# IMAS DIGEST

JUL. 2022
ISSUE 5


IMAS QUARTERLY NEWSLETTER

imas
INVESTMENT MANAGEMENT
ASSOCIATION OF SINGAPORE

EMAIL
enquiries@imas.org.sg

TELEPHONE
+65 6223 9353

WEBSITE
www.imas.org.sg

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## F O R E W O R D

Dear Members,

Q2 2022 has been a fruitful and productive three months for IMAS. Building on the momentum of the successful hybrid IMAS-Bloomberg Investment Conference held on 9 March, we organised our first-ever standalone IMAS Digital Summit on 20 April at the Shangri-La, which reached an audience of 100 in-person delegates and an additional 300 participants dialling in from across the region. We are deeply appreciative of the support from all of our members, sponsors, speakers, and our Digital Innovation Committee for making this Summit a great success.

The Summit was an important gathering of senior representatives from across the fund ecosystem, with panel discussions on the most impactful and pertinent trends in the asset management space, including data integration and centralisation; personalisation of products for individual investors' needs; and the adoption of blockchain technologies.

The Summit also saw the official launch of the Let's Invest Together game, a cross-industry collaboration between IMAS, MoneySense, CPF and SGX Group, which seeks to teach basic investment principles to the general public and improve their financial literacy. The Summit also featured the best solutions that were developed through the IMAS Digital Accelerator Programme (DAP), where successful Proof-of-Concepts (POCs) between Fintechs and asset managers were showcased. In this newsletter, you will have a chance to re-experience the Digital Summit through our recap article.

As the Singapore government continues to ease up on COVID-19 restrictions, we have begun to slowly pivot back towards hybrid and in-person meetings – giving IMAS Secretariat and our members the chance to meet and network within the community, and this close interactivity is a breath of fresh air that has been sorely missed after years of virtual meetings.

This close engagement with members will be a key priority for IMAS Secretariat in our new financial year FY2022/23, as IMAS membership continues to grow. Over the past year, we have seen many new joiners to the IMAS network, with many more in the pipeline, including firms from the wider fund ecosystem such as digital wealth advisory platforms, asset owners, Chinese asset managers, Fintechs, and brokers. As members continue to return to the workplace, IMAS Secretariat will looking for more face-to-face engagements with our new and existing members to better understand their needs and concerns, for us to better serve you.

IMAS is truly grateful for your support over the past year, and we look forward to closer engagements with all of you in the upcoming financial year.

Jenny Sofian
Honourary Treasurer

# IMAS Digital Summit 2022

20 April • Shangri-La Singapore


## Welcome speech by IMAS Chairman Susan Soh

Three out of five respondents to the IMAS 2022 Investment Managers' Outlook survey said that technology and innovation will create incremental improvements in the asset management industry. IMAS also believes that this will be a key driver and we hope to use it to improve ESG reporting transparency over the next five years.

## Opening address by Guest of Honour, Loh Boon Chye, CEO, SGX Group

*"Ecosystems need to be ready for an entirely new defi system that is independent of the traditional financial infrastructure. Policymakers need to agree on standardisation and regulation to address risks and put in place safeguards to boost trust and ensure market stability."*


Cryptocurrency, cloud computing, carbon neutrality and the industrialisation of China are key focus areas as Singapore, and the wider finance ecosystem primes itself for greater growth and innovation. As investors and stakeholders become increasingly sophisticated in their understanding of corporate climate action, green financing solutions that are customised for Asia have also become indispensable. Firms can remain relevant and contribute to the changing financial landscape by improving ESG datasets and tools, which can help quantify impact and improve transparencies in disclosures, and building strategic partnerships that will enhance the finance ecosystem.

## Has Investment Management Risen to Embrace its Own Changing Game?


The asset management industry has experienced tremendous change over the last few years due to technology. With the introduction of cloud technology, there is an opportunity for better data integration, advanced analytics, security and governance. Many firms are looking to integrate this strategically to centralise data and use it efficiently to give their clients an edge with their investment decision-making process.

***"Talent, resourcing and quality breath coverage of data is one of the broadest challenges we face. Asset Managers should hire data scientists who are knowledgeable and experienced to work on data sets. They should hire various specialists to clean that data and purchase that data with the goal of having quality data."***
*-Dr Arman Sahovic, APAC Head of Quantitative Analytics, LSEG*

***"Many firms have a long way to go in terms of being able to establish global data governance and appropriate councils around the way data is managed within the organisation and then ensure that the data is brought to live in the right way to derive the most value for clients"***
*- Marcus Hackett, Head of Technology and Change, APAC, Schroder Investment Management (Singapore) Limited*

## To B2B or to B2C: Competitive Outlook for Digital Wealth Management in APAC


Digitalisation in the wealth and asset management industry is now the norm for customers and investors. As more firms leverage digital solutions to offer better products, such as effective advice and greater information transparency, pre-empting consumers' personalised needs and changes in behaviour will fast-track the wealth management industry towards significant digital revolution and technological disruption.


***"Fintech players can now offer to customers services that were not available in the past, serving an underserved market. Fund managers should think beyond offering products, and also offer effective individual advice and greater transparency of information as they prepare for a digital revolution of the wealth management industry within the next 5-10 years."***
*-Philip Tso, Head of Institutional Business Asia Pacific Managing Director, Allianz Global Investors*

## "Let's Invest Together! (LIT)" Game Launch

IMAS is proud to announce the launch of the **Let's Invest Together (LIT)** game, a culmination of many months of cross-industry collaboration between IMAS, MoneySense, CPF and SGX Group. The game aims to help improve the investing community's financial literacy and engage them to incorporate the learnings into their own finance and money management. LIT uses real data to simulate investment outcomes.

***"The current prototype of this game is quite fit-for-purpose for investor education, as it has the essential building blocks of investing - equities, bonds, REITs, mutual funds, and even gold. For future updates, we can consider adding more building blocks on asset classes such as private equity and crypto, as well as more tools for investor education, such as retirement planning and common investing pitfalls."***
*- Mark Yuen, Chief Business Development Officer, Fullerton Fund Management*

***"We hope that this game can be adopted by the industry to supplement your investment education initiatives. We have just taken the first initial step and we still have a long way to go."***
*- Carmen Wee, Chief Executive Officer, Investment Management Association of Singapore*

Three key factors of the game include strong analogy and investment concepts; accelerated game play of real financial events and asset prices; and incorporation of new approach to investment risk profiling.

