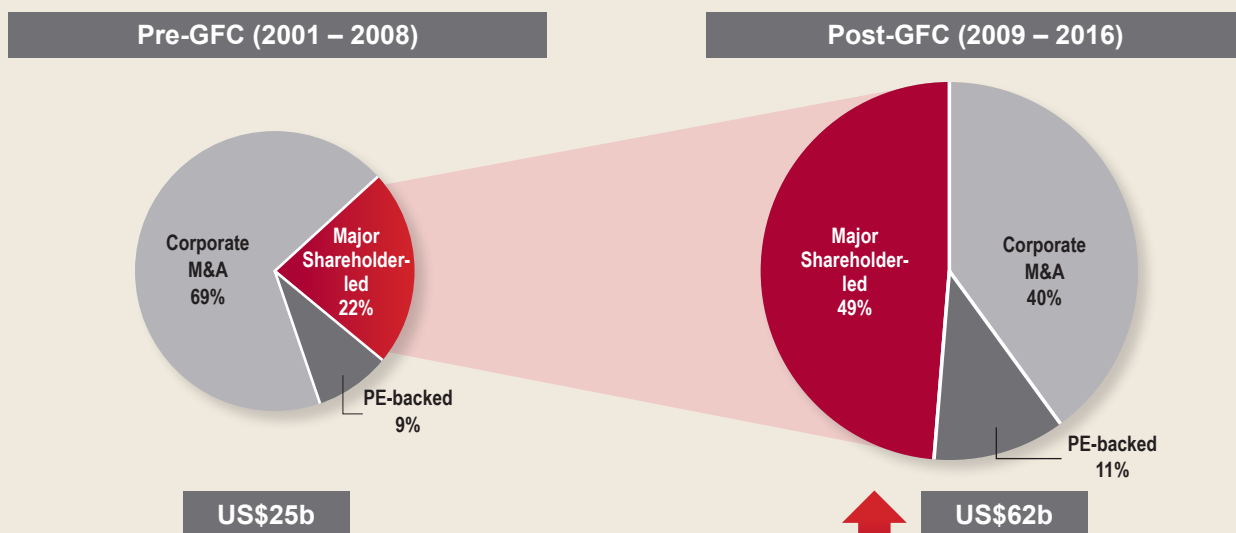
A comparison of the pre- and post-GFC periods shows some interesting trends in SGX listings and delistings.

Pre-GFC (2001 – 2008)		➔	Post-GFC (2009 – 2016)	
Pre-GFC	US\$b		Post-GFC	US\$b
IPO Value	30		IPO Value	62
Privatisation Value	(18)		Privatisation Value	(72)
Net change	+12		Net change	(10)

The aggregate value of IPOs reached US\$62 billion post-GFC, more than double the US\$30 billion over a similar time frame pre-GFC. However, comparable aggregate privatisation value grew by four times, from US\$18 billion to US\$72 billion, outpacing the value of IPOs on the market.

Who is driving privatisation

An analysis of the top 50 privatisation transactions for the pre- and post-GFC time frames demonstrated a marked shift in the nature of buyers driving M&A activity.



Source: Bloomberg as of 28 June 2017, based on the top 50 privatisation transactions in each period

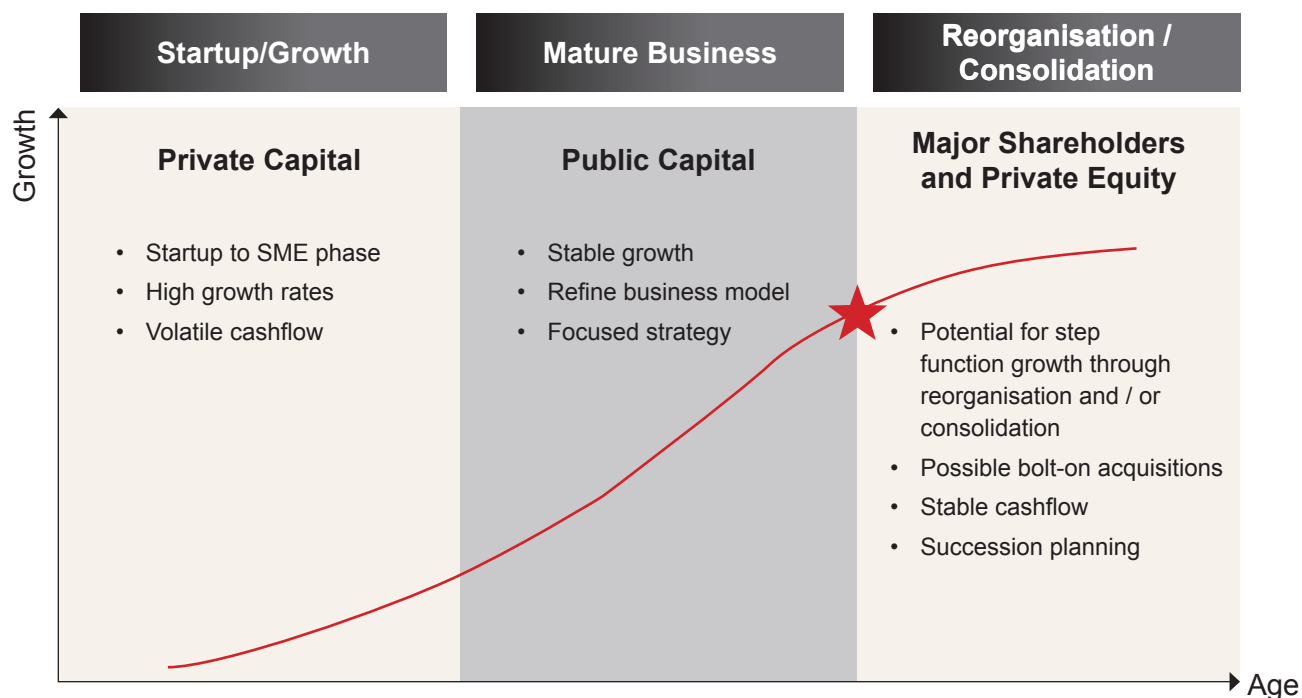
Pre-GFC, corporate and strategic M&A drove more than two thirds of takeovers. Major shareholders and insiders taking their companies private accounted for only one-fifth of the total M&A on the exchange. But post-GFC, privatisations led by major shareholders and company insiders account for almost half of total deal value, increasing by more than five times to reach US\$30 billion.

Why major shareholders delist

Major shareholders are increasingly choosing to privatise their companies for these key reasons:

1. Lack of research coverage, and low free float and trading liquidity, resulting in inefficient price discovery.
2. Stock markets' short-term outlook which is not always aligned with major shareholders' objectives of managing the business for the long-term.
3. A belief that higher valuations could be achieved elsewhere.
4. Potential partnership with a financial investor, which may be perceived to add significant strategic value to the company.

The Funding and Lifecycle of a Company



A company's capital requirements and strategic priorities evolve as it goes through different stages of growth (see diagram, "The Funding and Lifecycle of a Company").

After years of being a public company, businesses may pause to question whether a listing is helping or hindering the company from moving to the next stage of growth.

Therefore, rather than focusing on the rhetoric of why listed companies are exiting the public space, the more relevant question, from an ecosystem perspective, is: "Will companies continue to have access to capital, regardless of whether it is public or private capital?"

The answer is a resounding "yes" today given the amounts of private capital available.

Availability of capital

Quality companies do not necessarily need to rely solely on public markets to raise capital as they used to 15 or 20 years ago. The availability of private capital in Asia is at an all-time high today.

Dry powder held by Asia-focused private equity funds is roughly four times the level it was 10 years ago and has increased to circa US\$140 billion.

In fact, Singapore is at the forefront of attracting private capital. When indexed to market capitalisation of the respective stock exchanges, Singapore only lags behind Australia in attracting private equity (PE) and venture capital (VC) investments (see table, "PE & VC Investments Relative to Market Capitalisation in Asian Exchanges").

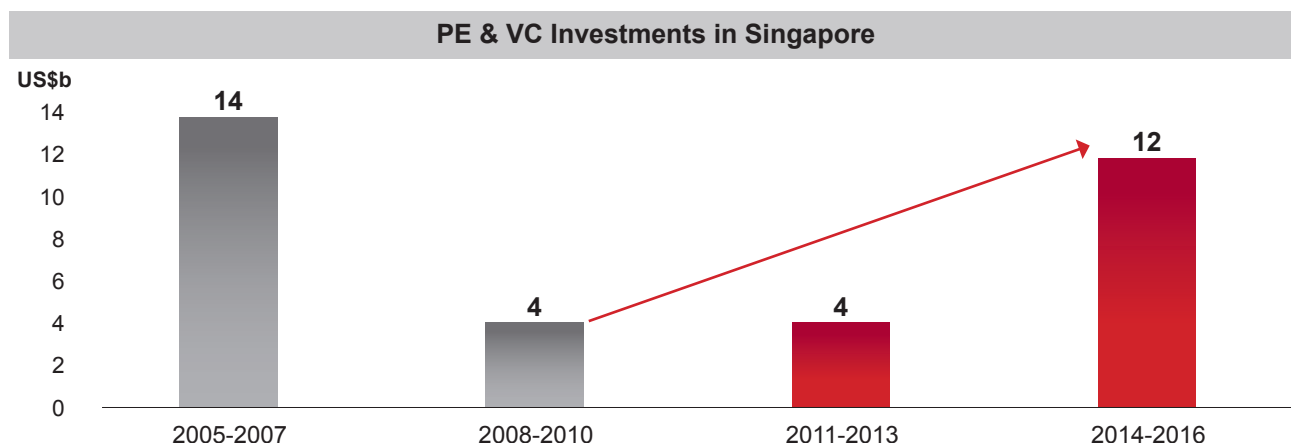
Singapore is uniquely positioned to attract capital given the relative maturity of the market, strong rule of law, transparency and the ease of doing business. These characteristics encourage more PE and VC investments into our market, and this bodes well for our local companies.

Moving forward in the Singapore capital markets

Privatisations are symbolic of the existence of a healthy, well-developed stock exchange and legal systems that facilitate these transactions.

PE & VC Investments Relative To Market Capitalisation In Asian Exchanges

2005-16 average	Japan (Base ¹)	China	India	SEA	Singapore	Australia
PE & VC Inv / Mkt Cap Index ²	1.0x	1.8x	1.9x	2.6x	3.4x	4.5x



Source: World Bank, Merger Market
¹Japan: 0.2%, China 0.3%, India 0.3%, SEA 0.5%, Singapore 0.6%, Australia 0.8%
²Other countries have been indexed to Japan

Singapore is considered one of the more sophisticated markets in meeting these requirements in Asia and, hence, quality companies with operations here do not necessarily need to rely solely on public markets to raise capital.

In fact, privatisations and partnerships with global private funds could be key in helping domestic companies achieve the next stage of their growth plans. As history has proven, privatised companies often return to public markets as stronger, more diversified entities, as Parkway Health did in the form of IHH.

At the same time, local and regional technology companies could also be a source of new listings on our exchange. Globally, IPOs are the preferred exit route for investors in technology startups. Unfortunately, this trend has so far not benefitted Singapore’s public markets as home-grown technology companies such as Sea Ltd. and Razer have opted to list overseas. Indeed, the “new tech” sector comprises less than one per cent of the market capitalisation of the SGX,

and our stock exchange lags far behind other major regional and international exchanges in this respect.

Given the quantum of regional VC funds raised in Singapore, the vibrant startup ecosystem and the level of investments made in “new tech” companies in ASEAN, the market should expect more new tech IPOs emerging from the region. However, quality companies have their pick of listing venues and, ultimately, their decision will be driven by valuations, investor interest and relevant sector depth of the exchange.

It is therefore important for the investment community and regulators to work closely together to create the right conditions for regional technology champions to choose the SGX as their listing destination. Perhaps the starting point may be to target smaller technology companies to list on Catalyst, or create a specialist market framework for “new tech” companies. A few successful IPOs are all that may be needed to kickstart the emergence of this sector on our exchange. ■

Corporate Strategy in a "VUCA" World



By **DAVID CHEW**
Member, Corporate Governance
Guides Committee, SID

In a VUCA world, one that is volatile, uncertain, complex, and ambiguous – as many would characterise today's global environment, strategy matters more than ever. That's because strategy is an integrated set of coherent choices about an organisation's goals.

Strategy aligns and reinforces corporate goals. It defines where the board and management decide to "play" and how they would play to win. Finally, it focuses on what management systems and resources are needed to achieve corporate goals.

The challenges companies face in a VUCA world demand a filter to separate opportunities from distractions, and strategy helps management make good decisions about what to do. Just as importantly, good strategy directs management about what *not* to do.

Resource allocation, investment positions, performance expectations, and the design of organisational structures – all these are underpinned by a set of assumptions about the organisation's industry, competitors, customers, and other factors. The key to good strategy is agility and flexibility around these factors.

The volatility of the current business environment calls for a periodic review of working assumptions. When they change – and they do constantly and rapidly – organisations need to recheck the choices they made based on those assumptions, and adapt them if necessary.

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**BOARDROOM
MATTERS**

How often strategy should be reviewed depends on the "clock speed" of the industry. The clock speed of the technology sector, for example, is much faster than that of many other industries.

Clarifying the role of board and management

It is a constant debate among governance experts on exactly where the board's role and management's role in strategy begin and end. Quite apart from drawing the line between the roles of the board and management, it is more important that the roles are complementary and each has a clear understanding as to the balance that should be struck.

In general, management is responsible for setting, refining, and executing strategy while the board provides oversight and guidance for the direction of the strategy, and weighs its inherent risks.

Part of the board's responsibility is to clearly set appropriate expectations for management's strategy. The board should not set the bar too low – by not demanding a strategy and simply allowing management to develop ad hoc initiatives without the context of overall strategic goals.

Nor should the board set it too high – with unrealistic expectations for the organisation based on its starting point and resources.

In a productive relationship, the board asks purposeful questions that legitimately probe

and advance the right strategy, and it does so without grandstanding or attempting to “one-up” management.

Defining the risk appetite

The board is the organisation's chief risk steward. As such, it is responsible for defining the entity's risk appetite, and how risks are managed and mitigated. The organisation's strategy must therefore be viewed within the context of the risks the organisation bears together with its stakeholders.

A recent Risk Management study by Deloitte showed that 38 per cent of the top 1,000 global public companies suffered share-price declines of more than 20 per cent relative to the MSCI Global 1000 index over the last ten years. The study found that many of these “value-killer losses” were caused by low-probability, low-frequency, and high-impact events.

This suggests the need for companies to consider scenarios of low-frequency events that could create “tail risks” when setting strategies. While risks cannot be eliminated, companies can better prepare for them. Scenarios and models can be built to explore how companies will fare and how to deal with value-killer events. Boards should encourage management to stress-test their capacity to respond to different scenarios where a bundle of events, correlated or uncorrelated, occur concurrently. While the past is not necessarily a prelude to the future, a well governed enterprise can build on the knowledge of prior value-killer risks to help model its strategy in a way that allows the company to better manage and respond to existing and future value killer risks.

In reviewing its strategic portfolio, the company therefore needs to weigh the risks associated with them under the different scenarios that change these portfolios. The board and management need to weigh, for example, when and how



the company should get out of one business or venture into another, and the impact such moves may have on the organisation's basket of risks.

In a VUCA world, directors and management tend to underestimate the risk of keeping the status quo – namely, staying with the current direction and makeup of the organisation. Curiously, they also tend to overestimate the risk of doing something different. Just because the risks associated with the current business activities are known, it does not mean they are any less than the risks associated with doing something different.

Volatile, uncertain, complex and ambiguous – these corporate realities are current and pervasive. The challenge of setting strategy is a greater challenge than it has been before. But the risks of not establishing a strategy are also greater, not forgetting that risk appetite is a crucial part of strategy. ■

Boardroom Matters is a regular column by SID in The Business Times and its online financial portal, BTInvest, where the article was first published.

A stylized illustration of a man with grey hair and glasses, wearing a suit and tie, sitting at a desk. He is surrounded by various office supplies and books. On the desk are several folders, a stack of papers, and a pen holder. Behind him are bookshelves filled with books. A large red circle on the left contains the text 'Ask Mr Sid'.

Ask Mr Sid

Dear Mr Sid

Worried over overly-worrying about the future

I retired six years ago, and took on an independent directorship at a garment maker. It was a smooth ride until a year and half ago when we had a new chairman who, we feel, overly-worries about the future.

Six months ago, he brought in a new independent director with a background in information technology, and she seems to want to automate everything in sight.

Both of them speak of “digital disruption”, “new business models” and use other jargon to paint the idea that we have a “burning platform” and need to make massive changes. Understandably, management is resistant to the proposals and now finds the board to be too intrusive.

I am not convinced that any change is necessary. The company makes clothes and accessories for high-end clients around the world. While revenue has been generally flat – actually, it’s been declining only a little for the last two years – we make healthy profits and distribute good dividends to shareholders.

The nature of our business is a manual one. Our designers have to read market trends and design the clothes and accessories they believe the market needs. The orders are then fulfilled individually as they are customised to each client. Each order is primarily handmade, but with the help of sewing and other machines.

We are as automated as we can be. I doubt if artificial intelligence can replace the human designers, nor can robots replace the workers who sew and make the customised clothes and accessories.

So, I don’t see why the board is now driving management so hard. Its role is governance, which is separate from management. Management does the strategy and planning. Our role is to provide oversight, stop management from doing anything foolhardy, and reward them in accordance with the company’s financial results.

What do you advise?

Yours confusingly

Now-Worried



Dear Now-Worried

Your letter touches on a number of contemporary topics that are important for directors. Let me cover each of them in turn, so as not to confuse matters.

Conformance vs. performance

I agree with your comment that the board's role is governance and oversight, and that is separate from management. However, a relevant question is how wide and deep the board should reach in its oversight.

As you may be aware, SID has been advocating that the board's governance role has two dimensions:

- Conformance: safeguarding stakeholders' interests in compliance with regulations and policies, and
- Performance: ensuring value creation for stakeholders of the enterprise.

Much of what you describe seems to be leaning heavily towards conformance. It is understandable that with the level of regulations and emphasis on risk management in today's increasingly complex and rapidly changing environment, you and, indeed, many directors, tend to see the safeguarding of company assets and maintaining the status quo as a priority.

However, the board is ultimately responsible for the success of the company, and there

is no success without performance. Due attention must, therefore, be paid to ensure the company's performance does not falter.

In fact, most of the board's functions have both a conformance and performance element. For example, while risk management is often associated with the board identifying risks and ensuring that management is not "doing anything foolhardy" (conformance role), it is more holistically about the board defining the risk appetite and encouraging management to respond to upside opportunities within the risk tolerance limits set (performance role).

It would appear that your company's performance needs attention from the board. You mention that the company's revenue has been relatively flat, even declining slightly. The company is, therefore, not growing. How long can this be sustained? How does that compare to your company's peers? Are there business trends that need to be addressed?

