Green Finance Industry Taskforce

Green Finance Work Group

White Paper

Fostering Green Finance Solutions

19 May 2021

Forward and Acknowledgement

The Green Finance Industry Taskforce (GFIT) is an industry-led initiative convened by the Monetary Authority of Singapore (MAS) consisting of representatives from financial institutions, corporates, non-governmental organisations, and financial industry associations. Its mandate is to help accelerate the development of green finance through four key initiatives: (i) develop a taxonomy, (ii) enhance environmental risk management practices of financial institutions, (iii) foster green finance solutions, and (iv) improve disclosures.

This white paper seeks to address the third initiative of ways to develop and accelerate sustainable financing. It is the culmination of research and discussions by members of the GFIT Workstream-3 on green finance solutions. The members worked to identify best practices, as well as key measures and resources needed to develop the green finance ecosystem in Singapore; the paper also formulates recommendations for the industry and policymakers.

The work group identified five key sectors that have the greatest near-term potential to catalyse change for the greening of the economy in Singapore and the region. The key areas are: 1) green trade finance and working capital, 2) transition finance, 3) real estate, 4) infrastructure, and 5) fund management. The work group was organised into five corresponding sub-groups to focus on each of these areas. The papers written by each sub-group differ in the level of specificity of the recommendations, however this is largely reflective of the different stages of development of each sector. Some are relatively advanced in the ESG journey, such as real estate while others only beginning to establish a taxonomy and framework for transition. Hence some chapters are more thematic and provide broader guidance on problems and potential areas for development, while others add more detailed suggestions and recommendations, with pilot projects to demonstrate how these recommendations may potentially be applied.

The publication of the paper comes at the back of several sustainability-related initiatives introduced by MAS and various Singapore government agencies (detailed in the Appendix 1). A taxonomy for Singapore-based financial institutions to identify and classify activities that can be considered green or in transition has recently been introduced with a draft released for public consultation on 28 January 2021. A handbook that offers guidance to banks, insurers and asset managers on implementing environmental risk management was also issued at the same time.

This white paper is the reflection of multiple representatives from the various sub-groups. We hope industry associations and practitioners will get involved and lend their support to the recommendations and initiatives proposed, as well as contribute their ideas and broaden this discussion on green finance solutions to the wider community. In the next stage, we are looking at capacity building: increasing awareness of sustainable finance through seminars, workshops, and other training events to highlight and potentially catalyst change for the future. A number of pilot projects have also been launched on the back of this paper to act as a demonstration of how some of these recommendations can be applied. We also invite further integration of this paper into various existing frameworks within industry bodies. If future pilots are launched, we would also look to reach out to the industries on engagement and ask for your support in these initiatives.

We wish to express our appreciation to all the leads and members of each of the sub-groups listed below for contributing to the white paper. This paper written by industry members will increase awareness and enable a greater consensus to be built with respect to the importance of greenifying the financial industry.

We welcome your feedback and look forward to your support in achieving the GFIT objectives together.

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Introduction

Climate change currently poses one of the greatest systemic risks to the global economy. With the frequency and severity of extreme climate events on the rise, stabilising the global climate has become a matter of urgency. However, the scale of investment needed to place the global economy on a path to low-carbon, sustainable growth is beyond the capacity of any public purse. As such, the private sector has a critical role to play in financing these significant climate investment needs. Private financing would also amplify the effectiveness of government climate policies, thereby accelerating the effects of climate action.

Singapore's central bank and financial regulator, the MAS, is playing a leading role in the country's efforts to become a premier hub for green finance in Asia and globally. It set up GFIT to drive this initiative with the private sector. The Green Finance Work Group under GFIT researched and consulted with industry players to identify priority sectors that can benefit from the development of green solutions. Within each sector, we explored activities that required support and identified potential measures and solutions that are most appropriate, focusing on enablers and ways to overcome existing barriers. We also identified target outcomes to provide a vision of what success would look like.