## Digital Assets, Decentralized Finance, Tokenization: Unshackling the Blockchain


Harnessing the potential and implications of blockchain is far from an easy feat – striking a gradual balance between regulation and innovation has been challenging for those seeking to narrow the information gap in blockchain technologies. More comprehensive educational and proactive engagement between stakeholders can facilitate the expansion of blockchain technologies in the asset management space. With greater access to, and adoption of, blockchain technologies, there will be opportunities for more precise regulation and development of active cryptocurrency and digital asset strategies.

***"We need to go back to first principles and solve the actual problems that financial institutions face. There needs to be a real understanding of objectives that can help us better implement blockchain technology in a way that, for example, doesn't let us sacrifice liquidity or adoption, yet deliver a solution that can integrate with existing infrastructures. That would be a key requirement for production to scale, and would require collaboration and co-development between key institutions and fintech companies."***

*-Benjamin Soh, Managing Director, STACS*

***"DLT is a wide network and you need to bring multiple players into the ecosystem – but some players are more traditional, which poses a challenge. Negotiating the responsibilities and duties of those across this network can take time, and regulatory challenges in cross-border projects can cause misalignments. We're hoping to build a scalable infrastructure and solve problems within these projects, while working with distributors and partners. Finding the right talents can be difficult as well, as you need project management skills, technological skills and industry knowledge."***

*-Emma Pecenicic, Head of Digital Propositions and Partnerships, Asia Pacific (ex-Japan) Distribution, Fidelity International*


***"There is a role for regulators but there is also room for the educational role to be expanded, and for people to really understand the cryptocurrency space. It is also important for people on the commercial side and service-providers to act responsibly."***

*-Matthew Lovatt, Director, Financial Services Tax, Deloitte Singapore*

## Winning Fintech Ideas in Asset Management

The IMAS Digital Accelerator Program was launched to match industry problems with Fintech solutions. This year, we had the honor of featuring three solutions.



Working with Schroder Investment Management Singapore, Nexus FrontierTech came up with a solution to automate data parsing, extraction and analysis for asset managers.

Nikko Asset Management collaborated with Stradegi on their no-code business solution platform to help streamline their risk assessment processes for outsourced service providers.


The IMAS Legal Committee is working with fintech U-Reg on a solution to automate the form-filling process on the MAS OPERA website, which can help to eliminate the human errors in manual processes.

## ESG Impact Monitoring within the Asset Management Space

Getting consistent, comparable and credible data has been a challenge for asset managers in the ESG space. Technology can play a vital role to expand comparable data regionally to aid performance ratings and evaluation processes, so the industry can scale the impact. The industry should be willing to think beyond measuring inputs and outputs and create regulations that support benchmark meaningful data that would aid in investment decision-making and offer greater flexibility to adapt to different data infrastructures.


***"The focus isn't so much about getting more data, but rather about getting the right data that will lead us to the right decisions. The tools being developed for financial institutions to understand their relevant exposure to ESG risks and then to be able to take mitigating steps. What we're really seeing is a broadening of use cases and an expanded range of data needs. Data comparability needs to be global, and develop core metrics that can be used across companies with some level of specificity, on a qualitative and quantitative basis."*** *-Helena Fung, Head of Sustainable Investment, APAC, FTSE Russell*

***"ESG risk measurement was a big challenge over the last few years, but we now have relatively comfortable data to assess this. But how do you know if your impact investing is targeting the right people? The data is not available in this space yet, but it still is a big challenge for both companies and investment managers. I believe that we're just at the beginning in the way that we manage impact investing. Machine-learning and natural language processes in tech will definitely bring us a lot of value in developing our strategies in assessing impact in investments. What I think is important, today, is to open up and make sure that whatever solution we build is flexible enough to prepare us for tomorrow."*** *-Nadim Jouhid, Head of Investment Solutions, Asia Pacific, BNP Paribas Securities Services*

## Closing Remarks by Digital Innovation Committee Vice-Chairman Christina Fernandes

Getting consistent, comparable and credible data has been a challenge for asset managers in the ESG space. Technology can play a vital role to expand comparable data regionally to aid performance ratings and evaluation processes, so the industry can scale the impact. The industry should be willing to think beyond measuring inputs and outputs and create regulations that support benchmark meaningful data that would aid in investment decision-making and offer greater flexibility to adapt to different data infrastructures.


Information Paper on

# ENVIRONMENTAL RISK MANAGEMENT FOR ASSET MANAGERS

MAS has published an "Information Paper on Environmental Risk Management for Asset Managers", alongside similar papers for Banks and Insurers on 31 May 2022.

The paper updates on the progress made by selected asset managers in implementing the MAS Guidelines on Environmental Risk Management for Asset Managers.

It also highlights emerging and/or good practices and identifies areas where further work is needed, with the intention of uplifting the industry's understanding of environmental risk management.

# ESG investing and the great data challenge

*Sustainable investment is booming, but many investors struggle to access robust data on companies' ESG performance. Financial market operators must step up and fill the information gap.*

While the growth of sustainable investment continues apace, investors are becoming increasingly frustrated with the lack of high-quality, comprehensive and trustworthy data to assist them in their decision-making processes. A survey of almost 200 global asset owners by London Stock Exchange Group subsidiary FTSE Russell found 59 per cent were concerned about the lack of standardisation in ESG data, scores and ratings.[1]

It is a common complaint. EY's most recent Global Institutional Investor[2] survey revealed widespread concern about inadequate disclosures of ESG risk. "There is a profound disconnect between the ESG data that asset managers need and what is available to them," warns Anthony Kirby, EY's Wealth and Asset Management Consulting Regulatory Intelligence Lead.

1 Sustainable Investment: 2021 global survey findings from asset owners, FTSE Russell

2 EY, Institutional Investors Survey, 2021

One problem is the proliferation of reporting standards and regulations, with global regimes competing with local rulebooks, self-regulatory systems butting up against mandatory requirements and separate frameworks applying to companies and investors taking stakes in them.

Some businesses have embraced the Global Reporting Initiative (GRI), which sets out best practice for sustainability reporting, while others are more focused on the Sustainability Accounting Standards Board (SASB) standards on financially material issues. Even the language of regulation is disconnected: the EU's Benchmark Regulation talks about "ESG factors", while its Taxonomy Regulation and Sustainable Financial Disclosure Regulation (SFDR) refers to "sustainability". Even attempts at standardisation, such as the CFA Institute's Global ESG Disclosure Standards announced in November 2021, are voluntary.