Governance vs. management

You allude to governance and management of the company as being separate. In general, the board is responsible for governance and oversight, and management for the day-to-day operations of the company.

In practice, how far the board should go in its governance role in areas such as strategy, risk management and human resources is up for

some debate. Each board and its management team need to find their own answers.

Take strategy, for instance. You say that “management does the strategy and planning”. The board, in its oversight role, is responsible for guiding, approving and monitoring these. In some companies, the board’s duties and involvement in strategy development could extend to supervision of the planning process; actively contributing to the strategy discussions; supporting strategy implementation by adjusting board composition and updating risk tolerances; and adjusting management performance measures and targets.

At the end of the day, it is more important that the roles of board and management are complementary, and that each “side” has a clear understanding about the balance that should be struck.

More significantly, the board needs to first establish itself just where and how it will draw the line. There seems to be a difference of opinion in this area between the new directors and those of you who have been on the board for some time. You need to come to a common view.

Digital disruption

It is fair to say that digital is the defining trend of our times. Pundits say that no industry is immune to digital disruption.

You say your company is in a primarily manual business. While that may be true today, there are many technological developments that could potentially impact your company’s business. For example, computer-aided design can facilitate the work of your fashion

designers; wearables (fashion accessories incorporating technological devices) can become the rage for the millennials; 3D printing can create clothing and accessories immediately on a customised basis; and supply chains are being disrupted with warehouse automation, autonomous vehicles, and omnichannel retail.

My point is that digital disruption does not usually come from further automation of manual tasks, but rather from a fundamental change in business models. Look how Uber and Grab have turned the taxi industry upside down, Airbnb is rearranging hospitality, and how Netflix put Blockbuster out of business. All done by applying technology in ways that change the business game.

The question that you and your board need to ask is: could any of this happen to the garment and accessory manufacturing and distribution industry?

In that regard, your chairman and digital director are correct in challenging management to think of the implications of technology and how it can be deployed to help the company perform at a different level. Whether there is indeed a burning platform and whether massive changes are needed, and the pace of the change required are matters that the board should deliberate and come to a collective view on.

Digital directors

The significance of digital threats and opportunities has led to the emergence of the “digital director”. A digital director is usually one with a strong information technology background. This can be someone who has a significant and relevant role in a digital company, or someone who has a primary digital operating role in a traditional company.

Increasingly, many boards look to have one or more digital directors in order to bring IT expertise and perspective to a company, especially one in need of digital transformation.

Surprisingly, digital directors are not prevalent in Singapore. According to a recent Russell Reynolds Associates study of digital directors in the global 300 companies, the US has the highest number (45 per cent of boards have one or more digital director), whereas Asia has the least (just 9 per cent).

In that regard, you should consider it fortunate that your board is so forward-thinking that it has one digital director.

Working together

An effective board is one that is able to work together as a board, and with management to conform with the rules and policies, and ensure that the company performs.

There are currently some gaps in your board in terms of an understanding of the role of the board, the line between the board and management, the company's performance, and the response needed to digital threats and opportunities.

I have offered some perspectives from my understanding of current trends and leading practices. I hope you can reflect on them and, perhaps, share them with your fellow board members, so that you can all work together to take the company forward in today's challenging environment.

Confidently yours

Mr Sid ■

Who is Mr Sid?



Mr Sid is a meek mild-mannered geek who resides in the deep recesses of the reference archives of the Singapore Institute of Directors.

Burrowed among his favourite Corporate Governance Guides for Boards in Singapore, he relishes answering members' questions on corporate governance and directorship matters. But when the questions are too difficult, he transforms into Super SID, and flies out to his super network of boardroom kakis to find the answers.

Mr Sid's References (for this question)

Board Guide

- Section 1.2: Company Performance
- Section 1.3: Regulatory Conformance
- Section 4: Board Duties
- Section 6.3: Board Dynamics
- Section 6.4: Management

Boardroom Matters

- Vol 1, Chapter 29: "Enter the Digital Director" by Robert Chew
- Vol 2, Chapter 43: "Strategy: More than a Board Game" by Wilson Chew
- Vol 2, Chapter 44: "Corporate Strategy in a 'VUCA' World" by David Chew

SID Directors Bulletin

- 2016 Q3: [Theme of issue is "Digital Transformation"]
- 2017 Q1: [Theme of issue is "Conformance or Performance"]
- 2017 Q4: "Growth of the Digital Director" by Audrey Tan

SID Directors Conference Book

- 2016: [Theme of conference and articles is "Digital Disruption"]

Hybrid Organisations: The Emergence of the “Zebra”

By **PATSIAN LOW**

Director, Asian Venture Philanthropy Network



Hybrid businesses combine the commercial sustainability of business models with a mission to create social and environmental impact. What does it mean for the rest of the business ecosystem and governance as the hybridisation movement grows?

The traditional approach to defining an organisation is based on two archetypes:

- Its ownership structure (e.g. company, partnership, non-governmental organisation, or trust), and
- Whether it generates economic value (e.g. revenue-generating, for-profit, not-for-profit).

Hybrid businesses have emerged to break this stereotyping, re-defining who they are based on their purpose for existence.

Hybrids' business models

Hybrid businesses are organisations which employ business models that are designed and dedicated to creating social and environmental benefits.

A good way to understand the value that hybrid businesses bring to society, is to look at the emergence of the “zebra” company – where the black stripes of profit-making are fully integrated with the white stripes of creating social good.

In a not-so-subtle rejection of the profit-driven ideal of unicorns that many startups aspire to, the zebras’ very distinct characteristics seek to address the social and environmental gaps that traditional business culture does not address in substance (see box, “Unicorns vs. Zebras”).

Hybrids seek to combine the social welfare logic of a nonprofit with the commercial logic of a

Unicorns vs. Zebras

	UNICORN	ZEBRA
THE WHY		
Purpose	Exponential Growth	Sustainable Prosperity
End Game	Exit, Liquidity Event, 10x	Profitable, Sustainable, 2x
Outcome	Monopoly	Plurality
THE HOW		
Worldview	Zero Sum, Winner And Losers	Win-Win
Method	Competition	Cooperation
Natural Model	Parasitism	Mutualism
Resources	Hoarded	Shared
Style	Assertive	Participatory
Seeks	More	Enough, Better
THE WHO		
Beneficiary	Private, Individuals, Shareholders	Public, Communities
Team Composition	Engineer Heavy	Balanced: Community Managers, Customer Success, Engineers
User Pays	With Attention (Opaque)	For Value (Transparent)
THE WHAT		
Growth Direction	Hockey Stick	Regenerative Growth
Metric	Quantity	Quality
Priority	User Acquisition	User Success
Obstacle	Product Adoption	Process Adoption

for-profit business. They have the potential to innovate new ways of solving difficult problems we face in society, in revenue-generating and self-sustaining ways. In essence, they embody the ideal that social mission and monetary profit can reinforce each other.

In today’s world, hybrid organisations would encompass the diverse world that sits between the traditional charity that is donation and grant-dependent, and the pure-profit-driven commercial business. Their key capital resources evolve along the spectrum as the emphasis shifts

between impact and finance as priority. (see diagram, “The Hybrid Spectrum”).

This would include social enterprises, social businesses, benefit corporations, low-profit limited liability companies, and progressive not-for-profit charities that operate revenue-generating models.

The hybridisation movement

The shifting definition of hybrid businesses and their investment markets make it hard to quantify its market size. The Global Steering Group for Impact Investment estimates that “social sector organisations already account for more than five per cent of GDP in several countries, including Canada, Germany, the UK and the US. In some countries, they employ more than 10 per cent of the workforce.”

Globally it has been estimated that approximately US\$10 billion is being invested for social impact, and another US\$15 billion mobilised as CSR funds from US and UK Fortune 500 companies. Another report estimates that the combination of investment in global microfinance, US community finance, US economically targeted investment, Green Bonds and International Development Funding could total US\$250 billion.

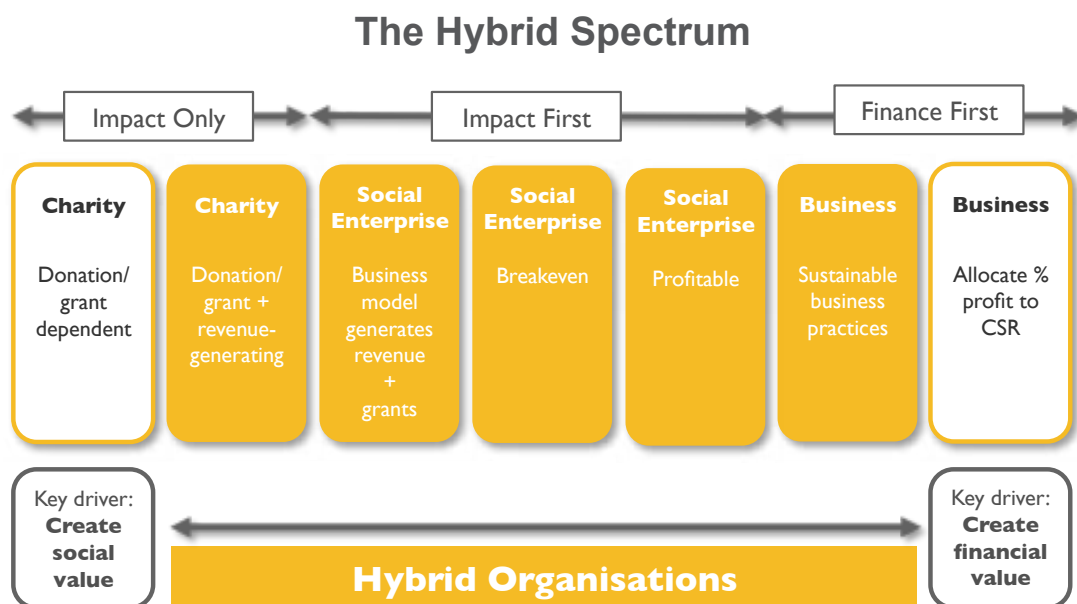
Relative to US\$23 trillion of global trade in goods and services, there is clearly great opportunity for commercial capital to be deployed towards social and environmental outcomes that come with financial sustainability. This way, hybrid businesses can be further mainstreamed into economic models worldwide.

In Singapore, the growth of social entrepreneurship is the strongest evidence of the hybridisation movement.

The Singapore Centre for Social Enterprises, raiSE has seen its membership grow 43 per cent between 2015 and 2016 to over 300 strong. This includes young ventures like BevEat which provides digital POS solutions to F&B and retail outlets that are supported by persons with disability, and more mature social businesses like Betr Barista which offers world-class specialty coffee education and services that empower the disadvantaged with employable skills.

Hybrids’ characteristics and capital needs

Hybrid organisations share common characteristics which distinguish them from regular businesses. These are summarised in the box, “Business Characteristics of Hybrid Organisations”.



Adapted from material produced by AVPN, which also draws on Skoll Centre, EVPA, CAF Venturesome, Noaber Foundation

Business Characteristics of Hybrid Organisations

1. Social or Environmental Mission at the Core

Unlike the sustainability programme of a company, social impact is the definitional core of a hybrid business. Commercial companies may implement sustainable social impact or philanthropy programmes when profits or resources have the slack to do so.

A hybrid business, on the other hand, is uncompromising about its social mission as this drives how it stewards and runs its business. This also means that business decisions around capital, operations, people, assets, value chain, customers, marketing, etc. are made based on how the social mission can be achieved sustainably.



2. Sustainability and Social Justice Culture

People behind hybrid businesses are driven by strong social justice influence. This is especially so in the early years. The founders and teams are changemakers and entrepreneurial in thinking. They want to defy stereotypes. They are community-centric in their thinking. They believe strongly in the importance of sustainability and social justice in their lives.

Many of them come into hybrid organisations after commercial and nonprofit experience have shown them opportunities for more innovation and opportunities for change. A study by Harvard Business School showed that this kind of “imprinting” in the early years lead to a desire to be engaged with hybrid models, a possible reason for the higher proportion of younger teams and founders.

The values espoused by hybrid organisations offer an alternative to an industry disillusioned by the profit-at-all-cost thinking that brought about the global financial crisis, and the increasingly toxic tech startup culture, recently surfaced by disturbing practices in Facebook and Uber, for example.

3. Mutually Beneficial Relationships with Stakeholders

Hybrids emphasise relationships that are supportive and empowered with the community they work in, involving their beneficiaries, customers, suppliers and other stakeholders in their planning and growth.

Relationships with these stakeholders are not transactional, but based on trust and mutual added-value. To the hybrids, the social impact they seek to create comes also from changes to the system surrounding their work, and not only from the transaction of goods and services provided.



4. May Experience Slower Pace Of Growth

Hybrids are sensitive to the impact of their work to the broader community and their beneficiaries, and make decisions based on principles of social and environmental welfare. Relative to traditional commercial companies, they typically exhibit a slower growth curve, but one which should lead to longer term sustainable growth.

Their growth curves are usually marked with experimentation, innovation, some failures along the way and the occasional pivot. Patience is needed to accompany them on this journey.



As a result, hybrids' need for capital (financial, social and human) have similarities but important differences from that of regular businesses.

Financially, zebras would need a continuum of capital to grow.

Starting with grant funding at the seed stage, to angel investment as business models establish, debt funding to support working capital through commercial funding for scaling up, a continuum of funding options is needed for the zebra as its stripes become more pronounced. This continuum of capital needs to reflect the impact-focus of the hybrid as commercial returns are generated.

As the field of impact investment and venture philanthropy refine their methodologies, increasingly there is a realisation that traditional funding models need to be more integrated with hybrid business models. There are now venture funders who have adopted unusual ways of engaging with their investees. For example, RS Group in Hong Kong introduced a portfolio approach which blends philanthropic funding, targeted impact investment and traditional investment in responsible companies, to produce a blended return that combines financial and social outcomes.

Social capital through networks can build new market opportunities between hybrids and traditional organisations. Hybrid businesses that are able to scale up have found their rightful place in the mainstream economy and count traditional businesses among their value chain stakeholders.

To develop such opportunities, the traditional business ecosystem needs to recognise and accept that hybrid businesses have a stake in their industry. Hybrids can benefit from being given a voice in a country's sustainable economic development and recognition for their achievements. Fundamentally, they should have

the same opportunities as other businesses to connect to the greater ecosystem and expand their market potential.

There is no better time for large commercial companies to offer such opportunities as the increasing pressure on sustainability means a greater need for innovative partners and/or alternatives that help improve the social and environmental footprint of business and develop markets beyond traditional industry segments.

Finally, human capital development is critical for hybrids.

Hybrid businesses today are mostly still young. Their founders can benefit from well-rounded mentorship. Emergent hybrid businesses can use help in scaling up. Their teams need access to a deeper pool of talent and human capital.

The unique characteristics of such businesses also mean that a hybrid ecosystem of incubators, accelerators, think tanks, academics, etc. need to be built. Singapore's educational institutions have taken the early steps with NUS Enterprise, NUS' Asian Centre for Social Entrepreneurship & Philanthropy, the introduction of Social Enterprise electives at polytechnic, undergraduate and graduate levels. There are more incubator and accelerator programmes from specialist provider, companies and sector developers like *raiSE*. More of such interest from the startup landscape will help to build capacity and talent for this sector.

Governance of Hybrid Businesses

Since a hybrid business seeks to integrate business sustainability and social welfare, this can present governance challenges for its board members. The board of a hybrid organisation will need to be cognisant of the following:

- **Funders and Investors.** Generally, boards of nonprofits ensure that the organisation is accountable to the funds received from donors. For commercial organisations, boards ensure that they are accountable to the investors. In a hybrid business, boards have to be accountable to both: investors and grant-makers. Aligning the levels of accountability will require good navigation of desired outcomes and the applicable regulatory frameworks and governance best practices.
- **Staying True to Mission and Financial Sustainability.** Here again, hybrid businesses have dual objectives: financial sustainability and its social mission. The board of a hybrid business will need to ensure that it continues to operate towards the achievement of its social mission in a financially sustainable manner, without drifting too much in either direction of social outcomes or revenue-generation.
- **Stakeholder Interests.** The nature of hybrid businesses will have to take into account the interests of community stakeholders beyond the traditional business stakeholders of investors, employees, customers and suppliers. This may mean a more complex network of vested stakeholders than a traditional business, as the hybrid businesses usually seek to address one or more specific social or environmental challenges or opportunities. This implies that the board should have familiarity with multiple sectors and stakeholder groups, and guide the business to manage these interests.

These challenges lead to considerations of the appropriate persons to take on the board and committee roles on hybrid organisations. Chairmen and board members of hybrids need to address questions such as:

- What are the relevant competencies, experience and attitudes of board members for the specific hybrid organisation?
- How should the directors establish trustworthy and effective relationships with the unique “zebra”-thinking management team?
- How do board members stay abreast of developments and trends in the nascent social impact business sector?
- How should the board adapt its governance approaches to the hybrid organisation?



Best of both worlds

The essence of hybrid businesses is not about simply putting two kinds of operating models together. Instead, it is the integration of the best of both realms to create a new way of operating, a new way of doing business and doing good.

Much as the combination of commercial experience and social consciousness have imprinted the zebra stripes, board leadership will be challenged to build new capabilities in a world where complex problems are evolving rapidly beyond current solutions and governance skills. ■

Everyone a ChangeMaker

By BILL DRAYTON



For many centuries, the game was efficiency in repetition with a very few orchestrating the many. In today's change-driven environment, the many now need to be changemakers themselves. And to get to that ideal "everyone a changemaker" world, our education system needs a reformation.

Change has been accelerating exponentially since the 1700s. Correspondingly, the number of people effecting that change is on the upward trajectory. But it is the changemakers – those who desire positive change in the world, and by gathering knowledge and resources, make the change happen – that we need more of.

Since the first Homo Sapiens crossed the mouth of the Red Sea some 50,000 years ago, humans have been utterly focused on achieving efficiency in repetition.

The modern equivalents of this? Law firms, the assembly line, schools where the goal of education is to give students the knowledge and mastery of the associated rules so that they can go forth and be a potter or a banker, for life.

The world has, of course, evolutionised but not quite in a way we expect it.

The day-to-day in a typical organisation is, on the contrary, still marked by repetition – increasingly specialised even, with the few telling everyone else how to repeat actions together and efficiently in physical and organisational structures with vertical nervous systems and walls.

That said, although this organisational model still dominates, it is failing. The half-life of a Fortune 500 company gets shorter and shorter— that is, the death rate of these slow-to-change giants is accelerating.

From repetition to change

We are moving rapidly into a world defined by change, which contrasts repetition. Whereas repeating parts fit together with repetition reinforcing repetition, we are now tipping into an equally coherent world where change begets and accelerates change. When one system changes, it bumps all those around it, and then they bump all those around them.