From our research and discussions, we found that many priority sectors have a common theme around energy efficiency. The working groups debated on the areas of potential support such as grants and subsidies and development of new products.

Within the corporate sectors, real estate is the most developed, and can be a major differentiator in ASEAN with well-established environmental, social and governance (ESG) standards and practices. Transition in other key industries such as the oil and gas (O&G), shipping, automotive and industrial sectors require further development of the taxonomy and transition frameworks. It is crucial for corporates to have a strong engagement at the C-Suite level to understand the benefits of incorporating ESG factors into long term strategic decisions rather than focusing only on short term price gains from one-off transactions.

Within the financial markets, we also found there is no shortage of capital markets solutions available in international markets. However local take-up has been slower than anticipated due to incomplete data, complexity in execution, and relatively limited pricing benefits. There is a need for market research to prove that sustainable business practices and investments are more resilient and profitable. The pandemic has somewhat provided proof points and catalysed changing behaviour and some differentiation in pricing; greater clarity around taxonomy and disclosure would also be key to driving momentum and behaviour.

At this juncture, the paper summarises the lay of the land and by way of priority, we have identified five key areas to focus on. These are:

1. Green and Sustainable Trade Finance and Working Capital;
2. Transition Financing with a focus on corporate/small and medium-sized enterprises in manufacturing, digitisation, and equity/venture capital;
3. Real Estate with enablers including green loans/green bonds, transition financing and securitisation;
4. Infrastructure with ideas such as a green development fund/export credit agency (ECA), securitisation, insurance and transition financing; and
5. Greening the Fund Management Industry.

1. Green and Sustainable Trade Finance and Working Capital

1.1 Introduction

Climate change and addressing transition risks, i.e., the risks inherent in banks and Non-Bank Financial Institutions (NBFIs) portfolios as the world moves to a low carbon economy, impacts an obligor's ability to meet its financial commitment. This presents both opportunities and challenges. Many opportunities exist in the form of financing renewables, investments towards a circular economy and electrification of mobility. Equally, there are challenges that will need to be addressed for example, increasing the pace of replacement of fossil fuel energy sources, addressing the risks of higher temperatures and increased flooding in low lying areas, impacting crop yields negatively.

The need for banks and NBFIs to establish a robust framework for putting in place financing solutions both short and medium/long term, to help clients transition to a low carbon economy is an immediate imperative. While the market for long-term green solutions is well developed, this paper seeks to establish a Green and Sustainable Trade Finance and Working Capital Framework ("Framework") for short-term trade, both funded and contingent and also working capital solutions for green and sustainable purposes, leveraging in part, the principles established by institutions like the Loan Market Association (LMA-Green Loan Principles) and the International Capital Market Association (ICMA-Framework for Impact Reporting). Banks and NBFIs are also recommended to refer to the International Chamber of Commerce's (ICC) Sustainable Trade Criteria: Customer Due-diligence Guidelines to better understand and assess their client's environmental, social and governance risk factors.

1.2 Proposed financial solution

1.2.1 Key drivers for green trade and working capital

Sustainability is a key issue for businesses and will only increase in importance. Today, different businesses and industries are at different stages in their journey. Broadly speaking, traditional "brown" sectors need to transition to a low-carbon model while emerging "green" sectors seek more growth. Sustainable finance aims to facilitate and support environmentally sustainable economic activity. This can be delivered by looking into *what* we finance – by assessing the "greenness" of end use - and *how* we finance – by developing financial instruments and products. Currently, the prevalent green finance solutions are mostly long-term capital financing consisting of green bonds, club, and syndicated term loans. There is a need in terms of providing shorter term (< one year) solutions such as trade facilities and working capital. The proposed solution described in this paper aims to fill the need by providing green or sustainability-linked financing along the value chain. The financial solution will be based on providing short-term working capital needs to the supplier/seller ("Supplier/Seller") and buyer ("Buyer") along the value chain, including cross-border transactions, such as issuing a letter of credit for a buyer, financing receivables for a supplier, or providing a guarantee to support a bid.