A related issue is the quality and consistency of the ESG data that is available. In some markets, there is a significant amount of data to access, while in others substantial shortfalls persist, particularly with smaller companies

# Building consistency in ESG data disclosure

In practice, responsibility for driving that improvement will fall to a number of different parties. However, financial market operators will play a crucial role in improving the availability and quality of data.

Julia Hoggett, CEO of London Stock Exchange (**LSE**), which issued guidance on ESG data reporting in 2017, says listed businesses have to recognise that shareholders and potential investors now want much more detailed information on their environmental performance. Hoggett says subsequent initiatives have included guidance specifically on climate reporting as part of a broader effort to help issuers identify the key metrics that investors need.

“Climate change represents the greatest challenge of our time, and it is essential that the financial market ecosystem supports and stimulates the action necessary across the economy to meet that challenge,” Hoggett argues. “Our new climate transition offering will help issuers understand how investors view their performance on the transition and facilitate change by providing an action-orientated climate reporting framework aligned with global standards.”

Operators can also supplement the work of ESG ratings agencies. For example, LSE’s Green Economy Mark identifies London-listed companies and funds that derive more than 50 per cent of their revenues from green products and services. And the Green Revenues 2.0 data model developed by FTSE Russell, an LSE Group business, has identified that out of more than 16,000 globally listed companies covered, around 3,000 have exposure to the green economy. These businesses account for more than 5 per cent of the total listed equity market and have a combined market capitalisation of $4tn.

Other players will make contributions, too. In some cases, investors are creating entirely new resources. For example, CCLA, the largest investment manager of charity assets in the UK, is gathering new data on how companies address the issue of mental health in order to create a benchmark that rates listed companies on this issue. New entrants to the financial services sector will also support innovation. Google, for example, has worked with HSBC to create new tools that help the bank measure the potential impacts of climate change risk on its trading book.

However, one advantage of tackling the data issue at source is the potential to secure greater consistency of information at the point it is disclosed. EY points out that some asset management firms can use up to 10 different third-party ESG data vendors to cover their needs. If listed companies with equity or debt trading on the largest markets were all to abide by the same reporting standards, such problems might be reduced.

This is what investors will increasingly look for, argues David Harris, Global Head of Sustainable Finance, Data and Analytics at LSEG. "The finance and investment community can drive the solutions to secure a sustainable and net zero emission future," he says. "[But] to achieve this, there is a need for robust data and analytics."

***FTSE Russell and Refinitiv. Two trusted names. One sustainable investment destination. Discover more.***

# Competitive outlook for Digital Wealth Management in APAC

"With digital wealth management rapidly developed in recent years, how do asset managers respond in this time of opportunity as well as competitive challenges?

What marketing and distribution techniques are required to adapt in this new world?

And who will come out on top - a winner take all, or room for everyone?"

Allianz Global Investors

**Phillip Tso, Head of Institutional Business Asia Pacific Managing Director, Allianz Global Investors ("AllianzGI"), was invited at the Digital Forum 2022 organized by the Monetary Authority of Singapore to share his views.**

With established relationships with the incumbents incumbents while establishing new ones with the newer players, AllianzGI is in a "sweet spot" to help its partners navigate in the current world.

Phillip Tso said being a leading asset management company in the region, AllianzGI aims to help clients to pave their way into the future of digitalization. "We own three  unique advantages. First, we have good investment strategies for our clients. Second, we have a dedicated technical team to support our service with technological strengths. And third, we use our technology to tailor-make personalized investment advice for our clients.

Digitalization has reshaped the landscape of wealth management industry, Philip said. It enables various client groups, including retail, mass affluent and high net worth individuals, to enjoy financial advisory services that were difficult to be delivered in the past. He added,

> "We partner with our clients to democratise wealth management by developing and implementing innovative and customised solutions."

The pace of digitalization sped up in the wealth management space due to the pandemic. “In the past two years, we have all become more accustomed to digital lifestyles such as online shopping and remote working or virtual studying.” When asked how fund managers should prepare themselves for the future of digital wealth management, Philip said the key is to improve transparency of information, efficiency, and cost of investment decision-making.

“We have to be fully prepared that consumers will ask for more and more information. We also have to think outside of the box and develop a new set of services, so that clients could get what they want with just a few clicks. Also, we must have great determination to embrace digitalization and improve our service accordingly.”

Philip observed that wealth is growing rapidly across Southeast Asia, where the rise of a youthful mass affluent segment is reshaping the wealth management industry.

> “We see tremendous opportunities among the mass affluent investors in Southeast Asia as they hold more than 50% of the region’s wealth[1]. They are looking for bespoke investment solutions, which can be best delivered digitally.”

Philip said, “I believe that digital technology would allow the industry to reach more customers which seemed impossible in the past. Wealth management will become increasingly personalized to serve clients based on their regions, cultures, income levels or needs. The one-size-fits-all solution in the past may not work anymore.”

As a leading active asset manager with over 700 investment professionals worldwide and EUR 673 billion asset under management[2], AllianzGI is at the forefront of investing because it is always looking for new ways to create value for clients and partners. With the award-winning active investment services, diverse investment strategies and products, global in-house research and advanced analytics, AllianzGI will be able to provide innovative, customised and holistic advisory solution to clients across Southeast Asia.

[1] Source: The Mass Affluence Opportunity: Unlocking Southeast Asia’s Digital Wealth Advisory Potential by Accenture. Data as of 2022.

[2] Source: AllianzGI, data as of 31 December 2021



Source: Allianz Global Investors, May 2022.
AdMaster no: 2215920

# Greening Asia through data and regulation.

*By Steven Yankelson, Head of ASEAN, Bloomberg*

ORIGINALLY PUBLISHED IN REGULATION ASIA
ON 9TH MARCH, 2022

> "Effective and efficient ESG risk management and reporting practices can be enabled through better data and technology,
>
> ***says Steven Yankelson.***

Over the next two years, Asia's gross domestic product (GDP) is forecast to be the fastest growing economic region in the world, increasing from USD 33 trillion in 2021 to USD 39 trillion in 2023. While it leads the way in economic growth, some say Asia lags behind other regions in investment into and adoption of sustainability-focused practices. However, COVID-19 has been a wake-up call to strengthen global efforts to reorient capital flows towards a more sustainable future.