Value in this world comes not from providing the same thing over and over to a client, but from managing kaleidoscopic change processes that are busily bumping one another. Because one now needs to see and seize ever-changing opportunities, the new organisational model must be a fluid, open team of teams.

Every team should comprise members who are observing, adapting, spotting opportunities, and helping to build and serve new teams of teams around these newly identified goals.

That is precisely what one sees in the islands where the new world of change is already flourishing—for example, Silicon Valley and Bangalore. Here (and increasingly everywhere) the critical factor for success is: What percentage of the people are changemakers, and at what level are their changemaking skills?

From some, to everyone, a changemaker

In a world of constant change, anyone who cannot keep up is out. And you cannot play the change game unless you are a changemaker.

A world in which everyone is a changemaker is one:

- Where problems cannot outrun solutions;
- Where everyone is powerful, thanks to far more equal structures that are in place;
- Where everyone, and not just the fortunate elites, can express love and respect in action – the origins of happiness and health.

The alternative is a deeply divided, angry world.

The challenge for leaders - and all of us - is to recognise and welcome the fact that we are at a turning point - and need to change everything from growing up to how we lead.

Education reform

To grow up, we need a new paradigm for education.

Fifty to 100 years ago, society took the radical step of saying that every person must master written language; today we must insist that every person have the social skills necessary to be an effective, confident changemaker before their 21st birthday.

These core social skills are: empathy, teamwork, leadership quality (the kind that can lead teams of teams where everyone is a powerful changemaker), and changemaking.

In a world of escalating change, the rules tend to change as well. Anyone who tries to be a good person, diligently following the rules will, inevitably find themselves, even if unintentionally, hurting and disrupting others. They (and others like them) will be marginalised and eventually thrown out of the game. It is in times like these that being able to empathise with others is critical.

To make way for the kind of change we wish to see, we must stop giving equal access to an obsolete system that ensures, at best, a generation of failure. Trying to solve youth unemployment by “giving them needed skills” is a chimera.

Major turning points always catch societies by surprise. And we are in the thick of a big one. Teaching our children to be changemakers will alter the most basic structure of society. And that will have much far-reaching impact than any technology-based revolution. ■

Bill Drayton is the Founder and CEO of Ashoka, the world's largest association of leading social entrepreneurs. Ashoka's vision is that everyone is an effective and confident changemaker.

Globalisation: The Good, the Bad, and the Technology



By **ROBERT CHEW**
Council member, SID

Globalisation may be getting some mixed reviews, but it is still the way forward.

The report of the Committee on the Future Economy reaffirmed that Singapore's future remains focused on globalisation, in spite of a "dark shift" toward protectionism in other developed markets.

Just 20 years ago, globalisation was lauded as the undisputed way forward for businesses and countries. It was supposed to act like a rising tide, lifting all boats in poor and rich countries alike.

More factories would be needed to meet the demand of the developed countries, thereby raising standards of living in emerging markets. This in turn would provide international companies with a vast and enthusiastic new customer base. Consumers in the US and Europe would have their pick of inexpensive items, and trade barriers would drop to support multinational expansion and geopolitical cooperation would flourish.

In the two decades leading up to the 2008 Global Financial Crisis, international trade grew at twice the rate of global output.

Since then, however, trade has been struggling. Recent data continues to disappoint; trade's share of global GDP is still falling. Mainstream political support for multilateral trade deals is diminishing and populist movements are on the rise in the West.



GLOBALISATION

For our future economy, perhaps we should re-examine what is good (that which we should continue to leverage), and what is bad (that we need to rethink) about globalisation, while we focus, in particular, on opportunities enabled by emerging exponential technologies referenced below.

The Good and the Bad

We learned, in Economics 101, about the benefits of international and free trade, based on the theory of comparative advantage. Countries will be better off if each specialises where it has a comparative advantage, and if they trade with one another. Specialisation increases global output. International trade opens up local markets to foreign suppliers, thereby increasing competition and efficiency. Through international trade, firms are no longer limited by the size of their country of origin, but can sell into bigger markets. Output increases and economies of scale follow, resulting in lower production costs and prices. And of course, consumer choice is enhanced.

Other benefits suggested by free trade proponents include:

- Corporations and governments seek to work together to solve global problems as economic and financial interests become more aligned;
- Labour moves freely from country to country;
- Communities learn about other communities, as cultural intermingling and social interactions increase. Socially we become more open and tolerant of each other, and strangers are no longer considered aliens; and

- Many see speedy travel, mass communications and rapid dissemination of information as positive bi-products of globalisation.

However, the reality for some is a far cry from the way globalisation is pitched. The shortcomings manifest in a number of ways.

Globalisation is supposed to be about the elimination of barriers, but barriers remain. For instance, over 160 countries have value-added taxes on imports, which can go to as high as 22 per cent in Europe. In fact, trading patterns point to an increase in protectionist attitudes rather than a golden age of open borders. The G-20 countries (the biggest economies and trading partners in the world) have added more than 1,200 restrictive export and import measures since 2008.

A big problem for developed countries is that with globalisation, jobs are often perceived to be lost, as they are being transferred to lower-cost countries. Or, Singapore's case, low cost foreign labour or talents are perceived to be brought in to compete "unfairly" and "take away" the jobs of locals.

Multinational corporations have also been accused of social injustice, unfair working conditions and lack of concern for the environment in their overseas supply chains.

Notwithstanding some populist governments that would like to see globalisation reversed, it is likely to continue, for better or worse. We cannot stop it (and should not try to) but there are things we can do to make globalisation better and fairer.

For one, corporations should formulate and execute their global strategies underpinned by the principles of sustainability, addressing the needs of communities by working with them to protect the environment, strengthen the social fabric, reward labour equitably, and conduct business and operations fairly and honestly.



The Tech

Reinforcing globalisation is the exponential improvement in the cost-performance of core digital technology (Moore's Law), which is fuelling unprecedented innovation.

Innovations built on the core digital building blocks – computing power, storage, and bandwidth – are rapidly moving across boundaries, causing traditional definitions to blur and blend. The resulting so-called exponential technologies include additive manufacturing, artificial intelligence, nanotechnology, new materials, renewable energy production and storage, robotics, and synthetic biology. We are arguably heading towards a future in which we will have the knowledge and capabilities to make the "impossible" possible... in a borderless world.

Some have proclaimed that the most problematic aspects of globalisation may be behind us, and we will climb to new peaks in the freedom of trade, innovation and ideas.

The future economy is indeed exciting and global, but perhaps not entirely as we expect. ■

Learning, Unlearning and Relearning in the Future Economy



By **POH MUI HOON**
Council member, SID

In a business environment that is rapidly changing, what does it mean for directors who have to keep abreast of all that is happening to be effective in helping their companies create and maintain value?

It is clear that in the new world, adaptability, flexibility, and the ability to learn at speed will be key to success for corporate leaders.

The opportunities for doing so will be immense. The learning choices available to directors will not be few, but more – many more. The challenge is making sense of the myriad of choices to learn, unlearn and relearn. These choices present themselves in the content, means and modes of learning.

Content

What will the future economy be like? What is clear is that the rate of change will almost certainly continue to accelerate, and this will fuel more disruption to existing business models and transform companies and industries in unimaginable ways.

There are four key content areas of understanding and competence required of an effective director:

- **Governance.** This refers to the system of rules, practices and processes by which a company is directed and controlled.
- **Behavioural.** This is the dynamics of board decision-making and director conduct.
- **Functional.** This refers to the professional areas of competence such as finance, human resource, legal and digital that are needed for a diverse board.



EXPANDING HORIZONS

- **Business and industry.** This refers to an understanding of the broad business environment and trends, especially in relation to the industry in which the company is operating.

All these four areas are not spared by the rapid changes in the environment, with the fourth, “business and industry”, being most affected by technological disruption. For that reason, SID introduced its “Business Future Series” a year and half ago.

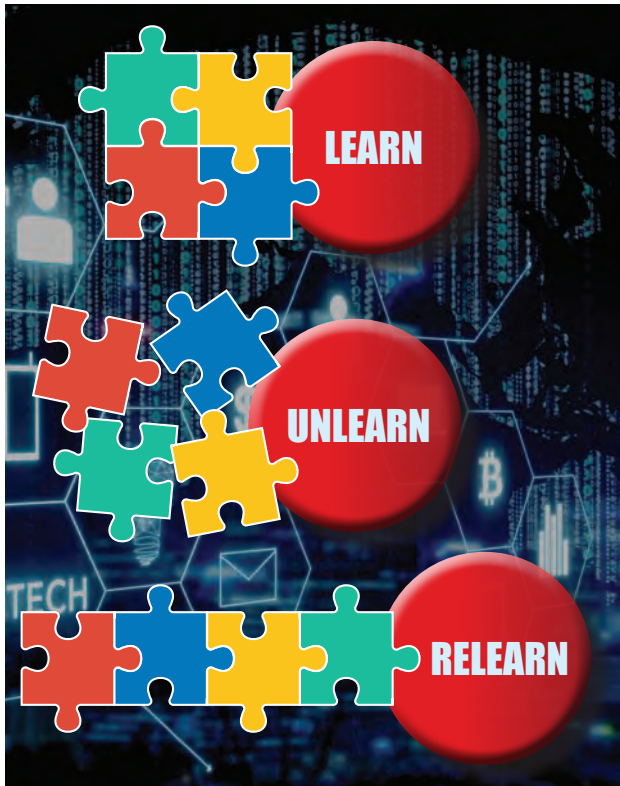
What is significant is that the plethora of new things to learn can be overwhelming. As such, directors need to make choices on how far and deep they go into any particular area, and the means and modes that best facilitate it.

What is more significant is not just the new knowledge and understanding that is required, but that old learnings and knowledge can be quickly superseded by new models, rules and practices. In this regard, the attitude of a director to be willing to discard the old and appreciate the implications of the new is needed.

Means

The new world is an omnichannel world. Different means of learning are available.

Apart from the traditional offline means of training such as classrooms and experiential learning, online platforms are seen to have the potential to revolutionise continual learning.



Toward this end, SID is piloting online courses and webinars in the coming year. Many organisations are also doing the same.

The technology has scaled it to a point where there are Massive Online Open Courses (MOOCs), online courses aimed at unlimited participation and open access via the web. The online learning is on-demand and can be taken to suit the learner's schedule. Many MOOCs provide interactive user forums to support community interactions among students, professors, and teaching assistants.

The top three online platforms in this area are Coursera, Udacity and EdX. Coursera is partnering with 149 universities to provide 2,000 courses. Udacity is more skills-based and industry-specific, offering nano-degrees in varied disciplines. EdX offers 1,386 courses and micro-masters programmes.

Mode

Both traditional and online approaches allow both group and individual modes of learning.

The traditional classroom approach emphasises the former, while online favours the latter.

The benefit of group-based learning is the debate and cross-fertilisation that can occur, especially when learners are in the same physical setting (i.e. classroom). In particular, behavioural topics such as board dynamics are best explored in face-to-face group workshops. Seminars and panel discussions by corporate leaders can also be great opportunities to learn from peers, and the experiences shared are invaluable.

One form of individualised learning is through coaching and mentoring. A coach or mentor can help a director approach matters differently and change behaviours to become a better and more effective director.

Coaching tends to be a formalised process to help executives achieve their full potential, develop better skills and improve performance. Mentors might be more applicable to non-executive directors. Such mentors can be found in more experienced board members who might be on the same or other boards.

Be Curious

Walt Disney once said: "We keep moving forward, opening new doors, and doing new things, because we're curious and curiosity keeps leading us down new paths".

As the new economy brings about rapid change, new challenges and opportunities, Disney's adage holds even truer. By being continuously curious, directors can remain agile and relevant despite disruptive forces and changes.

Learning resources are widely available, and having a personal learning plan can help point us in the direction we wish to take. Meanwhile, SID will continue to develop our professional development offerings to help our members on their learning journeys. ■

The Current State of Play in Director Remuneration

By
JON ROBINSON

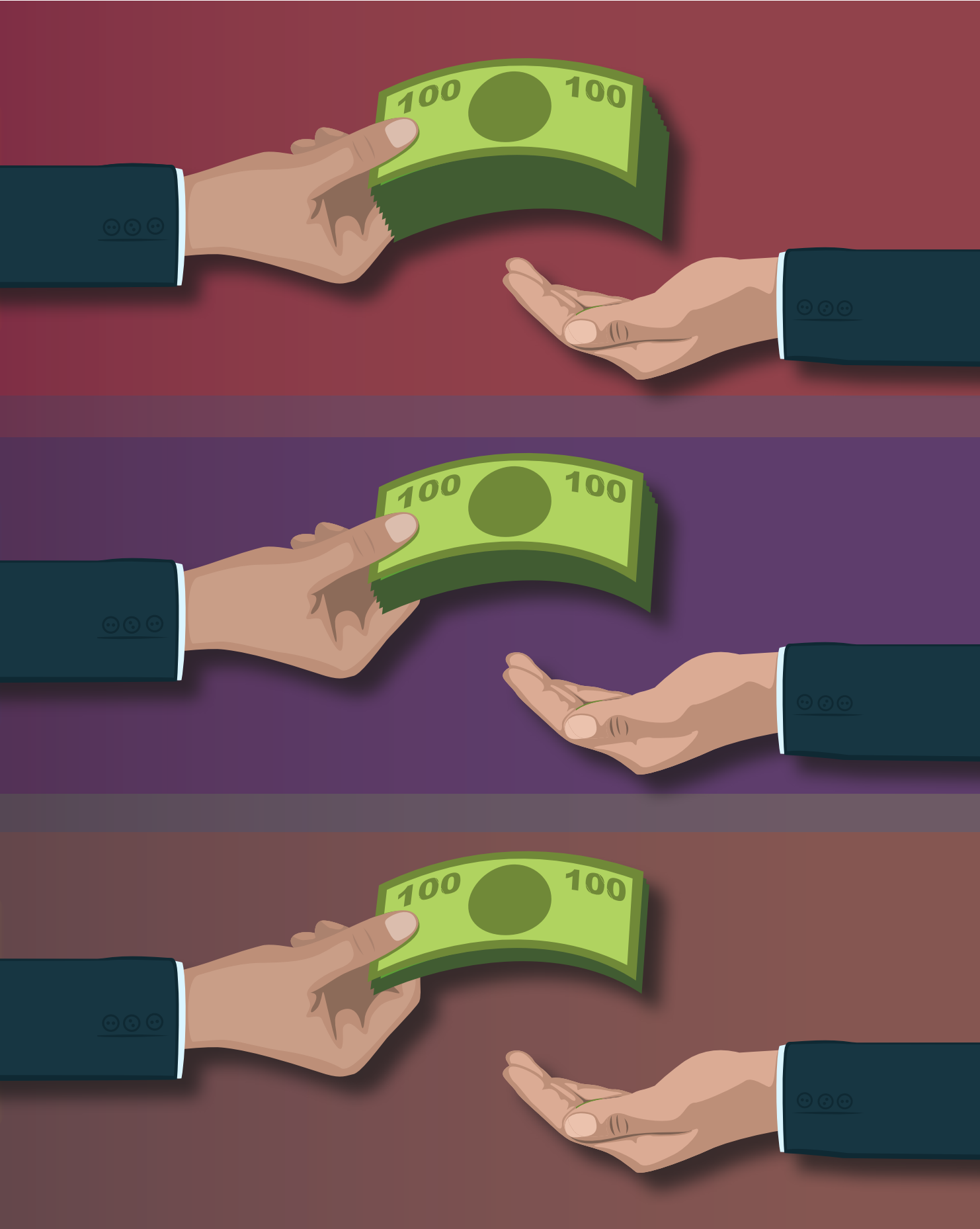
Director remuneration correlates to company size. In larger companies, non-executive director fees have risen more in the last two years, and executive directors receive more in long-term incentive compensation.



LARGE CAP

MID CAP

SMALL CAP



Managing remuneration requires an objective perspective on market practices. This article provides an analysis of market practices for director remuneration based on disclosures of director remuneration from over 250 companies for years ending before April 2017.

From the data, it is clear that larger companies pay higher fees in total and per director. With this in mind, the analysis looks at companies in three market capitalisation size groups: Large Caps (above S\$1 billion), Mid Caps

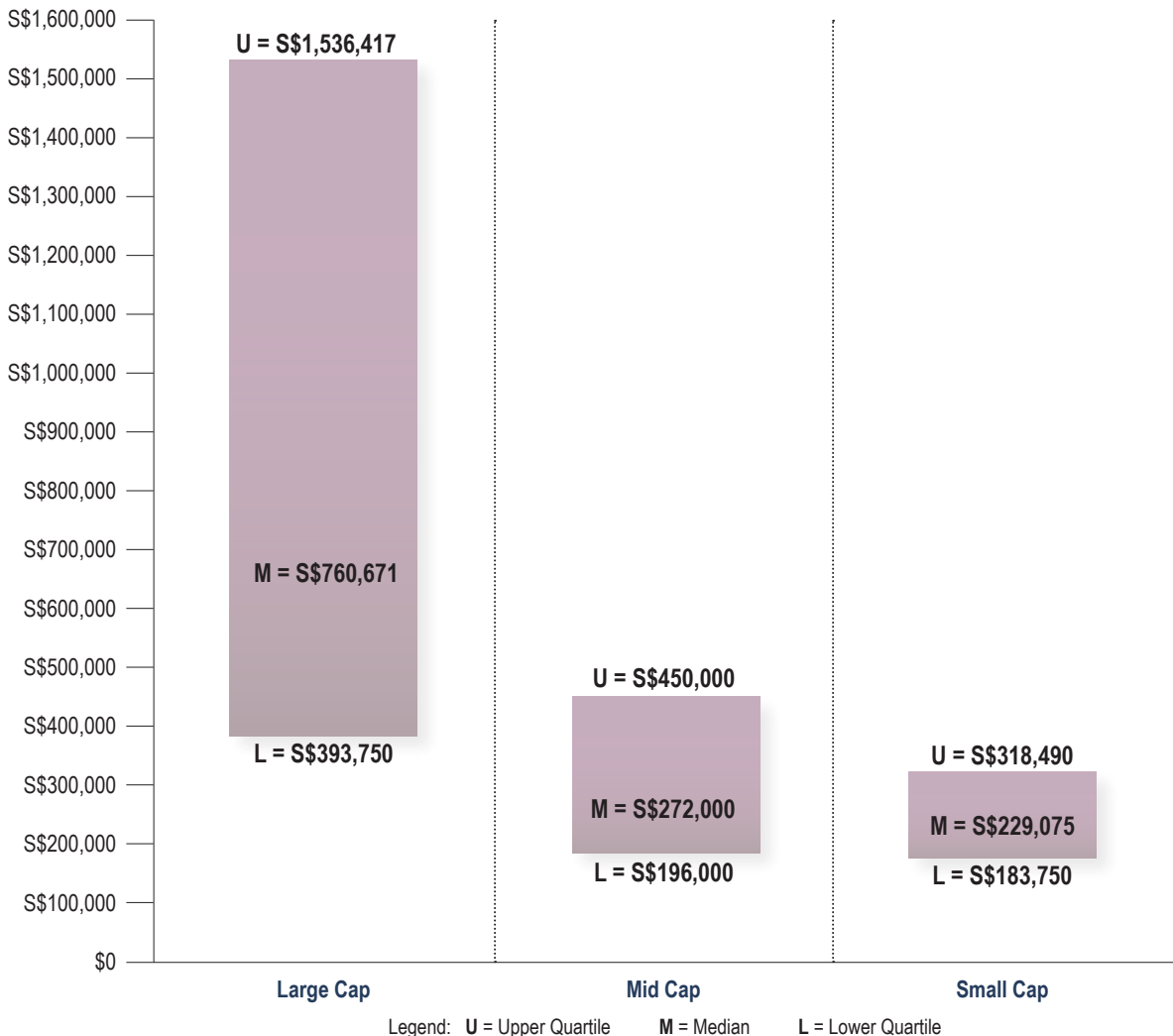
(S\$300 million-S\$1 billion) and Small Caps (S\$100 million-S\$300 million).