The benefits of increasing priority in sustainability agendas are clear, yet we recognise that the scaling of this agenda with green trade and working capital finance in Singapore will need to be supported by incentives such as:

- tax incentives for corporates participating in this program, for example higher preferential tax rates or longer tax holidays for Global Trader Programmes (GTP) and Regional Treasury Centre (RTC) participants;
- reducing cost of capital for Banks and NBFIs offering such financing for example, via state-sponsored loan and trade credit insurance schemes, matching funds from impact funds, state-sponsored entities, and pension funds with lower costs of capital;

- offsetting the costs of origination, for example, through an extension of the MAS Green and Sustainability-Linked Loan Grant Scheme (GSLS); and
- awarding carbon/green credits that can potentially be monetised on public exchanges.

In addition, other indirect or non-financial measures to support the wider ecosystem are equally crucial. These include carbon taxes, a national carbon database, funding for infrastructure required to support traceability of products and processes, national or industry awards to provide awareness and recognition of achievers.

1.2.2 Purpose of the Framework

It is important that a Framework is established that incorporates guidance to help banks and NBFIs providing green or sustainable lending solutions establish the intent of the financing. This addresses any risks of "greenwashing", i.e., providing financing for an ostensible green/sustainable requirement when this might not be the case.

The working group proposes a range of solutions that takes into account the product type or the sustainability credentials of the supplier and buyer for each transaction, in order to determine the type of financing the transaction qualifies for, under the Framework. The key aims of the solution are:

- to support green companies or companies with recognised sustainable certifications grow faster;
- to enable non-green corporates to transition via a principles-based approach;
- to support various type of corporates improve their sustainability practices; and
- to establish a set of processes/guardrails to mitigate the risks of "greenwashing".

A fundamental pre-condition to fully realizing this approach is a robust and clear underlying set of recognised green products/certifications; technology as an enabler to provide traceability along the value chain and a set of recognised Environment, Social and Corporate Governance (ESG) ratings.

The solution is principles-based, sector agnostic and has wide applicability for all companies requiring trade and working capital financing. While pure green activities such as producing low-carbon emission products is an obvious qualifier, the proposed solution also addresses how purchases from suppliers meeting certain sustainable certifications will qualify. In addition, it will also help companies obtain sustainability-linked trade financing.

The working group envisages that the Framework will complement the rapidly growing green/sustainability-linked loan/bond market and equip banks and NBFIs to provide financing options to meet corporates' short-term working capital needs while supporting their sustainability agendas as well as building resilience and financial viability of suppliers.

1.2.3 Scale of the green trade and working capital market

The total merchandise trade value in Singapore in 2019 was estimated at S$1,022 billion[1] at current prices. The preliminary assessment of the addressable green categories is S$91.3 billion, the bulk of which is in the capital goods, recycled metals/rubber, organic chemicals, transport sectors[2]. Potentially, this provides an estimated S$35 billion of sustainable financing along the value chain for financial services providers[3] over the next 10 years.

[1] Singapore Government Agency excludes domestic trade and goods that do not pass through customs.

[2] Used HS codes to determine potential green/sustainable products. Overall ~9% of trade.

[3] Based on *The Sustainable Supply Chain Finance Opportunity, BSR, June 2018* - Global supply chain finance is ~US$2 trillion with estimated US$660 billion of sustainable SCF and US$6 billion revenue opportunities. Similar percentage applied to Singapore trade figure.

1.3 Implementation

1.3.1 Identifying key barriers to implementation and solutions

The key barriers for implementing the solution can be grouped into two major categories, namely a well-defined eligibility and reporting framework as well as financial or non-financial incentives to promote adoption.

The current lack of a clearly defined framework for determining eligibility and administration of the solution will need to be addressed. The working group recommends the establishment of a national framework to promote transparency, disclosure, and integrity of the borrowers. The Framework should be principles-based and aligned to the environmental objectives set out in the Singapore taxonomy [4]. Minimally, the Framework should include the following controls to assess if the environmental objectives and principles are met:

(1) determine the purpose on the use of funds;
(2) a process to monitor the use of proceeds;
(3) a process for banks and NBFIs to screen and assess the eligibility of suppliers to be in compliance with green sourcing requirements; and
(4) a process to review transactions or requirement for independent assessments to be conducted.