The Hong Kong Monetary Authority (HKMA) recently shared the results of its first climate risks related stress test and found that intense climate hazards could cause banks to suffer an annual operational loss of USD 282 million. The Asia Investor Group on Climate Change (AIGCC) estimates that the Asia-Pacific region will need USD 26 trillion to USD 37 trillion worth of investment in energy infrastructure alone by 2050 to meet its decarbonisation goals.

The Asia-Pacific region — which is yet to standardise industry guidelines and ESG-related regulations — needs to move faster to implement sustainability practices.

# Global regulation to affect Asia

All that said, Asia can catch-up if its markets view it as an opportunity to be seized. The good news is that the IFRS Foundation announced at COP26 that it has formed a committee to prepare a single international green standard, and this is likely to be a driver of change in Asia. The European Union is arguably leading the charge in ESG as the first region to develop a sustainable finance plan focusing largely on disclosures and reporting. Companies use the EU Taxonomy — which defines what activities are considered sustainable — to report their activities as the EU's sustainable-finance framework reshapes the market for sustainable investment. Their lead has already had far-reaching impacts around the world. The EU is also making concerted efforts to improve data quality, consistency and availability through regulations such as the Sustainable Finance Disclosures Regulation (SFDR) and the Corporate Sustainability Reporting Directive (CSRD).

Every market is understandably at a different stage of its sustainability journey so there needs to be flexibility in applying blanket global standards on all countries.

Certain jurisdictions in Asia-Pacific are looking to strengthen their sustainable finance regulations, particularly in Singapore and Hong Kong.

The Monetary Authority of Singapore (MAS) launched the Green and Sustainability-Linked Loan Grant Scheme (GSLS), to support corporates in obtaining green and sustainable financing by defraying up to SGD 100,000 (USD 75,000) of the expenses of engaging independent service providers to validate the green and sustainability credentials of the loan. The HKMA launched the Green and Sustainable Finance Grant Scheme (GSF) in its 2021-22 budget to provide subsidies for eligible bond issuers and loan borrowers to cover their expenses on bond issuance up to HKD 2.5 million (USD 320,000) and external review services up to HKD 800,000 (USD 100,000).

# Slow and uneven progress in Asia

To support net-zero goals, the Bank of Japan (BOJ) introduced a new fund-provisioning measure in 2021 providing funds for investments or loans made by financial institutions that contribute to addressing climate change at a zero interest rate.

Beyond sustainable financing, banks in Hong Kong are also expected to start making disclosures in line with guidelines from the international Task Force on Climate-related Financial Disclosures (TCFD) from mid-2023 and this will become mandatory in 2025. In December 2021, the Singapore Exchange (SGX) mandated climate and board diversity disclosures. While these countries are moving decisively to formulate ESG regulatory frameworks, Asia's developing economies are moving more slowly as they seek to balance advances in sustainability with economic and social development imperatives to ensure a just transition to a lower carbon future.

# Data strategy necessary to accelerate ESG transition

Despite Asia's meteoric tech rise and its emergence as a technology leader, companies and banks are not fully leveraging data and digitalisation as an accelerator for their ESG journeys. There were over USD 35 trillion in ESG assets under management in 2020, a number estimated by Bloomberg to hit USD 53 trillion by 2025, a third of global AUM. Firms are therefore looking to technology to not just differentiate their offering, but to manage the increasing complexity in managing ESG related data, reporting and research.

Climate risk reporting in Asia is still evolving, which brings additional complexities. The TCFD is working to help bridge the gap between investor expectations and investment fund promises, providing clear standards around definitions, metrics and disclosure. In the region, Japan, Hong Kong, New Zealand and Singapore have already incorporated the TCFD standard in their recommended disclosure items and it now spans 89 countries and jurisdictions and nearly all sectors of the economy, with a combined market capitalization of over USD 25 trillion.

Workflows around managing and reporting data must first be optimised through the use of technology. Today, effective and efficient ESG risk management and reporting practices can already be enabled through advanced tools that can ingest sustainability data from multiple sources, integrate it with a firm's own ESG scores and other proprietary data, and perform advanced analytics to facilitate decision-making.

An important part of the solution to building climate resilience is already before us — leveraging data and technology to build a greener future.

# THE CHALLENGE AND OPPORTUNITY IN APAC INVESTORS' NET-ZERO PUSH

*With more governments, companies and financial institutions committing to reducing carbon emissions, institutional investors have realised quickly they cannot afford to be left behind.*

BNP PARIBAS

The bank for a changing world

With more governments, companies and financial institutions committing to reducing carbon emissions, institutional investors have realised quickly they cannot afford to be left behind. And while market participants across the world are taking note, investors in Asia Pacific (APAC) are emerging as pioneers among their global peers, according to BNP Paribas' ESG Global Survey 2021.

Two overarching factors are behind this trend. First, with the region's vast coastlines, several small island states and low-lying territories, countries in APAC are at significant risk from global warming and rising sea levels. Second, as pressure from at-risk communities, local media and companies mounts, more governments in the region are taking their climate commitments seriously and driving policy changes, leading to top-down action.

In this context, APAC's asset managers are now required to meet the region's demand for net-zero-aligned portfolios and investment strategies. Given the scale of the investment required in the region to achieve net-zero, the potential rewards for those who can meet this challenge are considerable.

## APAC investors emerge as Net Zero Leaders

The BNP Paribas survey studied investor action to support the goal of a net-zero economy by 2050. The survey identified three types of investors: Net Zero Leaders, who are already implementing their commitment to reaching a net-zero target, Net Zero Explorers, who have committed to a net-zero goal but are yet to start implementing it, and Net Zero Observers, who have not committed to a net-zero target yet.

Across the global sample in the survey, 37% emerged as Leaders, 36% as Explorers and 27% as Observers. Investors in APAC, though, are considerably more committed to reaching net-zero goals – 44% of the respondents in APAC were Leaders, while 41% were Explorers. By contrast, only 24% of North American investors fell into the Net Zero Leader category.