There is, of course, a significant difference between executive director (ED) and non-executive director (NED) fees and so these two groups are considered separately.

Total NED Fees

Whilst companies do not generally compete for NEDs on a monetary basis, they need to make sure that directors’ remuneration is set at a level that is fair and commensurates with the role, responsibilities and the expected work load.

Total Fees Paid to All NEDs



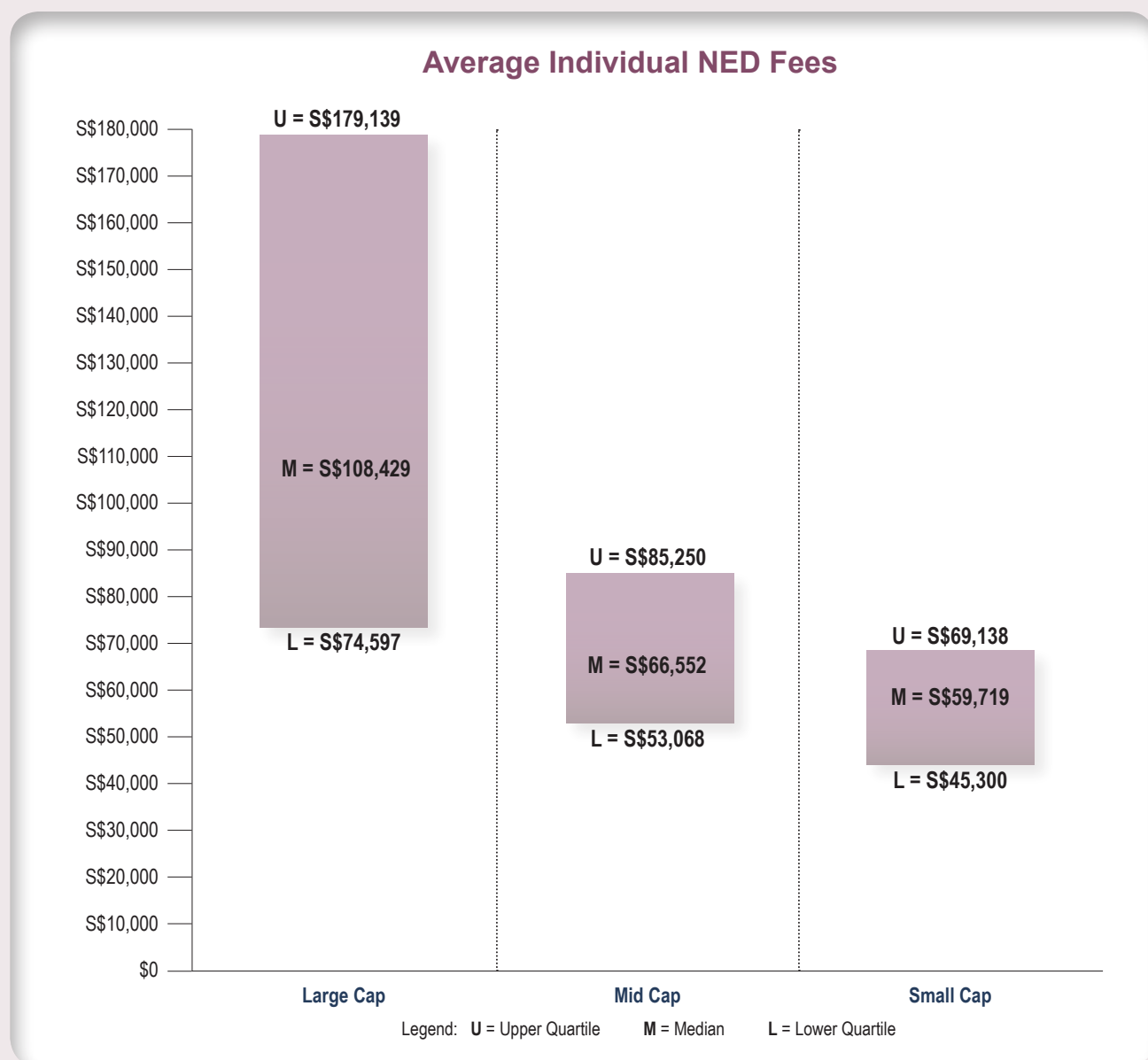
The Total Fees paid to NEDs give an indication of the overall cost of governance. Shareholders, who approve this total, should seek to determine whether the amounts are reasonable when compared to the complexity of the company. For example, regulated financial service companies require high levels of director involvement and fees are correspondingly higher.

The number of companies that ask for advance shareholder approval has increased over recent years. Some 42 per cent now put forward an AGM resolution requesting payment of fees, typically quarterly, in the coming year.

Individual NED Fee

While the Total Fees statistics are interesting from a shareholder perspective, an individual director would want to have an idea of what his or her peers are paid. This is shown below.

When comparing these fee levels to those from two years ago, I found that the fee levels have not significantly changed in the Mid Caps and Small Caps categories. However, overall, Large Caps have significantly increased fees over the last two years, with average fee increases by 12 per cent for lower quartile, nine per cent for median, and 24 per cent for upper quartile.



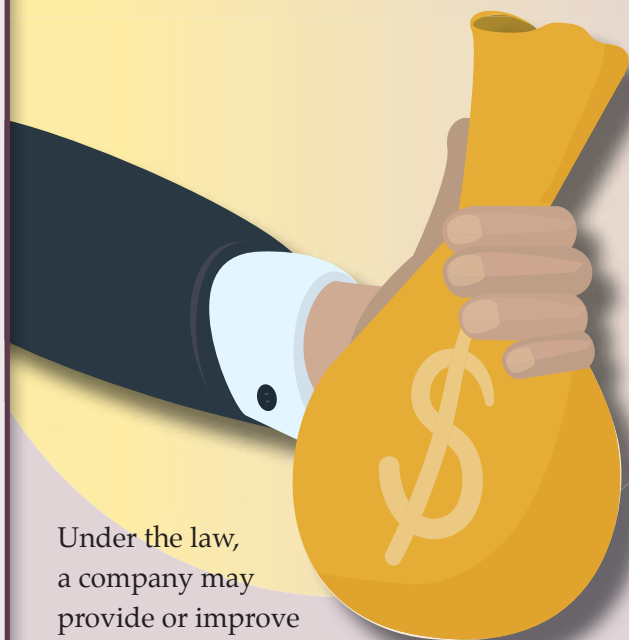
Fees have generally increased following the implementation of the Code of Corporate Governance in 2012. Perhaps, with changes to the Code underway, there could be increased directors' responsibilities and another rise in fees.

While the prevalence of awards of options or shares to NEDs remain low (less than 10 per cent of companies do so), there has been an increasing practice of paying a portion of the director fees in

the form of shares. For example, companies will define the fees payable, pay 70 per cent in cash and issue shares equivalent to the value of the remaining 30 per cent.

Shares are but one form of non-cash benefits. It is important for companies to declare other non-cash (e.g. payments in kind) benefits of a director. There must also be standalone resolutions for director fees (see box, "Director's emoluments under Companies Act").

Director's Emoluments under the Companies Act



Under the law, a company may provide or improve emoluments for a director in respect of his office only if such provision is approved by a standalone resolution passed by the general meeting of the company. This is provided for under section 169(1) of the Companies Act.

"Emoluments" to a director are defined under Section 169(2) of the Companies Act to include "fees and percentages, any sums paid by way of expenses allowance in so far as those sums are charged to income tax in

Singapore, any contribution paid in respect of a director under any pension scheme and any benefits received by him otherwise than in cash in respect of his services as director."

Emoluments therefore include not only cash, but also non-cash benefits to be received by a director in respect of his office (e.g. share, options, preferential rights to real estate, and payments in kind).

The resolution to approve the provision or improvement of the emoluments must be standalone, otherwise the resolution will be void. For example, a resolution that is purportedly passed to approve directors' emoluments as well as the payment of a dividend by the company would be voided.

Companies should comply with Section 169 of the Companies Act in providing for directors' emoluments.



NED Base and Role Fees

Most companies pay different levels of fees for different board and committee roles. However, not all companies that do so disclose details of these fees.

The table “Base Fees for NEDs” shows the fee structure in terms of a defined base fee (including the value of shares if given) for the different sizes of companies.

The table “Role Fees for NEDs” shows the additional fees for different roles as a multiple of the base fee.

Some observations on base and role fees:

- Some larger companies have changed to paying their non-executive chairs a single fee to cover all responsibilities. This “all-in-one” fee has also been significantly increased from prior levels to recognise that the board chair of a large company

needs to make a substantial time commitment to his or her role. These increases to the chair fee also go some way to explaining the general rise in average NED fees for larger companies.

- Those companies with a lead independent director (Lead ID) are now generally defining a fee for the role.
- The audit committee fees are the highest reflecting the responsibilities and workload of this committee. Those companies that have a separate board risk committee often pay similar fee levels, especially in the financial services industry.
- The fees for the remuneration committee have edged a little ahead of the nomination committee.

The practice of paying meeting fees is diminishing with only 10 per cent of companies disclosing such fees. Further, such fees are becoming more focused on specific scenarios, like ad-hoc meetings and required travel.

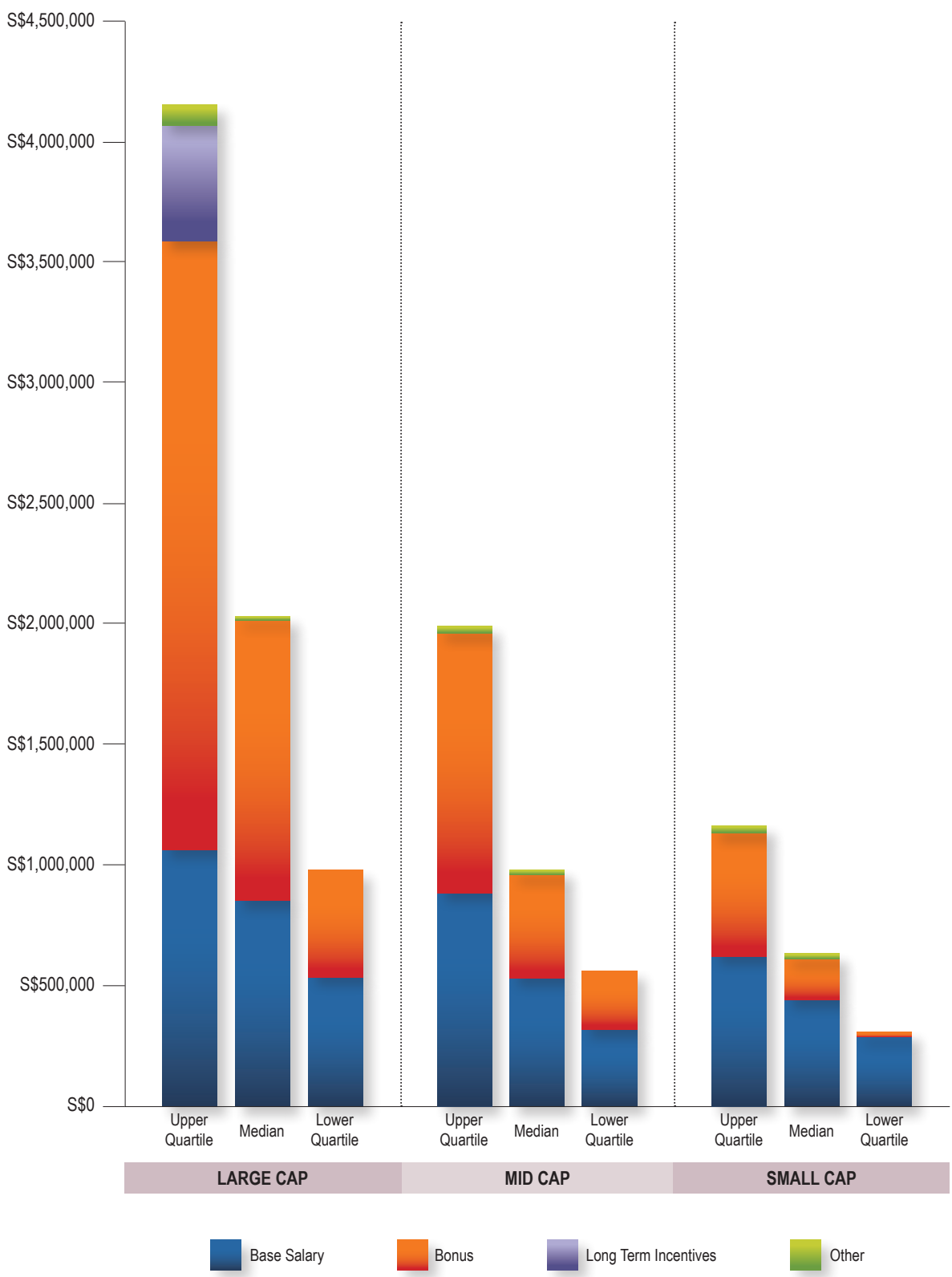
Base Fees for NEDs

	Large Cap	Mid Cap	Small Cap
% Disclosed	50%	23%	16%
Median Base Fee (S\$)	S\$73,500	S\$43,500	S\$37,500

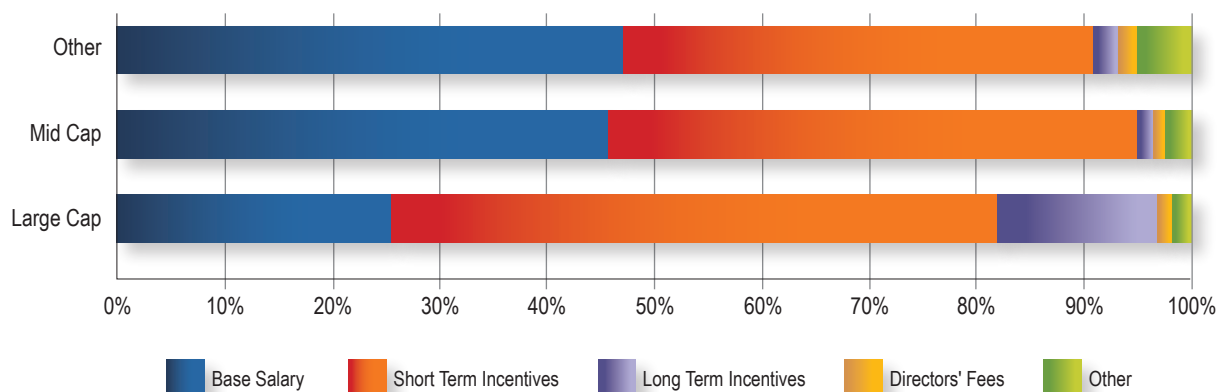
Role Fees for NEDs

Roles	Multiple of Base Fees		
	Lower Quartile	Median	Upper Quartile
1. Addition for Board Chair	86%	100%	359%
2. Addition for Lead ID	17%	20%	27%
3. Addition for Audit Committee			
a. Chair	50%	67%	73%
b. Member	25%	37%	40%
4. Addition for Remuneration Committee			
a. Chair	21%	33%	45%
b. Member	13%	20%	25%
5. Addition for Nominating Committee			
a. Chair	23%	32%	40%
b. Member	13%	20%	22%
6. Addition for Board Risk Committee			
a. Chair	39%	50%	65%
b. Member	23%	29%	40%

Executive Director Pay Levels and Components



ED Pay Mix



ED Pay Disclosures

Whilst disclosures of executive director (ED) pay have improved over recent years, it is disappointing that some companies are still not willing to disclose any meaningful information about their EDs' remuneration.

Like NED fees, ED remuneration is also closely correlated to company size. The chart "Executive Director Pay Levels and Components" show the components of ED remuneration and their amounts, and the chart "ED Pay Mix" shows the relative proportion of these components, for the different sizes of companies.

Some observations on the ED pay charts:

- Size correlates to total remuneration. The lower quartile level in Large Caps is broadly the same as the median level in Mid Caps and the upper quartile level in Small Caps at around S\$1 million.
- Base salaries are rarely above S\$1 million, even among the Large Caps.
- The proportion of pay in short-term incentives is much higher in Large Caps.
- Few companies provide their EDs with separate directors' fees. Only 17 per cent continue this practice.
- Almost half (44 per cent) of Large Caps – compared to only 12 per cent of Mid Caps and Small Caps – provide their executives with some form of long-term incentives.

Long-term incentives are generally synonymous with equity-based payments: stock options, performance share plans (where ownership is conditional on meeting performance targets), and restricted share plans (where ownership is based on the passage of time).

Many of the top executives of smaller companies are controlling shareholders and it can be argued that providing additional shares is not motivational and also can be difficult as it usually requires specific shareholder approvals.

Setting executive pay is a process that is simple in theory. It needs to be set at a level that is sufficient to attract and then retain the right person in the executive role and to provide incentives such that their actions create and sustain shareholder value.

In practice, though, a high level of considered judgement is needed to balance costs and risks with shareholders' and executives' interests. Market information provides a first level of objective data. More detailed information and a deep understanding of the remuneration environment are critical in achieving the right balance for each company and their executives. ■

Jon Robinson is Managing Director of Robinson Consulting Pte Ltd. He is a strategic consultant of Mercer where he was formerly ASEAN Executive Rewards Leader.

Corporate Governance Roundup 2017

The annual SID Corporate Governance Roundup was held at the Orchard Parade Hotel on 20 November 2017 with more than 150 members attending.

The SID governing council members provided a synopsis of the happenings in 2017 and a glimpse of what could be expected in 2018 in key corporate governance and directorship matters. Questions from the audience were taken thereafter, raising issues such as Initial Coin Offerings and board diversity.