Post disbursement of funds, there should be additional reporting outlined below:

(1) to report annually on amount of financing obtained and the use of funds;
(2) to report on key impact metrics;
(3) continuing representations and warranties;
(4) enhanced accounting, auditing, and regulatory reporting; and
(5) submission and renewal of certificates[5].

The Framework will provide standardisation and adoption of criteria for scaling the solution as well as alignment with the environmental objectives and principles, set out in the Singapore taxonomy. A proposed Framework can be found in Appendix 2 – Green and Sustainable Trade Finance and Working Capital Industry Framework.

In addition to the Framework, the development of incentives and discounts underpinning the financial solutions and funding support will be critical to promote widespread adoption. This can be achieved by maintaining and enhancing existing products and schemes, as well as introducing new ones.

1.3.2 Solutions to overcome barriers to implementation

The working group proposes a phased approach to implementing the solution, with each phase corresponding to a more advanced stage of development of the Framework. At the same time, relevant incentives can be introduced to support development of the solution at each phase.

Phase 1

The first phase ("Phase 1: Green Trade Finance and Working Capital") will focus on introducing two elements to the Framework – the description of green activities and principles that will meet the environmental objectives set out in the Singapore taxonomy as well as guidelines on the adoption and reliance on sustainable certifications. The activities and principles will be supported with examples and are intended to be illustrative rather than exhaustive, as both, the definition of eligible goods and services and industry certifications will evolve over time, given the nascent nature of the market.

[4] *https://abs.org.sg/industry-guidelines/gfit-taxonomy-public-consultation*
[5] Relevant for projects where certifications are obtained post completion

The Framework will also allow banks and NBFIs to address the green/sustainable financing needs of corporates, i.e., beyond pure play companies and build internal procedures and guidelines to meet the environmental objectives.

To support Phase 1 roll out, the relevant incentives may include:

- extending higher preferential tax rates or longer holidays for green/sustainable qualified transactions; and
- broadening the scope of support by reducing the cost of funds for trade finance products related to green activities.

The Framework will recommend a spectrum of relevant certifications for trade and working capital financing from local agencies, national authorities, globally or regionally accepted standards and third-party verifications that will help banks and NBFIs identify initial benchmarks, to complement the Singapore taxonomy. Where available, external certifications from recognised and credible agencies such as the Climate Bond Initiative can also be considered.

Phase 2

The second phase ("Phase 2: Sustainability Linked Trade Finance and Working Capital") will expand Phase 1 by introducing three new elements to the Framework, namely Third-Party Ratings, Internal Performance Ratings and External ESG Ratings.

(1) Third Party Ratings

This involves standardisation of the acceptable forms of ratings and their respective rating agents and applying them to determine sustainability performance of suppliers themselves, as opposed to their products. Examples of third-party rating agencies include Ecovadis, Sedex, ILO Better Factories, Higgs Index, Sustainability Consortium and Carbon Disclosure Project. The ratings can be used for bandings to apply carbon taxes to direct contributors of emissions and distribute carbon/green credits, which can be awarded for eligible trades and monetized on exchanges such as the AirCarbon Exchange.

(2) Internal Performance Ratings

Leading global buyers already have proprietary internal rating systems for their suppliers based on their own assessment. These ratings provide clarity on their suppliers on meeting sustainability programs and may include extensive auditing. The solution can leverage on these performance ratings to provide financing, thus helping them to strengthen the ecosystem of sustainable suppliers.

(3) External ESG Ratings

The working group expects that ESG Ratings can also be developed by external ESG Rating providers such as (Sustainalytics, Vigeo and S&P et al.) to score companies on their ESG performance for assessing eligibility in borrowing under Phase 2 of the solution.