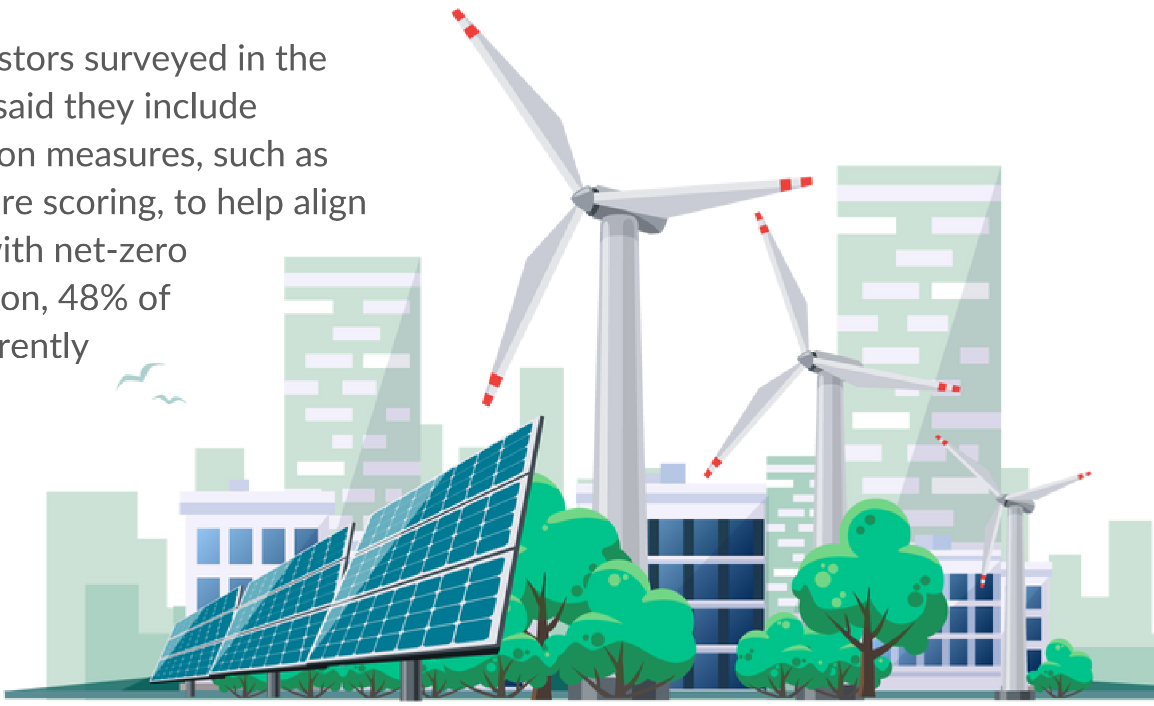
## Exploring more asset classes and strategies

Asset managers in APAC will have to cater to growing demands among these Net Zero Leaders for suitable investments, an appetite that extends across asset classes and strategies. For the majority of survey respondents (88%), equities remain the primary asset class used in their climate-related considerations, according to the BNP Paribas study.

Even so, some 52% of APAC investors said they invest in thematic Exchange Traded Funds (ETFs), compared to 37% globally, and 16% in ETF broad market indices to reach their net-zero targets. Only about 8% of APAC investors choose corporate credit for these investments, the survey showed.

APAC investors are also employing more sophisticated strategies and tools to manage climate change risks, according to the Asia Investor Group on Climate Change (AIGCC).

Half the APAC investors surveyed in the BNP Paribas study said they include climate risk mitigation measures, such as portfolio temperature scoring, to help align their investments with net-zero targets. In comparison, 48% of global investors currently practice this.



*"It is encouraging to see APAC investors moving in the right direction. We look forward to seeing these numbers grow, not just in Asia, but across the world. The investment community must understand the critical role it plays in propelling change. Those asset owners and managers who haven't yet thought about net-zero can learn a lot from APAC's Net Zero leaders."*

**- Jules Bottlaender,**
**Head of Sustainable Finance,**
**APAC at BNP Paribas Securities Services**

## A huge opportunity

Even as several APAC institutional investors have committed to lowering their carbon footprint, more need to join the fray to meet the Paris Agreement goal of limiting the rise in global temperatures to 1.5°C of pre-industrialisation levels. Indeed, the AIGCC estimates that the investment opportunity for Asia's energy supply to achieve net-zero is between USD 26 trillion to USD 37 trillion cumulatively from 2020 to 2050.

The scale of the investment needed in the region makes the role Net Zero Leaders play even more critical. Some recognise the scale of the challenge and the opportunity. Australian superannuation fund UniSuper, for instance, is among the institutional investors in the region issuing and implementing Investor Climate Action Plans.

*"We put our carbon targets in place last year and set a net-zero carbon emissions target for our portfolio by 2050. This is our first push into being more mindful of our impact and measuring progress against those targets… The shift to sort of being more cognisant of the impact our investments are having is something I find quite powerful."*
- **Sybil Dixon, Senior Investment Analyst, UniSuper**

Organisations like UniSuper are key to driving a mindset shift in the asset management space and can lead by example.

Under the bonnet:

# different economic engines that drive climate change scenario models

**Russ Bowdrey**
**János Hidi**

The climate scenario modelling ecosystem has changed considerably during the past five years. As Task Force on Climate-Related Financial Disclosures (TCFD) guidance becomes more widely adopted, and in places mandatory, now may be a good point to consider whether the models used so far remain appropriate, or whether there are more suitable alternatives. The choice depends on whether we favour much-needed standardisation, which supports comparable TCFD disclosures; or more nuanced and realistic climate scenario analysis needed for investment decisions. To make that choice, it is vital that model users fully appreciate what the clockwork inside their models is capable of emulating in the real world.