In the next few pages, we summarise the Council members' takes in the following 10 areas:

- Regulatory Updates
- Code of Corporate Governance
- Corporate Governance Rankings and Excellence
- Board of Directors' Survey
- Board Diversity
- Audit Committees
- Professional Development
- Cyber Security
- Sustainability
- NonProfit and Social Enterprise Directorship



Regulatory Updates

Tan Boon Gin



- Singapore Exchange Regulation (SGX RegCo) now operational.
- Sustainability reporting required on a “comply or explain” basis from 31 December 2017.
- Equities market structure and adjustments:
 - o Minimum bid size doubled for securities priced S\$1.00 to S\$1.99.
 - o Widening of forced order for stocks and other securities.
 - o Mid-day trading break from 12.00 pm to 1.00 pm.
- Following public consultation on dual class shares, SGX has clarified that companies with DCS structures primary-listed in developed markets can seek a secondary listing on SGX.
- Quarterly reporting has evolved over the years:
 - o Current regime requires quarterly reports for companies with market cap above S\$75 million.
 - o Percentage of listcos affected has risen from 37 per cent at inception to 70 per cent today.
- Other disclosures under review:
 - o Use of funds and unutilised monies for secondary fundraising.
 - o Exempted transactions in IPTs.
 - o Loans provided not in the normal course of business.

Code of Corporate Governance

Ramlee Buang



- CG Code was first established in 2001 after the Asian Financial Crisis. It has since been revised in 2005, and 2012. The next revision is expected in 2018.
- Sixteen-member Corporate Governance Council was set up in February 2017 under chairmanship of Mr. Chew Choon Seng. Three subcommittees:
 - o Board Matters led by Mr. Willie Cheng.
 - o Remuneration & Accountability led by Mr. Tham Sai Choy.
 - o Stakeholders’ Rights, Disclosures & Communications led by Ms. Rachel Eng.
- Issues addressed range from the quality of disclosures to director independence and stakeholder engagement.
- Consultation paper on CG Code revision expected in mid-January 2018, and Code to be finalised and issued in the second half of 2018.
- SID will schedule two feedback sessions in February 2018 to garner comments on the consultation paper.
- Following release of the revised CG Code, SID will update reference materials and training.

Corporate Governance Rankings and Excellence

Philip Forrest



- SGTI: The 2017 Singapore Governance and Transparency Index was enhanced to include Business Trusts and REITs for the first time. The upward trend in the overall index continues to be positive, but improvement still warranted especially among small- and mid-caps.
- ASEAN Corporate Governance Scorecard: The Scorecard enjoyed a gap year in 2017 as the methodology was being reviewed. Rankings will return in 2018.
- Singapore Corporate Awards: The glamorous black-tie affair had five main awards, plus a Special Recognition Award for Board Diversity which was given to SingTel.
- Sustainability Reporting Awards: The inaugural awards went to Singapore O&G, UOB and CDL.
- Other initiatives to promote CG excellence:
 - o The year saw the completion of the rollout of SID's *Corporate Governance Guides series*, with the launch of the *AC Guide*, the *Resource Guide*, eGuide to the CG Code, and the electronic version of all the guidebooks.
 - o In addition, the *Sustainability Guide for Boards* was launched at the SID Directors Conference.

Board of Directors Survey

Ng Wai King



- The biennial *Board of Directors Survey* was released in November 2017. Highlights below are additional to points covered in pages 72 to 79.
- Emerging critical areas: Sustainability and cyber security emerged as new critical areas that boards agree that they should pay attention to. However, there is a significant gap between the importance accorded and actual time spent at the board in those areas.
- Training: More directors were attending training, with sustainability and technology being two areas that received a significant jump in the training areas required for directors. Spending on directors' training, however, remained low with majority of the respondents spending less than S\$500 per director on training.
- Internal audit function: There was a marked improvement in corporate governance practice with 91 per cent of respondents indicating that their heads of internal audit report to the audit committee or audit committee chair, compared to 81 per cent in the 2015 survey.
- In alternate years, SID produces the *Singapore Directorship Report*. Expect this in 2018.

Board Diversity

Junie Foo



- In March 2017, BoardAgender and PAP Women's Wing jointly announced the aspirational target of having 20 per cent female directorships on SGX-listed boards by 2020.
- In April 2017, Diversity Action Committee adopted a triple “hop, skip and jump” target of 20 per cent by 2020, 25 per cent by 2025, and 30 per cent by 2030.
- 2017 was the first time that female representation on SGX listed boards exceeded 10 per cent. However, this is still low and far from the target.
- There has been a further call to action for regulations viz:
 - o Disclosure of diversity policy (including gender) and measurable objectives and progress in achieving objectives.
 - o Harden nine-year rule on director independence to promote board renewal.
- 2018 will see two new publications:
 - o SID book, *Women on Board: Making a Real Difference*.
 - o BoardAgender and HCLI report on 20 by 2020.

Audit Committees

Soh Gim Teik



- ACs faced a number of new regulatory developments during the year.
- IFRS Convergence: SFRS (I) kicks in on 1 January 2018 with two new accounting standards (IFRS 15 on revenue from customers, and IFRS 9 on financial instruments). Implementation has been a problem for some companies. Watch out for IFRS 16 Leases, effect 1 January 2019.
- Enhanced audit report (EAR). First time effective in 2017. What's new are Key Audit Matters (KAMs) and Other Information (OI). Only 42 per cent of ACs provided commentaries.
- Audit Quality Indicators (AQIs): Eight indicators and six targets to help ACs evaluate auditors.
- Financial Reporting Surveillance Programme (FRSP): 2017 change to “Restatements First” policy. In particular, watch out for reviews on impairment, valuation, and cash flow classification in 2018.
- AC Chapter set up in January 2017 to strengthen capacity and improve effectiveness of ACs:
 - o Six AC pit stops organised in 2017. More forthcoming in 2018.
 - o Collection of articles curated and available on SID website.

Professional Development

Poh Mui Hoon



- SID curriculum map look at developing directors in two dimensions:
 - o Horizontally: from fundamentals, to essentials, advanced and current topics.
 - o Vertically: from nonprofits, to startups, commercial, listed and international.
- Several new PD sessions successfully rolled out in 2017:
 - o SYS: So, You Want To Be A Social Enterprise Director.
 - o GFB: Governance for Family Businesses.
 - o BFS3: Sustainability for Directors.
 - o MCD series: Four new masterclasses on innovation, strategy, family firms, and cognitive bias in boardroom decision-making.
 - o AC Pit Stops.
- 2018 new courses and sessions planned:
 - o MCD series: masterclasses on leading from the chair, and anticipating the future.
 - o SDF: Startup Director Fundamentals.
 - o Other courses such as LCD (Listed Company Directors) course being updated.
- Pilot on online training and webinars.

Cyber Security

Robert Chew



- Cyber-attacks on prominent organisations continue unabated across the world, including Singapore (AXA, NUS, and NTU). This has also dominated much of the public discourse and thrust the issue of cyber security into the spotlight.
- Singapore has a national cyber security strategy that entails strengthening global partnerships and allocating more funds to plug security gaps in critical information infrastructure.
- A draft Cybersecurity Bill was launched in July 2017 for public consultation.
- Cyber security is the board's – and everybody's – business.
- SID initiatives in this area include:
 - o Business Future Series on Cyber Security for Directors to educate board members of their fiduciary duties and to set the tone at the top by ensuring that cyber security becomes a key board agenda.
 - o Conference and Bulletin issue focused on cyber security in 2016.

Sustainability

Lee Suan Hiang



- Sustainability has been gaining currency internationally, especially when brute capitalism is seen to be the cause of many global problems.
- UN has rolled out a slew of sustainability initiatives, the most significant being the Sustainable Development Goals launched in September 2015.
- SGX is requiring companies to produce a sustainability report on a “comply or explain” basis.
- SID initiatives:
 - SID Sustainability Subcommittee to identify and plan initiatives.
 - SID Directors Conference 2017 theme was sustainability. Event was attended by over 1,000 participants.
 - *Sustainability Guide for Boards* produced in collaboration with KPMG and SGX.
 - Inaugural Singapore Sustainability Reporting Awards organised in collaboration with EY and SGX.
 - SID Directors Bulletin 2017 Q3 issue theme on sustainability.
 - Professional development courses: Sustainability for Directors, and Business Value of Sustainability.

NonProfit and Social Enterprise Directorship

Wilson Chew



- The Code of Governance for Charities in Singapore was revised in 2017, to take effect in 2018. Revisions include:
 - 10-year rule on board tenures.
 - Definitions of charity size for checklists and disclosures. Waiver for those with annual receipts or expenditures below S\$50,000.
 - Increased disclosures on meeting attendance, remuneration of board and staff.
 - Introduction of risk management measures.
- The state of social enterprises (SEs) in Singapore:
 - In 2017, Singapore Centre for Social Enterprise, *raiSE* saw a 32 per cent surge in SEs registered.
 - Top three beneficiary groups are disadvantaged youths/children, persons with disabilities and low-income families/persons.
- In 2018, organisations such as Ashoka, *raiSE*, and DBS Foundation are increasing resources to support early-stage social entrepreneurs.
- SID professional development sessions on social enterprises (SYS) and nonprofit (SYN and NPD) have seen good take-up, and will continue into 2018. ■

Another Full Day at the SID CGR, AGM and EGM

The 19th Annual General Meeting (AGM), followed by an Extraordinary General Meeting (EGM) was held on 20 November 2017 at the Ballroom of the Orchard Parade Hotel. The general meetings were held just after lunch and a Corporate Governance Roundup event for members in the morning (see page 64).

With the requisite quorum, SID Chairman Willie Cheng called the meeting to order.

SID Executive Director Ms Joyce Koh then summarised the past year's activities and plans for 2018 through a short presentation.

The AGM resolutions were then tabled and voted on using electronic polling devices.

Eight governing council members were elected/re-elected. Mr Cheng expressed his appreciation to three members who were retiring from the governing council (see next page).

At the conclusion of the AGM, Mr Cheng opened the Extraordinary General Meeting (EGM) which sought to approve revisions to the Constitution of the Institute.

Amendments highlighted in the Special Resolution included those made necessary by changes to the Companies Act, corrections of typographical errors, compliance with provisions of the Personal Data Protection Act 2012, and streamlining and rationalising of certain other provisions in the existing Constitution.

It was noted that the Minister gave his approval for the changes to the constitution, and ACRA informed that this requirement was no longer necessary in future constitutional changes but SID will have to disclose its limited liability



status to potential lenders whenever it wished to borrow money.

The revisions to the Constitution were adopted unanimously.

As the EGM drew to a close, Mr Cheng conveyed his thanks to Far East Organization for sponsoring the venue for the day's activities; to Boardroom Limited for sponsoring and supporting the polling devices; and to Deloitte for providing the scrutineer services pro bono.

The new SID council had its first meeting immediately after the EGM. ■

Governing Council Members

The following members were elected/re-elected to the SID council at the 19th AGM.



Wilson Chew Huat Chye*



Philip Forrest*



Lee Chong Kwee



Ng Wai King*



Poh Mui Hoon*



Soh Gim Teik*



Wong Su-Yen*



Tham Sai Choy

*re-elected

The following existing SID council members retired at the 19th AGM.



Daniel Ee



Irving Low



Andy Tan Chye Guan



BOD Survey 2017 Trends in Board Focus and Practices

By CHUA WEI HWA, KOH WEI CHERN AND JONATHAN RAMSAY

The 10th edition of the biennial *SID-SGX Singapore Board of Directors Survey* was released in November 2017. The survey provided insights into board composition, board practices and trends in corporate governance among Singapore listed companies.

While the Survey covered a broad range of board views and practices (details of which can be found in the full report), this article focuses on governance issues that have garnered attention recently, including those highlighted by Singapore Exchange's inaugural review of Mainboard companies' disclosures in compliance with the Code of Corporate Governance (the Code) in July 2016.

Comparisons with the previous two surveys are shown to illustrate trends. Where applicable, data from the *2016 SID-ISCA Directorship Report* has also been used to add further context.

Board Focus

Board retreats have fallen but monitoring of strategy has increased

Less than half (48 per cent) of the respondents held board sessions dedicated to strategy, without discussion of any other agenda items (in the last 12 months).

But there was an increase in the percentage of respondents who use indicators to monitor strategy (87 per cent in the 2017 Board Survey compared to 78 per cent in 2015 Board Survey).

With mandated sustainability reporting, majority use outside help for their sustainability reports

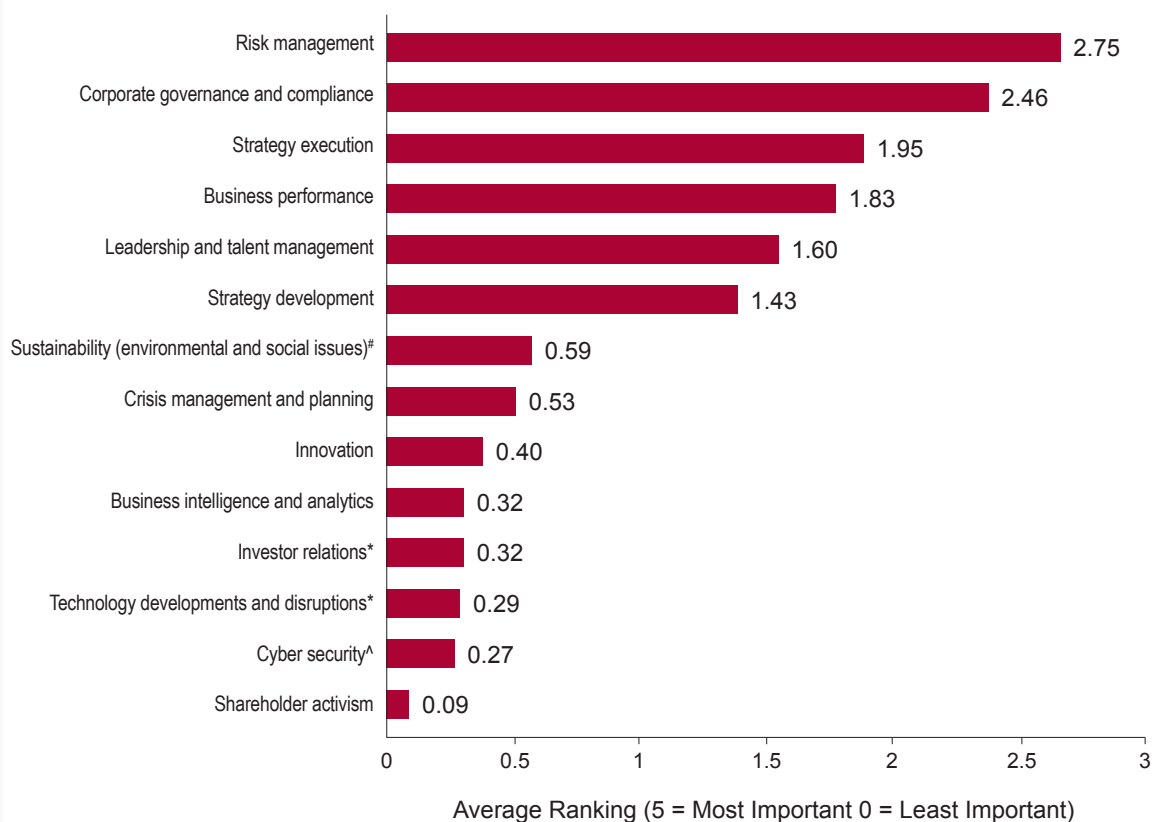
52 per cent of companies (mostly large- and mid-caps) engaged an external consultant to help with their sustainability reports. Another 24 per cent intends to do so in the future.

Risk management tops and cyber security is low on board agenda

Risk management continues to be the most important area of board focus.

While 97 per cent of the respondents agree that cyber security is of critical concern to the company, it does not rank high at all in terms of board focus.

Which of the following areas does the board consider to be most important?



Renamed in 2017.

* Indicates new categories in 2017.

^ New category previously included under "Information technology and risks".

Directorship



Director tenure: limited independence review beyond nine years

The 2016 *Directorship Report* showed that 64 per cent of 507 firms, which have been listed for nine or more years, have at least one independent director who has served for more than nine years. Guideline 2.4 of the Code requires the independence of such directors to be rigorously reviewed.

Only 18 per cent of the respondent firms in the 2017 Survey specified a limit on the number of years that a director can serve before the director is considered non-independent. While this is a slight improvement compared to 16 per cent in the 2015 Survey, only 51 per cent of the 2017 Survey respondent firms indicated that they conduct a rigorous review after nine years.

Multiple directorships: more boards specify limit

Guideline 4.4 of the Code recommends that Boards determine and disclose a limit on the number of listed board representations that directors can hold.

Survey respondent firms indicated specifying such a limit as follows:

Type of Directors	2017	2015
Executive directors	30%	25%
Non-executive directors	29%	28%
Independent directors	34%	[Included in above]

There is thus a modest improvement compared to the 2015 Survey. The most commonly specified limit remains as six directorships across all the types of directors.

Numbers of allowed listed company directorships for Independent Directors	3	4	5	6	7	8	9	10
% of companies (N=68)	1	9	21	53	4	4	6	1

Note: Companies that indicated they have a limit but did not specify a number were excluded in the table above.

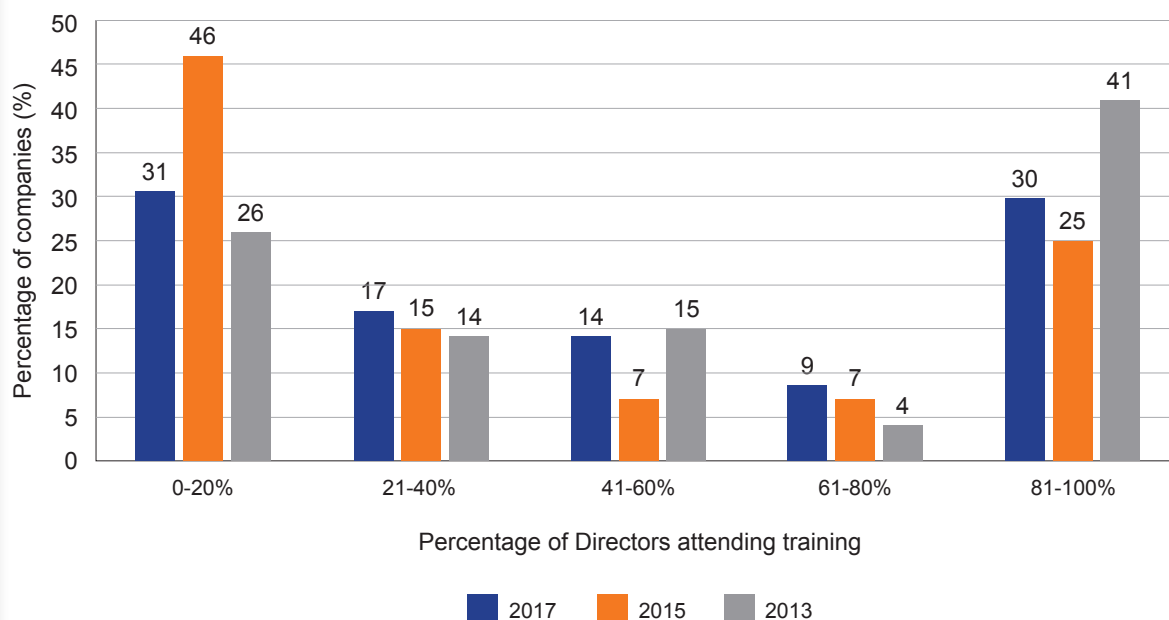
However, the 2016 *Directorship Report* findings suggest that multiple directorships are not a common phenomenon, with only 18.3 per cent of directors in the sample holding multiple board seats.