Progressively, all the above ratings could lead to the development of a sustainability-adjusted risk scoring capital computation of risk-weighted assets (RWA) supported by green investments and capital expenditure programs to incentivise the take-up rate for such schemes.

Potential incentives needed to support Phase 2 include:

- Trade Infrastructure Development Fund to support digitalisation for traceability;
- national or industry awards for green/sustainable companies to increase the profile of and recognition for the initiative;
- loan and trade credit insurance schemes to mitigate risks and ultimately reduce funding costs for Banks and NBFIs providing the financing; and
- the consideration of buyers to provide direct incentives to their suppliers, which may include non-price incentives like fast tracking invoices or order channelling.

Finally, the working group expects that External ESG Ratings can be developed to score companies on their ESG performance for assessing eligibility in borrowing under green and sustainable trade and working capital. Progressively, this could lead to the development of a sustainability-adjusted risk scoring capital computation of risk-weighted assets (RWA) supported by green investments and capital expenditure programs to incentivise the take-up rate for such schemes.

The working group envisage that implementation of the second phase will require banks and NBFIs to leverage on technology solutions such as Distributed Ledger Technology (DLT) as well as established ecosystems such as the Network Trade Platform (NTP) for the exchange of digitised trade documentations, validation of ESG certifications and provision of supply chain traceability. The industry will also need to research on other potential technology-based solutions and consider how to incorporate technology innovations into sustainability. A holistic approach should be adopted by the industry to take into account all these considerations and potential integration at a national level.

1.4 Key market players and how to motivate them

The key market participants and stakeholders include the direct participants in transactions such as Buyers, Suppliers, Banks and NBFIs, as well as government bodies including Enterprise Singapore (ESG), Inland Revenue Authority of Singapore (IRAS), Monetary Authority of Singapore (MAS), National Environment Agency (NEA), Ministry of Trade and Industry (MTI), Singapore Customs, ratings providers such as audit firms, certification firms, credit/sustainability rating agencies, industry associations, technology/logistics partners, and insurance companies.

The primary motivation for buyers will be to achieve sustainable sourcing goals and ensuring security of supply by attracting suppliers with good overall management practices, strengthen the financial stability of suppliers and achieve positive marketing and branding in the eyes of their consumers.

For suppliers, key motivators would include the potential to enjoy price or non-price incentives and quantify the business case for sustainability improvements, increase revenue opportunities through government/financial institution linkups with new customers.

Most of the other abovementioned players such as government bodies, ratings providers, industry associations should be relatively self-motivated as the policy should provide support for their missions and activities but incentivising corporates to participate will be critical as there is a “cost” to sustainability.

More crucially, once formulated, the policy will require a centralized effort led formally by a core group of key players to administer, set targets, engage with players regarding the Frameworks and program features.

1.5 Target Outcomes

In Phase 1: Green and Sustainability Trade Finance and Working Capital, the proposed target is to implement and scale up the solution to cover some portion of Singapore’s 2019 annual trade flow within two years. While some financial institutions have already defined some green eligible categories, scaling up of this phase can only be achieved with a guiding taxonomy on a local, Singapore-specific basis. The complexity is expected to be at a medium level, with smooth implementation achievable only with a common guiding green taxonomy and accepted green certifications.

Phase 2 will require Singapore-based corporates to meet the required qualification criteria of the various ESG data types, with a proposed target to scale up the solution to cover 30% of Singapore’s 2019 annual trade flow (~S$300 billion) within five years. This will only be achievable with ecosystem

partners set up, the implementation of successful policies, establishing a certifying body for recognised industry qualifications, creating a platform for pooling of source capital, and bringing on board audit and technology partners for monitoring, tracking and compliance. The complexity is expected to be at a medium to high level, as building the ecosystem and implementing robust tracking, monitoring and compliance procedures involves a large amount of coordination. In particular, the technology element will require greater examination.

The working group propose to move this solution to a pilot in the first half of 2021 to establish the relevant benchmarks, documentation, process and best practices to adopt.