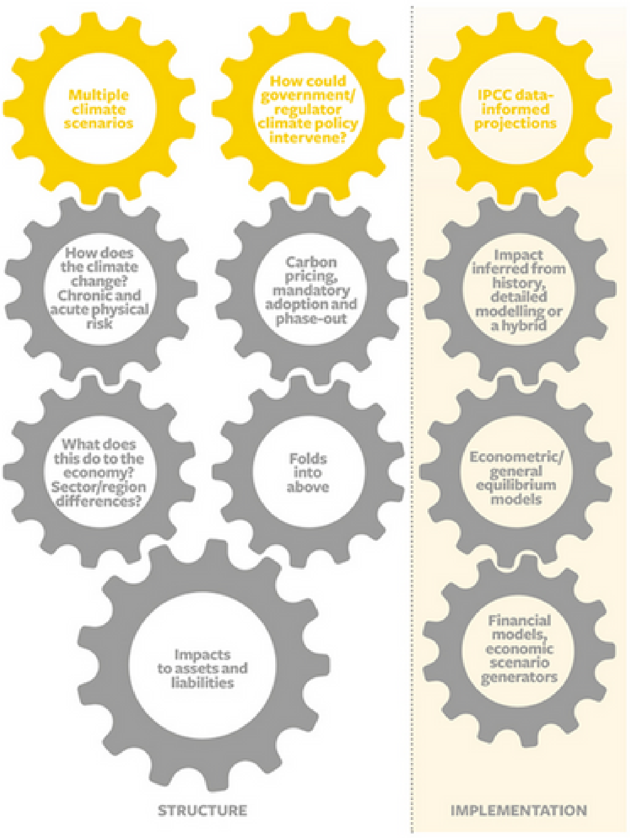
In 2016 and 2017 the first TCFD guidance set out recommendations for more effective climate-related disclosures. At that time, climate scenario modelling was a nascent field, with a few early movers looking to adopt the guidance, and a small field of start-ups and progressive established data providers. In those years, Russ Bowdrey was involved in a major international insurer's TCFD project and recognised that with a lack of choice, there was need to leverage any available established modelling or data. These days we have more choice, but with choice comes potential confusion if you don't know how the machinery works.

# An overview

Asset owners and managers use climate scenario models to understand how climate change, and attempts to mitigate it, will affect their balance sheets. Figure 1 outlines the key components and interactions.

Climate model results support decision making, risk management and disclosures. An effective climate model should incorporate realistic and plausible dynamics, so that impacts at economy and asset level are consistent and explainable. We do not want a model to be too complex, unexplainable, with too many variables. We want models that are well suited to each stage of understanding the impacts. The most pivotal is arguably the model layer that translates climate impacts and policies into economic impacts – the 'economic translation layer' (ETL).

FIGURE 1: The key components and interactions of climate scenario models.




Two broad model classes have been used for ETLs: general equilibrium models (GEMs) and non-equilibrium models. GEMs are more widely used in ETLs' underlying climate models. Their popularity is partly attributable to familiarity. Equilibrium models are associated with neoclassical economics, which is the current mainstream economic thinking.

Non-equilibrium models arose in the 1960s; the world was in a state of transition, and macroeconometric models were better equipped to capture this. However, their development outstripped the computing power available at the time. And difficulties with parameterisation and calibration sometimes led to counterintuitive or hard-to-explain outputs. As computing power is no longer a constraint, non-equilibrium models are being reconsidered and adopted, especially in fields that require projections for non-equilibrium phenomena, such as the low-carbon transition.

# What differentiates GEMs and non-equilibrium models?

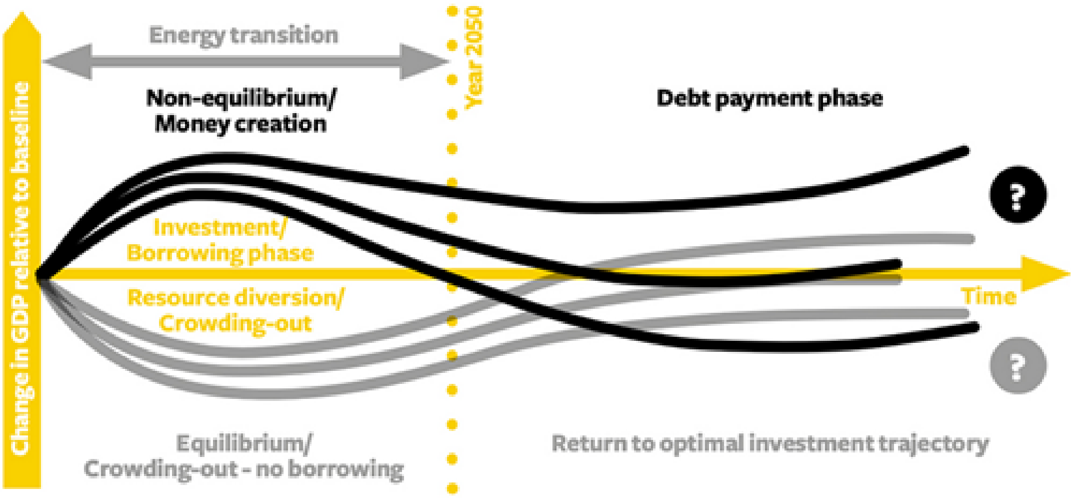

Equilibrium models are based on neoclassical microeconomic assumptions and consider the interaction of multiple rational agents that optimise their behaviour. By contrast, E3ME – a example non-equilibrium model built and maintained by Cambridge Econometrics – does not assume optimising behaviour or full use of resources, and allows for real-world inefficiencies. *Figure 2 summarises the key differences between the models.*

**FIGURE 2:** Equilibrium versus non-equilibrium models.

| Equilibrium models (GEM-E3, GTAP, PRIMES etc) | Non-equilibrium (eg post-Keynesian E3ME) |
|---|---|
| Neoclassical microeconomic assumptions | Not assume optimising behaviour |
| Rational agents **optimise** their behaviour | Derive behavioural parameters from historical relationships using econometric equations |
| Efficient markets hypothesis broadly consistent with the CGE model assumptions | Bounded rationality; uncertainty; **path dependence**; **learning effects** |
| Money supply determined by central banks (exogenous)<br>• **Neutrality of money**<br>• **Crowding out of investments** | Endogenous money<br>• Money is created by banks through new loans<br>• **No crowding out of investments**<br>• New investments are financed by new bank loans (if banks have confidence that those investments are profitable) |

In terms of the practical modelling outcome for climate scenario modelling, the key difference is that non-equilibrium models typically show economic growth resulting from the energy transition, while equilibrium models usually exhibit an initial hit to growth during the transition, followed by recovery. *Figure 3 shows various illustrative pathways for each model.*

**FIGURE 3:** How model choice impacts outcomes.




**Key takeaway:**

- Final result reflects the choice of model type
- In non-equilibrium models the macroeconomic benefits arise first, and costs are incurred later due to debt financing and no investment full crowding out

**Based on:** *Mercure J-F, Knobloch F, Pollitt H, Paroussos L, Scrieciu SS, Lewney R. Modelling innovation and the macroeconomics of low-carbon transitions: theory, perspectives and practical use. Climate Policy 2019; 19, 1019–1037.*

The adverse economic impact of the transition in equilibrium models occurs because it is assumed that real assets are used in an optimal way, so any regulatory enforcement will divert the economy from its competitive optimum.