Director training: improved but still insufficient

Guideline 1.6 of the Code recommends that all directors receive regular training. One of the recommendations from the SGX inaugural review of mainboard listed companies is for companies to make greater disclosure about the specific training received by directors and their attendance.

The reported level of director training has increased in the 2017 Survey, compared to 2015. The percentage of respondent firms reporting that less than 20 per cent of their directors attended training in the past year decreased from 46 per cent in 2015 to 31 per cent in 2017. Correspondingly, there was an increase from 25 per cent in 2015 to 30 per cent in 2017 of firms indicating that over 80 per cent of their directors attended training in the past year.

In the last 12 months, how many directors have attended training (other than orientation and induction) which are provided or arranged by the company in relation to their duties on the board?



Less impressively, 51 per cent of the 2017 Survey respondent firms reported spending, on average, less than S\$500 per executive director on external training, and 62 per cent reported spending less than S\$500 per non-executive director.

Gender Diversity



Gender diversity has improved marginally

Guideline 2.6 of the Code explicitly recommends diversity of “skills, experience, gender and knowledge of the company”. However, the 2016 *Directorship Report* finds that the proportion of women on boards increased only marginally from 9.7 per cent in 2014 to 11 per cent in 2016.

Most boards not taking positive actions to improve diversity

While 39 per cent of the 2017 Survey respondent firms claimed to have taken specific steps towards increasing female representation on their boards, 71 per cent of these firms simply reported that they have “generally encouraged female representation”.

In contrast, only five of the 39 per cent reported making specific plans, and only three per cent have set gender diversity targets.

Boards cite challenge of limited pool of female candidates

Respondents cited the main challenge to achieving gender diversity as being the lack of credible or suitable female candidates.

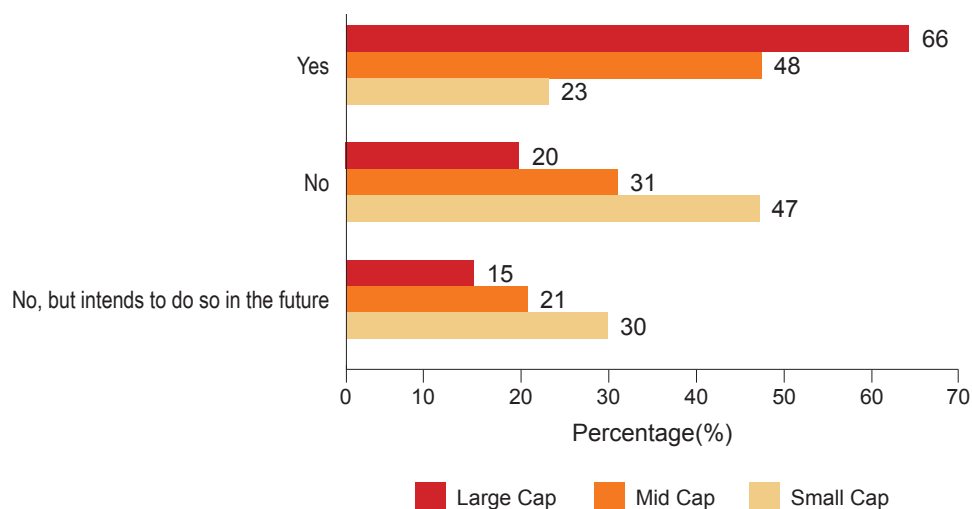
In addition, 33 per cent of the respondent firms anticipate having no female directors in the future.

Boards do not wish for stronger regulatory measures

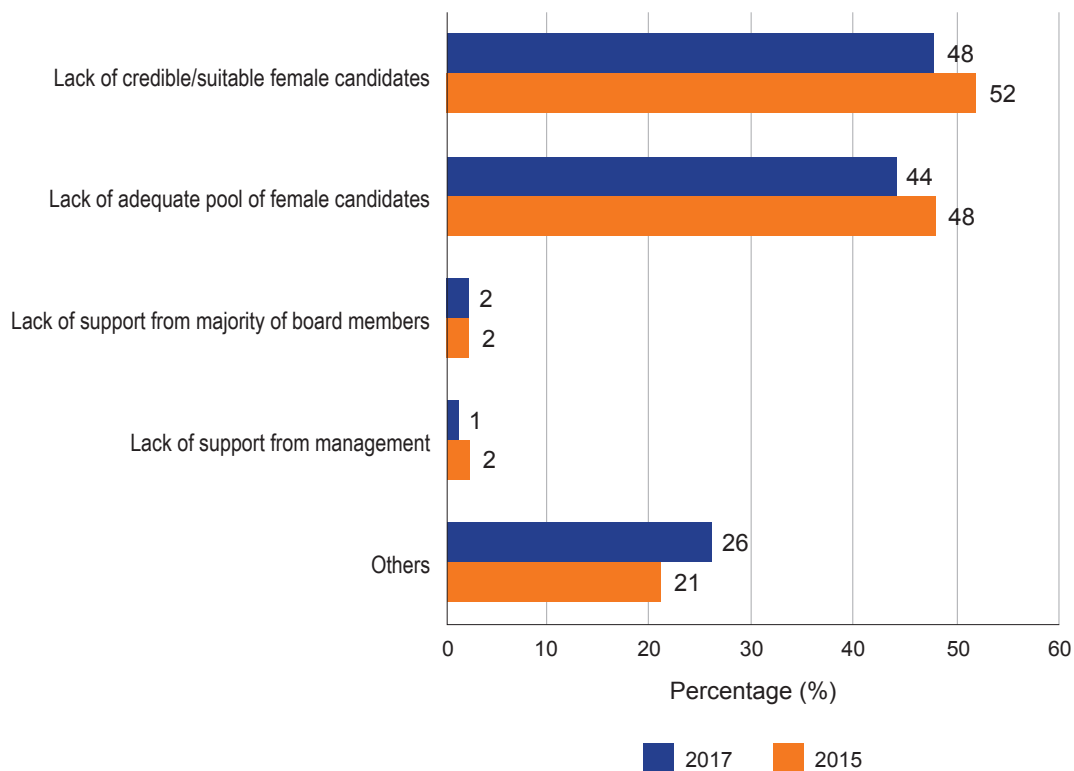
Yet, the most popular choice of regulatory action to encourage diversity is a continuation of “best efforts to increase awareness”.

There is little support for gender quotas.

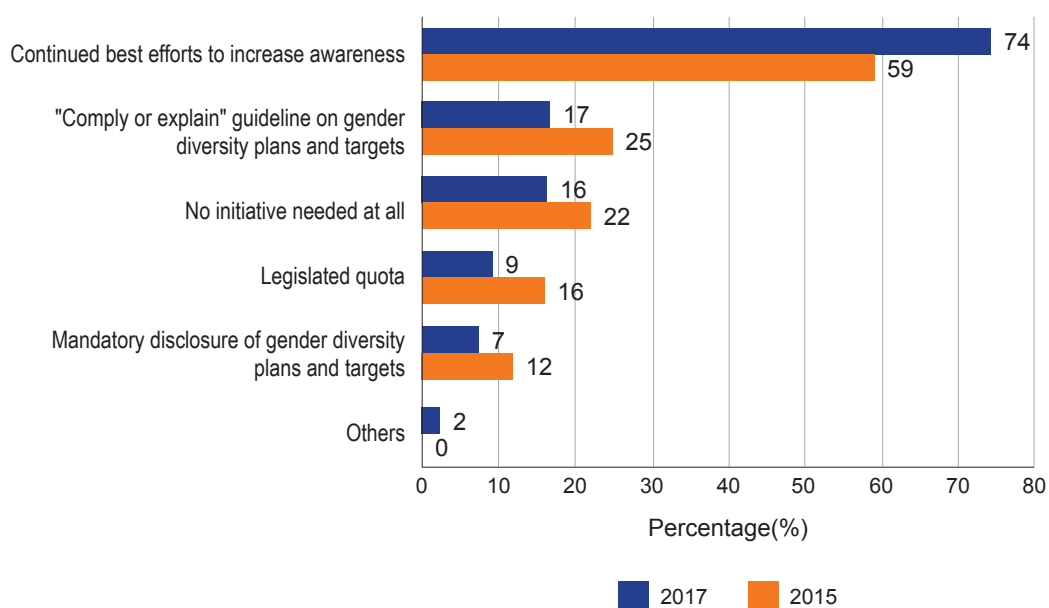
Has the board taken steps to encourage female representation on the board?



What are the main challenges that your board faces in increasing gender diversity?



Which of the following actions by regulatory authorities would result in greater diversity in the board?



Remuneration Disclosures

Director and CEO remuneration disclosures continues to be poor

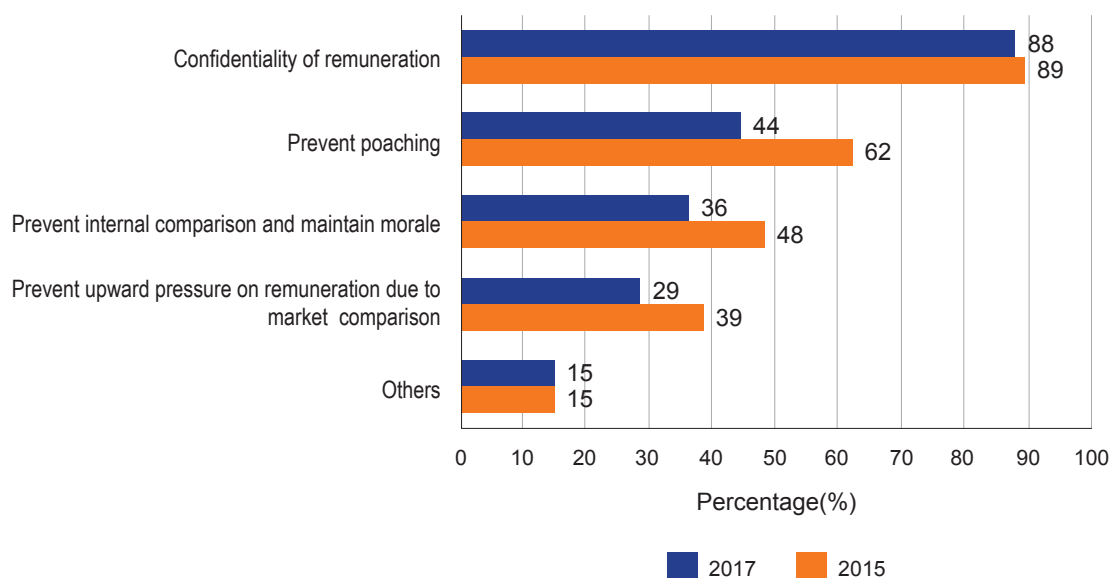
Although Guideline 9.2 of the Code recommends disclosure of the remuneration of each individual director and CEO, the 2016 *Directorship Report* finds that only 34.2 per cent and 27.1 per cent of firms made precise disclosures of directors' and CEOs' annual remuneration on a named basis.

Of the respondent firms in the 2017 Survey that indicated such non-disclosure, 95 per cent of them indicated no intention of doing so within the next two years.

Main reasons relate to confidentiality and competition

Similar explanations were given in the 2015 Survey.

What are the reasons that the company does not fully disclose the detailed remuneration of each individual director and the CEO on a named basis?



Disclosure of aggregated top management remuneration is much better

Guideline 9.3 of the Code recommends the disclosure of the remuneration of at least the top five key management personnel in bands of S\$250,000, and the aggregate total remuneration paid to these management personnel.

Similar to 2015, 74 per cent of respondent firms in the 2017 Survey indicated that they make such disclosures. However, 96 per cent of those that do not currently disclose have no intention of doing so within the next two years.

Reasons cited for non-disclosure are similar to those for the non-disclosure of directors' and CEOs' remuneration.

Shareholder Engagement



Companies are more active in investor relations

Principle 15 of the Code recommends that companies have an investor relations policy in place to ensure a consistent approach to engaging and communicating with shareholders.

Some 87 per cent of respondent firms in the 2017 Survey reported having a designated person/officer in charge of Investor Relations (IR), an increase from 80 per cent in 2015.

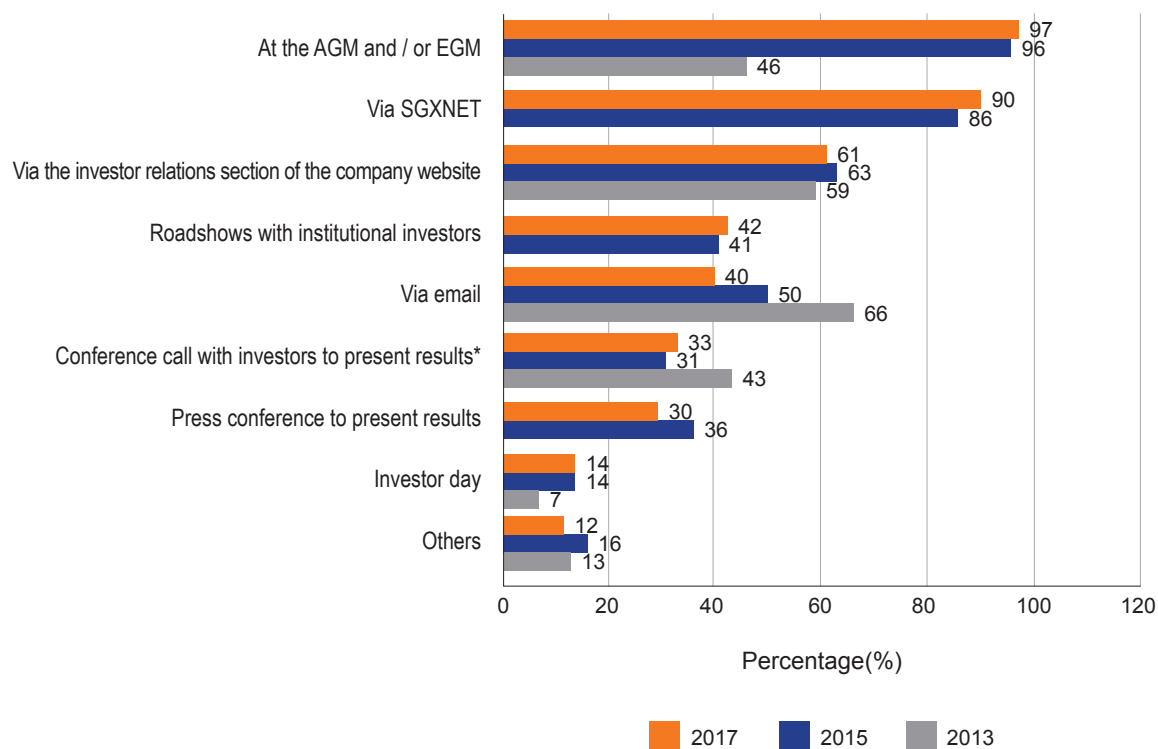
In 2017, this designated officer is most commonly the IR Officer. In contrast, the designated officer was most commonly the CFO in the 2015 Survey.

General Meetings and SGXNet most commonly-used medium

As might be expected, the Annual General Meeting and/or Extraordinary General Meeting continues to be the main mode of communication with investors and other stakeholders.

This is followed by SGXNet, which was chosen by 90 per cent of respondents. The use of emails appears to have declined in popularity. ■

How does your company contact or communicate with your investors and other stakeholders?



Chua Wei Hwa and Koh Wei Chern are both Associate Professors and Jonathan Ramsay is a Senior Lecturer at Singapore University of Social Sciences.

Launch of Singapore Board of Directors Survey 2017

On 7 November, SID launched the 10th edition of the *Singapore Board of Directors Survey 2017* in the presence of some 200 company directors and senior executives at the Marina Mandarin Singapore.

The survey, conducted by SID and SGX together with PwC and Singapore University of Social Sciences (SUSS), offers an insight to the board structures and practices of listed companies in Singapore.

In his welcome address, Mr Willie Cheng, SID Chairman, suggested that the survey provides useful context for the ongoing review of the Code of Corporate Governance (the Code), and might help shape recommendations for revisions to the Code.

Mr Ng Wai King, SID Council member and Chairman of the Survey Committee, and Dr Koh Wei Chern, Associate Professor at SUSS,



Ng Wai King.



Dr Koh Wei Chern.

presented the key findings from the survey. They covered governance issues such as board diversity, sustainability, cyber security, internal audit and training.

This was followed by a panel discussion moderated by Mr Ramlee Buang, SID Council member.

Ms Fang Eu-Lin of PwC addressed gender diversity, noting that while there was an uptick in the proportion of companies taking steps to encourage female representation on boards,





Panellists (L-R) Ramlee Buang, Fang Eu-Lin, Jon Robinson, June Sim, Annabelle Yip.

much scope for improvement remained. Nevertheless, the panel concurred that gender should not be the only indicator of board diversity. For example, Mr Jon Robinson of Robinson Consulting proposed that diversity of age is also important, given developments in technology and the power of social media.

Related to this is the issue of director search. Ms June Sim of SGX RegCo was concerned about the high percentage of companies identifying potential non-executive directors through personal contacts only, as this casts doubt on independence and is likely to reduce diversity.

Director training demands greater attention, according to the panel. All panellists were of the view that it should be mandatory for first-time directors to attain a comprehensive understanding of directorship to effectively

discharge their roles. This particularly applies to family controlled firms.

Other matters discussed included where the substantial shareholder threshold should be set, and the number of directorships that a board member should be permitted to hold.

The session ended on an uplifting note, with the panel rejecting the notion that “compliance” and “performance” are independent pursuits that compete for directors’ time. Rather, they are constantly intertwined; non-compliance invariably has a bearing on performance, as highlighted by Ms Annabelle Yip of WongPartnership. Hence, boards must maintain a keen focus on the duality of governance. ■

The Board of Directors Survey is available from the SID Secretariat at \$90 for SID members and \$150 for non-SID members.

NonProfit Directors Programme Run 3

The third run of the highly successful NonProfit Directors (NPD) course commenced on 12 October 2017 with 30 participants.