2. Transition Finance

2.1 Introduction

Transition finance in relation to the green finance market refers to financing that enables companies traditionally seen as very high-impact polluting and still reliant on fossil fuels, to make incremental improvements to eventually be completely de-carbonised. This journey can see them reach peak emissions by 2030 and then arrive at net zero emissions by 2050. We view transition finance as another label that can complement the green, social or SDG[6] labels that are currently used in the loan and capital markets.

The term "transition" has been used in different contexts. Here we distinguish transition finance from the word "transition" used in the climate change context of "transition risk", which refers to the risks associated with moving towards a less polluting, greener economy, such as in the form of higher costs of doing business or big shifts in asset values.

With transition finance, there is some controversy with regards to commentary in the market compared to the stricter green or SDG finance because there is no clear consensus on what constitutes transition. At the same time, we do not think that the lack of taxonomy on transition activities should stop industries or financial institutions involved from attempting transition finance because there are a number of areas that can still quite legitimately and credibly be seen as transition.

However, we emphasise that transition finance should not be seen as a way to sidestep green finance. This is another area of contention where some non-governmental organisations (NGOs) and advocacy groups view that an inability to completely achieve net zero emissions is basically a cop out. Hence, we propose using the term "transition finance" judiciously because we do demand in applying this label, a demonstration of carbon abatement and the trajectory of reduction over time. To this end, the International Capital Market Association's (ICMA's) December 2020 publication of the Climate Transition Finance Handbook 2020[7] is timely, and issuers wishing to label financing instruments with a climate "transition" label may consider referencing this guide.

We believe that Asia, as an emerging market, transition finance is important because the region is to a large extent the manufacturer of the world. It holds a large market share of metal production, oil and gas refinery, automotive, chemicals, power generation and shipping. These activities are all currently very carbon intensive and the solutions to decarbonise may not be entirely commercially scalable or economically viable.

Transition finance can also be very applicable where there is a requirement for a system-wide change in the industry. We focus our discussions here on three industries: oil and gas, shipping, and automotive. For each sector, we first provide an overview with the industry sub-sectors and related eligible transition activities in each. We then identify key financial solutions with an estimate of the scale of the addressable market and target users for each product. Next, we look at the barriers to implementing these solutions and ways to mitigate them, including the market participants and stakeholders involved, and the engagement and motivation required. Finally, we put forward a vision of what we think success would look like with a potential timeline for target outcomes and the degree of complexity involved in achieving them.

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[6] SDG refers to the United Nations' Sustainable Development Goals, which are a collection of 17 interlinked goals designed to be a "blueprint to achieve a better and more sustainable future for all". They address the global challenges we face, including poverty, inequality, climate change, environmental degradation, peace and justice.

[7] Retrieved from https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/climate-transition-finance-handbook/

2.2 Overview of features common across all sectors

In studying the three key industries of oil and gas, shipping and automotive where transition finance can be transformative, we found some commonalities that apply across all sectors.

2.2.1 Proposed financial solutions

To catalyse the development of transition finance, we think it is key to have government-led support, ranging from engaging with technical consultants, to providing capital tax allowances and tax incentives. After examining the three sectors: oil and gas, shipping, and automotive, we think one key takeaway is for industry associations to come together with financial institutions and the relevant government agencies to translate ideas into programmes. This is so that transaction costs, which is foremost on business owners' minds, can be reduced. Certain programmes can be created within the whole ecosystem instead of having individual companies seek out standalone programmes. For example, an accredited panel of technical consultants could be set up for companies to use within each industry. Consequently, the transaction costs of implementing transition finance can be brought down.

The financial solutions we propose, which are common across all sectors include:

(1) **Government-led support** including providing comprehensive commercial risk cover, direct funding and risk participation (including direct lending and tenor subordination) to improve commercial bank pricing and/or extension of tenor for financing of eligible transition activities. This could be similar to the Enterprise Financing Scheme[8] (EFS) administered by Enterprise Singapore which provides risk-sharing and risk mitigation for financiers for loans, e.g. working capital, trade, fixed assets, M&A, venture debt, and project financing.