In reality, there are often idle resources in the economy, as well as market failures due to institutional constraints, uncertainties or externalities. Under such circumstances, additional green investments triggered by regulatory intervention can push the economy towards fuller use of existing assets in the short term, and extend the required assets through new investments in the long term. Non-equilibrium models aim to capture these real-world behaviours and relationships. As a result, the outcomes of each type of model can be fundamentally different in direction and magnitude.

# Abandoning optimality

Another element of non-equilibrium models is that they explicitly do not assume optimising behaviour. To understand how economies adapt to changes, a mechanism is needed to capture how climate impacts, mitigation policies and technology adoption will support the green transition. An advantage of non-equilibrium models is that the transition can reflect real-world decision making better: satisficing, bounded rationality and imperfect information.

E3ME, uses an evolutionary innovation model to capture the diffusion of the technology used to support the green transition. This approach gives more flexibility to reflect typical uptake and adoption of technology and how that uptake responds to regulation and interactions with other sectors and global economies. This last point becomes particularly important when translating the impact to assets, such as the equity investments in different sectors and regions around the world as part of a portfolio-level climate scenario analysis.

# The Compass - Climate & ESG Solutions

Thinking through the financial impacts of various climate risk scenarios and creating a net-zero roadmap may feel somewhat overwhelming. At Ortec Finance, we are here to help. Don’t hesitate to reach out to us via contact@ortecfinance.com or take a look at our Climate & ESG solutions page.

# Growing suite of sustainability related ETFs listed on SGX close to S$700m in AUM

Recent years have seen a spike in interest for sustainable investing among investors. While there are many ways to incorporate environmental, social and governance (ESG) strategies into one's portfolio, ranging from ESG integration to thematic investing, buying sustainability-focused exchange traded funds (ETFs) is perhaps one of the most direct approaches.

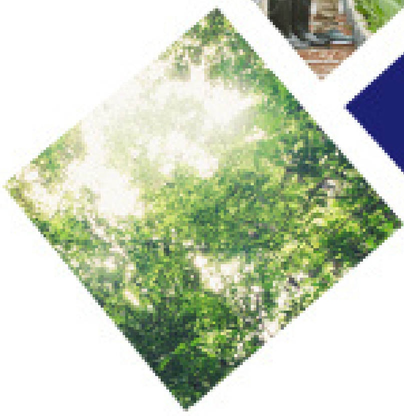
Global ESG ETFs saw record flows of €81.7bn in 2021, according to a Morningstar report, almost double the €41.3bn seen in 2020 and a five-fold increase from 2019. SGX strives to be a leading sustainable and credible transition finance and trading hub with end-to-end products, solutions and ecosystems. Listed on the exchange are four sustainability related ETFs with combined asset under management (AUM) of over S$680 million.

These four ETFs are Lion-OCBC Securities Singapore Low Carbon ETF, NikkoAM-StraitsTrading MSCI China Electric Vehicles and Future Mobility ETF, UOB APAC Green REIT ETF and Lyxor MSCI China ESG Leaders Extra UCITS ETF.

## Lion-OCBC Securities Singapore Low Carbon ETF

The Lion-OCBC Securities Singapore Low Carbon ETF is the latest addition to the suite of sustainability related ETFs listed on SGX. Launched in April 2022, the ETF has an AUM of S$60 million and offers investors an investment tool for portfolio decarbonization with a significant reduction in portfolio carbon intensity when compared to standard market-cap weighted benchmarks.

The fund tracks the iEdge-OCBC Singapore Low Carbon Select 50 Capped Index, which provides investors access to the top 50 globally-listed Singapore companies and trusts with a lower carbon intensit than their industry peers.



## UOB APAC Green REIT ETF

With an AUM of S$79 million, the UOB APAC Green REIT ETF is benchmarked to the iEdge-UOB APAC Yield Focus Green REIT Index, which comprises 50 high-yielding REITs across the Asia-Pacific region, that participate in the annual assessments by global ESG benchmark for real assets, GRESB. The ETF is also part of the comprehensive suite of five REIT ETFs listed on the exchange.

The underlying REITs in the iEdge-UOB APAC Yield Focus Green REIT Index are weighted by their relative environmental performance using GRESB data for indicators such as energy and water consumption, greenhouse gas emissions and green building certifications, in addition to their ESG performance.

## NikkoAM-StraitsTrading MSCI China Electric Vehicles and Future Mobility ETF

The NikkoAM-StraitsTrading MSCI China Electric Vehicles and Future Mobility ETF (AUM: S$38 million) tracks the MSCI China All Shares IMI Future Mobility Top 50 Index, which represents the 50 largest, multi-country listed Chinese companies that are expected to derive significant revenues from energy storage technologies, electric and autonomous vehicles, shared mobility and new transportation methods.

This is the first SGX-listed ETF benchmarked to the fast-growing electric vehicles (EV) sector that is projected to more than triple to US$800 billion by 2027 (source: Allied Market Research, April 2020). China is the largest EV market globally in terms of both production and sales, and is expected to continue to lead into the next decade.

Supported by government polices (e.g. plans to achieve carbon neutrality by 2060 and Made In China 2025 initiative), China has created a conducive environment to stimulate the growth of its electric vehicle and future mobility (EVFM) industry. By 2025, it is estimated that over 50% of new global EV sales will be attributed to China *(source: Bloombergnef – Electric vehicle outlook, October 2020).*

## Lyxor MSCI China ESG Leaders Extra UCITS ETF

In 2021, Lyxor implemented an index switch of its China equity ETF listed on SGX to track an ESG-tilted index instead, meeting the ever-increasing interest coming from Asian investors in ESG exposures on the China equity market. This created the Lyxor MSCI China ESG Leaders Extra UCITS ETF, the largest sustainability-linked ETF listed on SGX with an AUM of S$505 million.

The index is benchmarked against the MSCI China Select ESG Rating Trend Leaders Net Total Return Index, which combines a set of stringent business activities exclusions with an ESG best-in-class approach, aiming at selecting companies with a robust ESG profile.