The NPD course, jointly organised by SID and the Social Service Institute (SSI) with the support of the Centre for Non-Profit Leadership and the Charity Council, is designed for existing directors of NPOs. It features seven modules addressing the various aspects of fundraising, strategy, financial accountability and new social models.

The first module, “The NonProfit Environment” kicked off with an overview of the nonprofit ecosystem by Ms Sharifah Mohamed, co-editor of *The World That Changes The World*.

Following that, a distinguished group of nonprofit leaders, Ms Sim Hui Ting (Deputy Commissioner



of Charities), Mr Ang Hao Yao (Charity Council Member), Mr Willie Cheng (SID Chairman), Ms Theresa Goh (NVPC Board Member), and Mr Sim Gim Guan (NCSS CEO) took turns to present and answered questions from the floor. They discussed the regulatory environment, nonprofit versus commercial directorship, talent management and issues encountered in nonprofits. ■

Overcoming Cognitive Biases in Boardroom Decisions

Twenty-two participants attended the Masterclass module on “Overcoming Cognitive Biases in Boardroom Decisions” by Dr. Massimo Massa, the Rothschild Chaired Professor of Banking and a Professor of Finance at INSEAD, at Marina Mandarin Singapore on 10 November 2017.

Dr. Massa started by sharing the three categories of biases, namely, Attitude Towards Risk, Self-Concept and Attention-Grabbing, and the impact they have on the decision-making process. Interestingly, people were generally risk-averse to gains and made different decisions on the same issue when framed differently. He cautioned that views formed based on a good track record may not necessarily translate into good future performance.

He also proposed that besides having a board with diverse experience, some board members



should, ideally, play “counterfactual thinking” roles. This approach ensures discussions are open and healthy.

The engaging session left participants with new insights that empower them to make sounder and more rational boardroom decisions. ■

Board Chairmen's Conversation: Will Singapore Survive the Future?

On 15 November 2017, Booz Allen Hamilton (BAH) hosted 14 Board Chairmen at the Shangri-La Hotel Singapore to discuss the topic "Will Singapore survive the future? – Emerging threats and opportunities".

Mr Mike McConnell, Senior Executive Adviser of BAH and former Director of US National Intelligence, set the stage by suggesting that Singapore is at an inflexion point, and its response to potential threats will determine its subsequent path.

The chairmen agreed that while sound governance and robust financial, education, and social systems have served Singapore well thus far, uncertainty around the US-China relationship, technology, and regional politics



are forces of disruption that threaten to reshape the island-nation's economic order. In response, companies should pivot their focus towards niche markets and ensuring broadminded leadership.

In closing, Mr Horatio Rozanski, Global CEO of BAH, said that corporate leaders need to advocate change and play a vanguard role in leveraging technology and responding to the evolving geopolitical and other aspects of the environment. ■

RC Chairmen's Conversation: Long-Term Incentive Pay

On 12 October 2017, 16 Remuneration Committee (RC) chairmen discussed incentive compensation for executives in an era of disruptive innovation and business transformation.

The RC Chairmen's Conversation was hosted by Mr Na Boon Chong, Managing Director of Human Capital Consulting and Mr Michael Burke, Global CEO of Talent, Rewards and Performance of Aon Hewitt. Mr Burke provided an overview of the long-term incentive design trends in Singapore and from around the globe. He observed that the jury is out on the efficacy of total shareholder returns, a mechanic that many companies still apply.

He also described pay, design, governance and communication as the key levers employed by



RCs, and emphasised the importance of increasing transparency in remuneration.

Participants then discussed the issues of calibrating pay structures to attract and retain the right talent to mitigate business disruption in good and challenging times, and the attendant challenge of balancing innovation with core businesses. ■

BFS 2: Directors Face Cyber Attacks

The second run of BFS 2, “Cyber Security for Directors”, organised in collaboration with Booz Allen Hamilton (BAH), Dimension Data and PwC on 20 September 2017, attracted a full house of 42 participants.

The event featured a highly engaging hands-on cyber security war game led by the BAH team, which comprised Senior VP Mr Dennis Gibson, Executive VP Christopher Ling, and Senior Executive Adviser Mike McConnell, who summarised key takeaways and shared their war stories of real-life cyber security situations.

Mr Neville Burdan, General Manager, Dimension Data, Asia Pacific, shared various mitigation strategies such as the three lines of defence, which are: effective strategies, tools and processes, and a robust audit process.



The session ended with a lively panel discussion moderated by Mr Vincent Loy, Partner at PwC. The panel concurred that to achieve cyber resilience, boards should know what their crown jewels are, have a strategy roadmap, and embrace the need to close any identified gaps immediately. ■

International Directors Programme (IDP) Participants in Fontainebleau

Thirty-four participants from the 2017 cohort of the International Directors Programme (IDP) Asia Edition gathered at INSEAD's Europe Campus in Fontainebleau, France from 25 to 27 September 2017 for the second IDP module on “Board Dynamics, Efficiency and the Role of Committees”.

Prof Jose Luis Alvarez kicked off with a discussion on the political and social competencies of directors, where he covered the role of a director as a political actor, and the question of directorial power.

In the second day, Prof Ludo Van der Heyden dealt with the concept of “Fair Process Leadership”, a useful model for any board. The day ended with an engaging fireside chat with Ms Barbara Kux, a board member of several prominent listed entities in Europe.



On the third day, Prof Erin Meyer discussed how business is conducted across cultures.

Besides the learning experience, the participants bonded, friendships blossomed, and networks were expanded. It was indeed a memorable trip to picturesque Fontainebleau. ■

ASEAN Corporate Governance Scorecard: Experts Meet to Enhance Framework

SID hosted a meeting on 4 and 5 October 2017 for 18 corporate governance experts and support staff from the appointed Domestic Ranking Bodies (DRBs) of the participating ASEAN countries, to review the ASEAN Corporate Governance Scorecard process.

Singapore was represented by Mr. John Lim, SID's Immediate Past Chairman, and Ms Nguyen Mai Huong and Mr Muhammad Ibrahim, both research staff from the Centre for Governance, Institutions, and Organisations (CGIO) at NUS Business School.

The review meeting, chaired by Ms Carmela Rosario Austra from the Securities Commission of the Philippines, was part of the continuing discussion focused on improving the framework of the Scorecard and strengthening the evaluation process of companies in the ASEAN region.



From 2017, the Scorecard initiative introduced an additional level of assessment for top companies, involving the evaluation of key corporate governance practices by an independent assessor.

SID hosted the participants to a dinner at the OASIA Hotel at the end of the session on the first day. ■

INDUSTRY NEWS

Singapore Chief Legal Officer Awards

The winners of the augural Singapore Chief Legal Officers Awards received their trophies from Chief Justice Chan Sek Keong at a black-tie gala dinner at the JW Marriott Hotel Singapore South Beach on 17 November 2017.

The Singapore CLO Awards was organised by the Singapore Corporate Counsel Association (SCCA), the national association for in-house lawyers, and supported by SID. The Awards seeks to recognise the contribution of chief legal officers to the work of their board of directors and senior management team in their organisations. The independent judging panel was chaired by Ms Angeline Lee, SCCA President Emeritus, and included Justice Steven Chong and four SID Council members (Mr Willie Cheng, Mr Daniel Ee, Mr Tan Boon Gin, and Ms Wong Su-Yen.)



L to R: Willie Cheng, Loretta Yuen, Gladys Chun, Chan Sek Keong, Angeline Lee.

The winner for the Singapore listed company category went to Ms Loretta Yuen, General Counsel, OCBC Bank. The winner for non-listed companies, including Singapore regional office of an MNC, went to Ms Gladys Chun, General Counsel of the Lazada Group. Both handled hugely valuable and complex acquisitions for their companies which involved multinational legal issues. ■

New Guide on Prevention of Insider Trading

SGX and industry partners, including SID, launch a guide to prevent insider trading and information leaks.

Why should companies and directors care about insider trading and information leaks?

The obvious answer is that insider trading is prohibited by law. Companies that fail to prevent or detect insider trading by their employees contravene the Securities and Futures Act, if the trades are conducted for the corporate benefit and attributable to corporate negligence.

Beyond the law, there are also practical considerations.

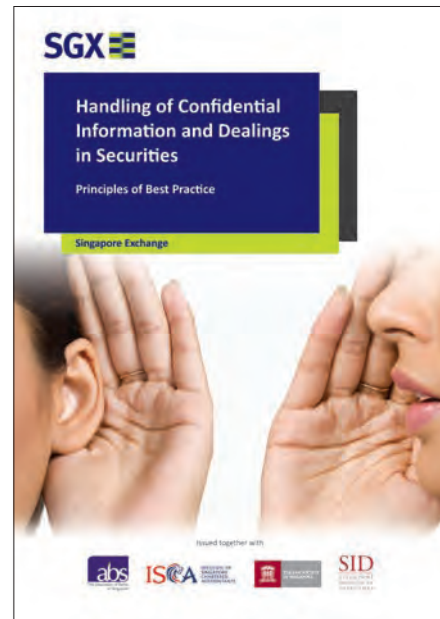
Information leaks cast a shadow over deal certainty. A 2009 Intralinks and Cass Business School study found that leaked deals, when compared with non-leaked ones, had a lower completion ratio, took a longer time to complete, and, in effect, resulted in a lower premium being paid.

SGX Listing Rules require issuers to immediately disclose material information.

One of the necessary conditions to withhold disclosure, when the issuer is not yet ready to announce the information, is to ensure that the information is kept confidential. Leaks may result in market rumours or unusual trading activity in the issuer's securities.

If the information is no longer confidential, to ensure informed and fair trading, the issuer must immediately announce such information, even if it is contrary to its original intention. Companies must thus control information flow to maintain confidentiality.

When insiders trade in a company's securities while in possession of inside information, uninformed



investors are worse off as the playing field is tilted unfairly against other market participants. That is why a trading query will be issued to draw investors' attention to the unusual trading.

To help companies and their advisers safeguard information and avoid unwanted distractions, SGX, together with the Association of Banks in Singapore, the Institute of Singapore Chartered Accountants, the Law Society of Singapore and SID, has launched a guide, *Handling of Confidential Information and Dealings in Securities*.

The guide collates industry best practice and practical examples on how to effectively deter insider trading and information leaks. Companies can decide on the measures they should adopt according to their own profile and needs.

The guide organises these guidelines and examples around nine principles, grouped into three parts (see box, "Principles of Best Practice").

It is in the interest of companies to combat insider trading and information leaks. Together, we can strengthen investor confidence in our markets if everyone follows these leading practices. ■

Principles of Best Practice

A. Creating a culture of compliance

Principle A1

Have in place clear written policies and procedures on the handling of confidential information and restrictions on dealings in securities.

Principle A2

Put in place measures to create a strong culture of awareness within the organisation of the risks of information flow and restrictions against dealings in securities.

Principle A3

Conduct regular reviews of the policy and procedures to assure that they are relevant and effective.

B. Handling and control of information

Principle B1

Restrict the dissemination and sharing of confidential information to reduce any chances of information leakage, which could reduce market integrity.

Principle B2

Have in place procedures to prevent accidental disclosures.

Principle B3

Have effective physical document management and information technology controls.

C. Restrictions against dealings in securities

Principle C1

Institute a “black-out period” and/or “trading windows”, to limit the time frame that dealing in the company’s securities is permitted; maintain a policy that staff should not deal in the company’s securities based on speculation or short-term considerations.

Principle C2

Establish proper pre-dealing and post-dealing procedures, and ensure proper audit trails.

Principle C3

Maintain a “restricted list” and “watch list” of securities.

Taking ACs to the Next Level



By **DANIEL EE**
Vice Chairman, SID Governing Council, and Chairman, AC Chapter



COUNTING BEANS

Which board committee does the most work, carry the most responsibilities, and is usually on the firing line?

Most directors and senior managers will say that it is the audit committee, or AC. So, when news of corporate failures like Enron, Worldcom and Lehman Brothers broke, a common question is: “What was the AC doing?”

It may be easy to point fingers at the ACs for “napping on the job”, but rather, the lesson here is that when ACs are held to very high standards, their value comes into question when a crisis over misleading financial statements hits.

What these misgivings about the ACs suggest is the need for AC chairs and members as well as those who support ACs (the management, auditors and regulators) to be better prepared to play their roles effectively. Indeed, over the last decade, we have seen more articles on AC-related subjects, and training sessions for ACs come up more frequently. Still, it appears that more can be done to help ACs.

Enter the AC Chapter

This is where the AC Chapter comes in.

It was formally launched by SID at the AC Seminar in January 2017, with a mission of building a community that is involved with ACs: AC members, CFOs and management personnel who support ACs, audit and other professionals involved with ACs, and regulators. The AC Chapter wants to build the capacity

and improve effectiveness of ACs in Singapore, particularly those in listed companies, REITs and business trusts.

The focus for the AC Chapter is to make it the “go-to” place for resources pertaining to ACs and where ACs can share experiences and information, through educational courses, publications and focus groups.

Education

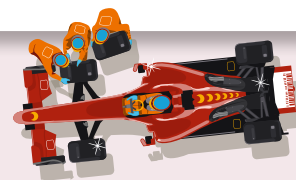
To satisfy the educational needs of the AC community, we designed two-hour sessions called “pit stops”, to suit the needs of ACs, which are known for their fast pace and professional need to update their technical knowledge bank on a regular basis – akin to how an F1 race car makes pit stops to refuel and change their mechanical components.

The Education Subcommittee of the AC Chapter identifies the subject areas important to ACs and organises the pit stops. The pit stops organised for 2017 are shown in the box, “AC Pit Stops 2017”.

These pit stops bring together subject matter specialists from public accounting firms and ACRA to present bite-sized sessions, making them easily “digestible” for the participants.

In addition, participants can look forward to meaningful interactions with fellow attendees who come from varied backgrounds, all with a common agenda: to learn, share and network on a relevant topic, adding a valuable dimension to the learning.

AC Pit Stops 2017



16 February 2017:

Relevance of the Enhanced Auditor's Report (EAR) to Directors, ACs and Management

(Organised in collaboration with Deloitte)

12 April 2017:

Financial Reporting Surveillance Programme (FRSP) and Audit Quality Indicators (AQIs)

(Organised in collaboration with ACRA)

27 July 2017:

Practical Implications of FRS 115 Revenue from Contracts with Customers

(Organised in collaboration with KPMG)

7 September 2017:

Practical Implications of FRS 109 Accounting for Financial Instruments

(Organised in collaboration with PwC)

3 November 2017:

The Critical Role of ACs in Valuation and Impairment of Assets

(Organised in collaboration with Deloitte and Singapore Accountancy Commission)

16 November 2017:

Demystifying Sustainability Reporting and Integrated Reporting

(Organised in collaboration with EY)

Publications

In this age of information, there are numerous publications and articles on the subject matters that ACs are most interested in to the point of having information overload. The AC Chapter seeks to help by aggregating and curating lists of readings for ACs. These are catalogued in the AC Chapter section of the SID website (www.sid.org.sg).

Currently, the articles are categorised according to:

- Corporate Governance.
- Auditors and Audit Quality.
- Accounting and Reporting.
- Ethics and Culture.
- Risk and Compliance.
- Sustainability and Shared Value Creation.

The site also provides links to other resource such as:

- Audit Committee Guide.
- Board Risk Committee Guide.
- AC Mini Guide (annual).
- IAS Plus' Guidance on AC.
- PwC's AC Resources.
- EY's AC Insights.
- KPMG's AC Guides, Tools and Templates.
- KPMG Audit Committee Institute's Resources.
- Deloitte's IAS Plus - Guidance on AC.

These articles are sourced both from SID as well as that of the accounting firms and professional organisations. As we progressively source for more articles, this could become the first-stop repository of resource materials for ACs.

Focus Groups

Chapter members may also be invited to take part in focus groups for their feedback and ideas.

For example, two focus groups were organised in 2017 to discuss and provide feedback on the Enhanced Audit Report (EAR) for a study jointly conducted by ACRA, ACCA, ISCA and NTU. The focus groups provided valuable feedback for improvements to the EAR regime.

Do join the SID AC Chapter if you are not already a member and keen to be part of the AC support ecosystem. ■

To be an SID AC Chapter member, you just need to first be an SID member and then sign up by completing the AC Chapter application form on the SID website. There is no additional fee to be a member of the SID AC Chapter.

AC Pit Stops

Valuation and Impairment of Assets

On 3 November 2017, 46 participants spent the morning examining the critical role of ACs in the valuation and impairment of assets. The session, held in collaboration with the Institute of Valuers and Appraisers, Singapore (IVAS), was conducted by Sir David Tweedie, Chairman of the International Valuation Standards Council (IVSC) together with Ms Koey Soo Earn, Regional Managing Partner, Financial Advisory, Deloitte Southeast Asia.

Participants learned from Sir David the genesis of the IVSC in the early 1980s, and how it has set global standards since. He explained the importance of business valuation and its impact on financial statements.

Ms Koey highlighted that the FRS framework is “principle” rather than “rule” based, and shared



the practical challenges faced when applying FRS 113 Fair Value Measurement and FRS 39 Financial Instruments. The participants found the session interesting and posed numerous questions about communicating the risk level of assets held by the company, and on tax implications of the new standards. ■

Demystifying Sustainability Reporting and Integrated Reporting

On 16 November 2017, an enthusiastic EY team led by Mr Simon Yeo, Partner, Climate Change & Sustainability Services, facilitated the last AC Pit Stop for 2017.

As of 31 December 2017, all listed companies are required to prepare an annual sustainability report on a “comply or explain” basis. The five primary components of the report are (1) the environmental, social and governance (ESG) factors that are relevant and material to the company; (2) policies, practices and performance relating to each such ESG factor; (3) targets set by the company for each material ESG factor; (4) selection and application of an appropriate sustainability reporting framework; and (5) a board statement which attests to its oversight. Each of these components were discussed in some detail, as were various reporting frameworks.



There was vigorous debate among the participants on the implementation timeline and the benefits of the new reporting to a company’s share value.

Mr Yeo concluded by sharing the challenges faced by companies at different stages of reporting, and emphasised that Sustainability and Integrated Reporting is a journey rather than an event and will take time to refine. ■

Director Appointments

SID members appointed as directors of listed companies during the period September to November 2017.