### Table: List of sustainability-linked ETFs listed on SGX

| Name of ETF | Stock Code | Bloomberg Ticker | Issuer | Underlying Index | AUM as of end Apr 2022 |
|---|---|---|---|---|---|
| Lion-OCBC Securities Singapore Low Carbon ETF | ESG<br>ESU | ESGSG SP<br>ESUSG SP | Lion Global | iEdge-OCBC Singapore Low Carbon Select 50 Capped Index | S$60 million |
| NikkoAM-StraitsTrading MSCI China Electric Vehicles and Future Mobility ETF | EVS<br>EVD | EVS SP<br>EVD SP | Nikko AM | MSCI China All Shares IMI Future Mobility Top 50 Index | S$38 million |
| UOB APAC Green REIT ETF | GRN<br>GRE | GRN SP<br>GRE SP | UOBAM | iEdge-UOB APAC Yield Focus Green REIT Index | S$79 million |
| Lyxor MSCI China ESG Leaders Extra UCITS ETF | P58 | ASI SP | Lyxor | MSCI China Select ESG Rating Trend Leaders Net Total Return Index | S$505 million |

*Source: SGX, Bloomberg (Apr 2022)*

# Why data remains the biggest ESG investing challenge for asset managers

by Benjamin Soh, Co-Founder & Managing Director, STACS

It's becoming crystal clear that for the finance industry to make good decisions in terms of capital allocation to environmental, social, and governance (ESG) assets, we will need to improve transparency and trust at the data level.

Asset managers are getting savvy to the need for better screening and scoring of everything in the ESG universe, as well as understanding the data they are receiving from ESG data providers while using more of their own analytics capabilities to project out into the future.

One of the remaining challenges is an over-reliance on publicly available non-financial ESG data, with what's available in the private sector typically far more fragmented and non-transparent, making it hard for institutions and asset managers operating in private markets when it comes to ESG screening.

# Financial market modeling needs better ESG data

Asset managers are getting savvy to the need for better screening and scoring of everything in the ESG universe, as well as understanding the data they are receiving from ESG data providers while using more of their own analytics capabilities to project out into the future.

As capital allocation decisions are based on complex models that make assumptions on future outlooks based on present data, this lack of transparency around ESG data makes it very difficult to accurately predict the future in these areas and therefore to be effective capital allocators.

In particular, we have observed that large asset managers are at more of a disadvantage versus banks and insurers who are more likely to have confidential/non-public data available from their expansive customer bases.

However, with much of today's asset allocation being done by the large asset managers such as BlackRock and Vanguard, who between them manage nearly $20 trillion in assets, it is clear the ESG data situation could lead to some less-than-optimal capital allocation decisions.

# Truly efficient markets need gold data standards

This, potentially, undermines the very idea of efficient markets as more and more investments are being screened for ESG criteria using sub-optimal data.

Beyond just the accessibility of data, there is another headache on the horizon: no "single source of truth", something the blockchain was originally created to help address.

We believe STACS can be an upstream data partner to the ESG ratings agencies, many of whom are also grappling with the challenge of a lack of public data and single source of truth but whose clients (the asset managers) are looking to them to help solve.

An analysis of 62 of the largest asset managers worldwide found that most use between two and five different ratings providers and some even use up to 10 different third-party vendors to cover their ESG data needs, according to EY.

Alternative data sources will become increasingly important in the desired goal of reliable real-time ESG data through technologies such as satellites and drones that offer insights into supply chains, production (i.e. agriculture), and transportation networks.

# ESGpedia – Enhancing Trust in ESG Data and Finance


Dr Darian McBain, Chief Sustainability Officer of MAS, was the guest of honour at the Project Greenprint industry showcase event, where ESGpedia was launched.

ESGpedia by STACS, officially launched on 18 May 2022 at the Project Greenprint Industry Showcase event held at Google, powers the ESG Registry of Monetary Authority of Singapore's (MAS) Project Greenprint.

There's a profound disconnect between the ESG data financial institutions and companies need, and what is available to them.

Serving both financial institutions and corporates, ESGpedia aims to provide two gold standards for asset managers: that single source of truth we have been talking about, as well as holistic ongoing project data that is both trustworthy and transparent, shining a light on both public and private companies.

First of its type, ESGpedia aggregates all ESG efforts, bridging the gap in ESG data and finance where there is no other such platform today.

**Dr Darian McBain, Chief Sustainability Officer at MAS**, said, “The launch of the blockchain-based ESGpedia platform establishes a robust base for powering the Greenprint ESG Registry, combining STACS’ work on aggregating high quality ESG data from multiple certification bodies and verified sources, with the ability for financial institutions, corporates, and regulators to access this trusted data via a single source in accordance with their needs. In time, data housed in the Greenprint ESG Registry will form a central pillar that underpins the financial sector’s effective mobilisation of capital towards sustainable projects, as well as the accurate tracking and quantification of emission reductions, abatement levels, and other sustainability KPIs linked with these projects.”

Companies going green need easier access to ESG financing, while financiers with idle capital can leverage on more insightful data to better allocate funds to ESG effectively.

We invite financial institutions and corporates large and small to get in touch with us if you’re interested to navigate the opportunities in going green via ESG data and technology – only together we can make good progress towards solving the ESG data puzzle and truly enable effective sustainable finance for the industry.

Read the press release here.
Sign up for a trial of ESGpedia:
https://esgpedia.io/

Watch financial institution partners comment on ESGpedia and how it enables holistic ESG data to support Green Finance:
https://youtu.be/JufEFPT0hJg

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# A Warm Welcome

## TO OUR NEW MEMBERS WHO JOINED US IN FY2021/22

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DTA SE Asia
Endow.us
Gordian Capital Singapore
Haitong International Asset Management
Lu International (Singapore) Financial Asset Exchange
Robeco Singapore
William Blair International

**Assoicate Members:**

Angsana Investment Partnership
DTCC Singapore
Euromoney Institutional Investor
FundApps Limited
360T Asia Pacific

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**IMAS Secretariat**

Three Phillip Street
Royal Group Building
#07-01
Singapore 048693
Tel: +65 62239353


imas
INVESTMENT MANAGEMENT
ASSOCIATION OF SINGAPORE

EMAIL
enquiries@imas.org.sg

TELEPHONE
+65 6223 9353

WEBSITE
www.imas.org.sg