COMPANY	PERSON	DESIGNATION
Accrelist Ltd.	Lim Yeow Hua @ Lim You Qin	Independent Director
Accrelist Ltd.	Ng Li Yong	Independent Director
Advance SCT Limited	Paul Lim Choon Wui	Independent Director
AEM Holdings Ltd.	Adrian Chan Pengee	Independent Director
APAC Realty Limited	Hee Theng Fong	Non-Executive Director
APAC Realty Limited	Tan Bong Lin	Non-Executive Director
AusGroup Limited	Melvin Poh Boon Kher	Independent Director
DBS Group Holdings Limited	Oliver Lim Tse Ghow	Independent Director
Genting Singapore PLC	Tan Wah Yeow	Independent Director
Hatten Land Limited	John Lee Sok Khian	Non-Executive Director
Jardine Matheson Holdings Limited	David Alexander Newbigging	Executive Director
KLW Holdings Ltd.	Mark Leong Kei Wei	Non-Executive Director
Koda Ltd.	Tan Choon Seng	Independent Director
Koh Brothers Group Limited	John Lee Sok Khian	Executive Director
M1 Limited	Danny Teoh Leong Kay	Non-Executive Director
MindChamps Preschool Limited	Lee Suan Hiang	Director
MindChamps Preschool Limited	Philip Antony Jeyaretnam	Director
MindChamps Preschool Limited	Phua Chin Chor	Director
OLS Enterprise Ltd.	Philip Wong Yee Teng	Non-Executive Director
OLS Enterprise Ltd.	Simon Koo Ah Seang	Non-Executive Director
Oversea-Chinese Banking Corporation Limited	Chua Kim Chiu	Non-Executive Director
Parkson Retail Asia Limited	Ng Tiak Soon	Independent Director
Sin Heng Heavy Machinery Limited	Renny Yeo Ah Kiang	Non-Executive Chairman
Singapore Exchange Limited	Lim Chin Hu	Non-Executive Director
Swee Hong Limited	Peter Moe	Non-Executive Chairman
Transit-Mixed Concrete Ltd.	Tan Kok Hiang	Non-Executive Chairman
United Engineers Limited	Lee Suan Hiang	Non-Executive Director
Yanlord Land Group Limited	Hee Theng Fong	Independent Director
Yinda Infocomm Limited	Henry Tan Song Kok	Non-Executive Director

The Martial Art of Regulation



By **TAN BOON GIN**
Council member, SID

When he became Chief Regulatory Officer of SGX, Tan Boon Gin realised there are some parallels between taekwondo and his new job.

“Come on son, can you kick just a little bit higher please?” I implored my then 6-year-old, four years ago, as he was going through his white belt taekwondo sequence.

“If you think you can do better, why don’t you have a go?” he shot back at me. “It’s not that easy, you know.”

I joined in his taekwondo class the next day and found, to my chagrin, that he was right.



AFTER HOURS

Executing a respectable high-rising kick was actually a lot harder than it looked; instructing someone to kick higher was a whole lot easier than having to do it yourself.

Little did I know, I would be facing that same situation when my predecessor approached me and broke the news that he was leaving for Abu Dhabi and reminded me of all the “instructions” I had given him when I was at the Monetary Authority of Singapore and the Commercial Affairs Department.

It has been two years on the job now and needless to say it has not gotten any easier.



That said, I have learned that the jumping, spinning and fast head-height kicks executed with the speed and agility often associated with taekwondo could apply to my approach to regulation – the core of my work at SGX.

For starters, the first move in a taekwondo pattern is always a block, not a punch or a kick. This is in keeping with the martial art's spirit of self-defence. It is also akin to my approach to regulation: always focus on deterrence and to give the market fair warning before any enforcement is undertaken.

Second, every stance in taekwondo is designed with a reason and purpose. For example, a forearm bent at a 45-degree angle is the best line of defence from an opponent delivering a good kick to the ribcage. In the same vein, every rule in regulatory work should be calibrated such that it is absolutely necessary and achieves the purpose it is intended for.

Third, one should adopt a side-facing stance when facing your opponent in taekwondo as it will present to him the smallest possible target area, making any attack he plans to make as challenging as possible.

There may be some who feel that I am trying to extend my regulatory presence to the four corners of the market. On the contrary, my aim is to ensure a fair and orderly environment by keeping as low a regulatory profile as possible. As the founder of modern policing, Sir Robert Peel promulgated in his *Peelian Principles*, "The test of police efficiency is the absence of crime and disorder, not the visible evidence of police action in dealing with it."

The good news is that I have since obtained a black belt in taekwondo. But, more importantly, I have grown much closer to my son and can relate to what he is going through. I hope to achieve that same proficiency in my job and even more crucially, display greater empathy with the marketplace. ■



SID Council Retreat • 22-23 September 2017



Board and Director Fundamentals • 4 October 2017



Director Financial Reporting Essentials • 5 October 2017



Listed Company Directors Essentials • 11-27 October 2017



Governance, Risk Management and Compliance Programme • 11-27 October 2017



NonProfit Programme Module 2 - Board and Management Relationship • 9 November 2017



SID's Q3 Events (Oct 2017 – Dec 2017)

DATE	TYPE	EVENT DETAILS
2-4 Oct 2017	Event	ASEAN Scorecard Meeting
4 Oct 2017	PD	Board and Director Fundamentals
5 Oct 2017	PD	Director Financial Reporting Essentials
11 Oct 2017	PD	LCD Module 1: Listed Company Directors Essentials
12 Oct 2017	PD	NPD Module 1: The NonProfit Environment
12 Oct 2017	PD	Remuneration Committee Chairmen's Conversation
13 Oct 2017	PD	LCD Module 2: Audit Committee Essentials
13 Oct 2017	PD	LCD Module 3: Risk Management Essentials
23 Oct 2017	PD	Directors Compliance Programme
25 Oct 2017	PD	LCD Module 4: Nominating Committee Essentials
25 Oct 2017	PD	LCD Module 5: Remuneration Committee Essentials
27 Oct 2017	PD	LCD Module 6: Investor and Media Relations Essentials
30 Oct-1 Nov 2017	PD	Governance, Risk Management and Compliance (GRC) Professional Training Course
1-3 Nov 2017	PD	SDP Module 2: Assessing Strategic Performance
3 Nov 2017	PD	AC Pit Stop: Valuation and Impairment of Assets
7 Nov 2017	Event	Singapore Board of Directors Survey Launch
9 Nov 2017	PD	NPD Module 2: Board and Management Relationship
10 Nov 2017	PD	MCD Module 4: Overcoming Cognitive Biases in Boardroom Decisions
15 Nov 2017	PD	Board Chairmen's Conversation
16 Nov 2017	PD	AC Pit Stop: Demystifying Sustainability Reporting and Integrated Reporting
20 Nov 2017	Event	Annual General Meeting and Extraordinary General Meeting
20 Nov 2017	Event	Annual Corporate Governance Roundup
22-24 Nov 2017	PD	SDP Module 3: Finance for Directors
6 Dec 2017	PD	Director Financial Reporting Essentials
7 Dec 2017	PD	NPD Module 3: Board Dynamics and Evaluation
12-14 Dec 2017	PD	IDP Module 3: Development of Boards and Directors

Upcoming Events

Core Professional Development Programmes

PROGRAMME	DATE	TIME	VENUE
NDP Module 4: Strategic Decision Making	11 Jan 2018	1700 – 2030	HCA Hospice Care HQ
Directors Compliance Programme	23 Jan 2018	1300 – 1730	Capital Tower
MCD 4: Leading from the Chair	23 Jan 2018	0900 – 1230	Marina Mandarin Singapore
LCD 1: Listed Company Directors Essentials	24 Jan 2018	0900 – 1730	Marina Mandarin Singapore
So, You Want to be a Director	30 Jan 2018	1000 – 1200	Capital Tower
Board and Director Fundamentals	7 Feb 2018	0900 – 1730	Marina Mandarin Singapore
NDP Module 5: Fundraising and Outreach	8 Feb 2018	1700 – 2030	Children's Cancer Foundation
CTP 1: Harnessing Data and AI in the Digital Economy	9 Feb 2018	0900 – 1100	Marina Mandarin Singapore
BFS 3: Sustainability For Directors	21 Feb 2018	0900 – 1230	CDL Academy
Director Financial Reporting Fundamentals	23 Feb 2018	0900 – 1730	Capital Tower
Governance, Risk and Compliance (GRC) Professional Training Course	28 Feb - 2 Mar 2018	0900 – 1730	Capital Tower
So, You Want to be a NonProfit Director	1 Mar 2018	1700 – 2100	Capital Tower
SDP Module 1: The Role of Directors	7-9 Mar 2018	0900 – 1730	SMU Campus
NDP Module 6: Financial Management and Accountability	8 Mar 2018	1700 – 2030	Mercy Relief
LCD Module 1: Listed Company Directors Essentials	13 Mar 2018	0900 – 1730	Marina Mandarin Singapore
LCD Module 2: Audit Committee Essentials	14 Mar 2018	0900 – 1230	Marina Mandarin Singapore
LCD Module 3: Risk Management Essentials	14 Mar 2018	1230 – 1730	Marina Mandarin Singapore
LCD Module 4: Nominating Committee Essentials	15 Mar 2018	0900 – 1230	Marina Mandarin Singapore
LCD Module 5: Remuneration Committee Essentials	15 Mar 2018	1230 – 1730	Marina Mandarin Singapore
LCD Module 6: Investor & Media Relations Essentials	16 Mar 2018	0900 – 1230	Marina Mandarin Singapore
Directors Compliance Programme	20 Mar 2018	1300 – 1730	Capital Tower
CTP 2: Sustainable Financing	27 Mar 2018	0900 – 1100	CDL Academy
SDP Module 2: Assessing Strategic Performance	4-6 Apr 2018	0900 – 1730	SMU Campus
NPD Module 7: Social Trends	12 Apr 2018	1700 – 2030	Crossings Cafe
CTP 3: Strategic Value of Design, and Design Thinking	13 Apr 2018	0900 – 1100	Capital Tower
Director Financial Reporting Fundamentals	18 Apr 2018	0900 – 1730	Capital Tower
MCD Module 5: Anticipating Risk and Precaution at the Board Level	24 Apr 2018	0900 – 1230	Marina Mandarin Singapore
BFS Module 1: Disruptive Technologies for Directors	27 Apr 2018	0900 – 1530	Accenture Liquid Studio
SDP Module 5: Strategic CSR & Investor Relations	3-4 May 2018	0900 – 1730	SMU Campus
MCD Module 1: The Director as an Innovation Driver	8 May 2018	0900 – 1730	Marina Mandarin Singapore
MCD Module 3: Strategy at the Board Level	9 May 2018	0900 – 1730	Marina Mandarin Singapore
LCD Module 1: Listed Company Director Essentials	10 May 2018	0900 – 1730	Marina Mandarin Singapore
LCD Essentials Programme (Mandarin)	17-18 May 2018	0900 – 1730	Marina Mandarin Singapore
Governance, Risk Management and Compliance (GRC) Professional Training Course	21-23 May 2018	0900 – 1730	Marina Mandarin Singapore
SDP Module 3: Finance for Directors	23-25 May 2018	0900 – 1730	SMU Campus

Core Professional Development Programmes

PROGRAMME	DATE	TIME	VENUE
CTP 4:: Managing Millennials in a Multi-Cultural Workplace	31 May 2018	0900 – 1100	Capital Tower
Directors Compliance Programme	8 Jun 2018	1300 – 1730	Capital Tower
So, You Want To Be A NonProfit Director	13 Jun 2018	1700 – 2100	Capital Tower
MCD Module 2: Value Creation for Private Owners and Directors	18 Jun 2018	0900 – 1230	Marina Mandarin Singapore
IDP Module 1: Board Effectiveness and Dynamics	19-22 Jun 2018	0900 – 1730	INSEAD Campus
CTP 5: Data and Insights-Driven Digital Innovation	21 Jun 2018	0900 – 1100	Capital Tower
Board and Director Fundamentals	27 Jun 2018	0900 – 1730	Marina Mandarin Singapore
Director Financial Reporting Fundamentals	29 Jun 2018	0900 – 1730	Capital Tower

Other Professional Development Programmes

PROGRAMME	DATE	TIME	VENUE
AC Pit-Stop: Financial Reporting and Audit Considerations for 2018	8 Jan 2018	0900 – 1100	Capital Tower
Nominating Committee Board Conversation	18 Jan 2018	1200 – 1400	Ritz-Carlton Hotel
AC Pit Stop: Anti-Money Laundering/ Countering the Financing of Terrorism for Non-Financial Companies	29 Mar 2018	0900 – 1100	Capital Tower
Remuneration Committee Board Conversation	15 May 2018	1200 – 1400	Fullerton Hotel
AC Pit Stop: The AC's Role in Crisis Management	23 May 2018	0900 – 1100	Capital Tower
Audit Committee Board Conversation	5 Jun 2018	1200 – 1400	Fullerton Hotel
AC Pit Stop: Getting Ready for FRS 116 (Leases)	29 Jun 2018	0900 – 1100	KPMG

Major Events

EVENT	DATE	TIME	VENUE
ACRA-SGX-SID Audit Committee Seminar	16 Jan 2018	0900 – 1115	Marina Mandarin Singapore
INSEAD Directors Forum	26 Feb 2018	0900 – 1700	INSEAD
INSEAD International Directors Programme Cocktail	27 Feb 2018	1730 – 1930	Capital Tower
ASEAN Corporate Governance Scorecard	3 Apr 2018	0900 – 1100	Marina Mandarin Singapore
Singapore Corporate Awards	11 Jul 2018	1800 – 2200	Resorts World Sentosa
Singapore Governance and Transparency Index 2018 Launch (SGTI)	1 Aug 2018	0900 – 1100	Marina Mandarin Singapore
SID Directors Conference	7 Sep 2018	0900 – 1630	Marina Bay Sands
Singapore Directorship Report 2018 Launch	31 Oct 2018	0900 – 1100	Marina Mandarin Singapore
Annual Corporate Governance Roundup	13 Nov 2018	0900 – 1300	Orchard Parade Hotel
Annual General Meeting	13 Nov 2018	1300 – 1500	Orchard Parade Hotel

Socials

EVENT	DATE	TIME	VENUE
SID Golf Tournament	17 June 2018	1100 – 2030	Sentosa Golf Club

Course dates and venues are subject to change. Please refer to www.sid.org.sg for the latest updates.

Welcome to the Family

September 2017

Samir Chandra Arora
 Varinder Singh Bal
 Shekhrendu Bhardwaj
 Ranjith Cheerath
 Chik Wai Chiew
 Mark Chua Kheng Chiang
 Barry Duncan Clarke
 Andrew Nickel Crombie
 John Ellis
 Mark Florance
 Bill Foo Say Mui
 Timothy Hill
 Jason Alexander Hoffman
 Kaushal Pravin Kapadia
 Aliza Knox
 Joycelyn Kwek Theng Theng
 George Lee Lap Wah
 Leo Hee Shong
 Lin Chee Seng
 Sylvia Liu Siew Wun
 Nathalie Luangrath Garagnon
 Ivan Ng Chuen Pin
 Jemme Ong Peng Kwang
 Darryl Parrant
 Krishan Kumar Sharma

Tan Gek Cheng
 Tan Teck Lee
 Teo Yiam Beng
 Toh Han Boon
 Lawrence Wu Jueh Ming
 Yeo Shi Yuan
 Jaclyn Yeo Zhi Yi

October 2017

Bey Soo Khiang
 Peter Chong Ton Nen
 Fong Thian Loong
 Jason Goh
 Peter Hu Kwang Ren
 Koh Keng Hiong
 Koh Keng Siang
 Kuah Ee Wen
 Sanjeev Kumar
 Leong Kok Ho
 Jason Leow Juan Thong
 Liang Seng Wah
 Elizabeth Liew Xian En
 Luo Dan
 Muk Siew Peng
 Galen Murphy
 Rakesh Narayanan
 Joyce Ng E-Ming

Oh Eng Lock
 Gene Phay Mia Young
 Melvin Poh Boon Kher
 Ben Radclyffe
 Duncan Ritchie
 Evelyn Seah Puay Lee
 Sng Hock Lin
 Soh Chun Bin
 Tan Eng Hwa
 Shiva Venkatraman
 Bert Wong
 Philip Wong Yee Teng
 Ye Binlin
 Yeo Boon Chye
 Terrence Yong

November 2017

Martin Antony Blake
 Cheah Yee Leng
 Chen Jun
 Choo Shu Hui
 Chua See Piu
 Gracelyn Ho
 Hui Choon Kit
 Khoo Boon Wah
 Michael Koh Leong Beng
 Kua Ghim Siong

Kuan Li Li
 Edwin Kung
 Maxwell Lau Yong Huat
 Henry Liew Heng Lee
 Ronald Lim Cheng Aun
 Andrew Geoffrey Lim Cho Pin
 Lim Hwee Hua
 Low Boon Hon
 Low Yeow Boon
 Kalyan Ram Madabhushi
 Mohamed Saleem Mohamed Amanullah
 Ong Chun Teck
 Baskaran Palanysamy
 Raymond Quah Chung Weih
 Krithika Razdhakrishnan
 Sanjay Raghunath
 Seah Hong Wee
 Alan Joseph Shaw
 Bethia Su
 Tan Cher Wee
 Jeremy Tan
 Gerald Tan Kwong Ming
 Naoki Wakai
 Ketut Budi Wijaya
 Wong Peng Yeong

SID Governing Council 2018

CHAIRMAN

Willie Cheng

FIRST VICE-CHAIRMAN

Tham Sai Choy

SECOND VICE-CHAIRMAN

Soh Gim Teik

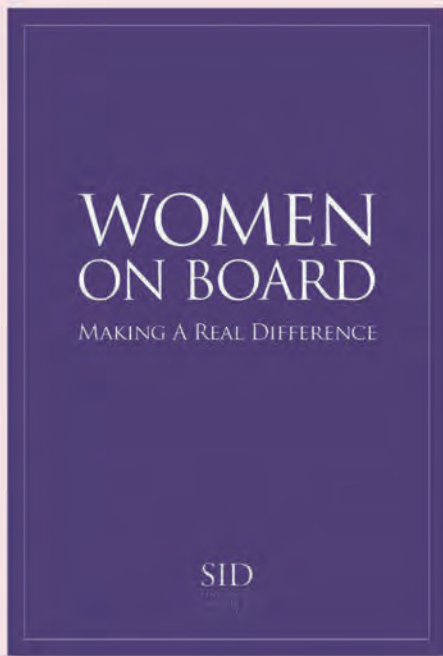
TREASURER

Gerard Tan

COUNCIL MEMBERS

Ramlee Buang
 Robert Chew
 Wilson Chew
 Ferdinand de Bakker
 Junie Foo
 Philip Forrest
 Pauline Goh
 Theresa Goh
 Lee Chong Kwee
 Lee Kim Shin
 Lee Suan Hiang
 Ng Wai King
 Poh Mui Hoon
 Tan Boon Gin
 Tan Yen Yen
 Wong Su-Yen

Launch of
**2018 ASEAN CORPORATE
GOVERNANCE SCORECARD**
and **WOMEN ON BOARD**
(A Book on Gender Diversity in the Boardroom)



Featuring 24 women directors and their journeys around 12 boardroom themes and focus.

Guest of Honour: Grace Fu
Minister for Culture, Community and Youth

Tuesday, 3 April 2018 | 9.00 am - 11.00 am
Marina Mandarin Ballroom

Register at www.sid.org.sg/CGSWOB



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