(2) **Defraying costs of engaging professionals** relating to technical reviews, issuance of transition financing opinions and regular periodic audits of such transition financing.

(3) **Capital tax allowance** for qualifying investments and assets.

(4) **Tax incentives** for the following areas:

- Transition loans and bonds arranged by Singapore banks or Singapore branches of foreign banks. This may include tax incentives on fees earned by banks, and/or tax incentives on the interest income generated from such transition financing; and

- Use of new technologies on an approved list to facilitate green transition.

It is an encouraging initiative that in Budget 2021, Ministry of Finance introduced the Investment Allowance – Energy Efficiency Scheme to promote investments in energy efficiency projects, administered by Economic Development Board. The scope of qualifying projects includes projects involving a reduction of greenhouse gas emissions; and both data centres and non-data centres are eligible.

(5) **One-time reimbursement** of the set-up costs for transition finance bonds.

[8] Retrieved from https://www.enterprisesg.gov.sg/financial-assistance/loans-and-insurance/loans-and-insurance/enterprise-financing-scheme/overview

2.2.2 Key barriers to implementation and solutions

The key barriers to implementing the financial solutions and our suggested answers for overcoming each include:

(1) A **lack of a transition finance taxonomy** that clearly outlines a systematic, sector-based classification of eligible transition activities and/or methods to approach transition activities. To overcome this, we propose establishing a Transition Finance Taxonomy that defines the eligible transition activities, taking into account Singapore's local context.

(2) A **lack of an internationally harmonised set of green principles**. Although the principles overlap in many areas, having a set of harmonised principles that can be recognized internationally will provide clarity for companies steering in this direction. The development of harmonised green principles is an international endeavour and we propose for MAS to consider taking an active role given its government-to-government network and the international high regard for Singapore.

(3) The **lack of a centralised accrediting authority** or institution that incorporates a panel of related certifiers and technical experts for benchmarking and setting standards to determine the environmental rating of industry operators such as for refineries and power plants. We recommend setting up a centralised accrediting authority and developing a standardised rating system for companies involved in transition activities. This would provide a common yardstick to compare companies and encourage them to improve and move up the rankings. Standards need to be progressive to recognise initial small efforts to go green and encourage further improvement.

(4) The **lack of a system of regulatory or financial incentives** to promote the arranging and investing of transition financing products or instruments. We propose developing a financial sector incentive scheme to provide tax incentives or capital relief to Singapore banks or Singapore branches of foreign banks for arranging transition financing products or instruments, and to investors who invest in them.

(5) The **lack of a system of regulatory or financial disincentives** that incorporate higher costs on borrowers who continue to borrow for underlying activities that are environmentally-damaging. We propose developing a set of policies to disincentivise or penalise companies when they borrow to fund environmentally damaging activities. For example, a price floor may be imposed by regulation on such "brown" loans or bonds. This would incentivise borrowers to switch to transition financing, which would require them to adhere to better practices.

(6) **Costs** to adhere to new regulations and to get certified by independent third parties are **borne by the borrowers**. We recommend providing subsidies for costs to adhere to new regulations to companies that are able to improve their ratings (on the proposed standardised rating system) by a certain timeframe. The higher the rankings, the more subsidies can be given.

(7) The **need for specialist consultants** to verify energy savings and emission reductions achieved. We propose providing subsidies to encourage the use of such specialist consultants. In addition, we propose developing local expertise in such consulting areas so as to bring down the cost of engaging consultants.

(8) The **availability of technology** that are key to green transition and are economically viable.

We recommend implementing feed-in-tariff schemes and related subsidies (similar to the early years of the solar and wind sector before these sectors took off) to encourage take up of these technologies to drive economies of scale.

2.2.3 Recommendations on what success would look like

The goal of enabling Singapore's transition to a low-carbon, resilient and resource-efficient economy involves transition finance as a critical component of such transformative improvements. We envisage that, to be successfully implemented, transition finance should result in the following business and economic events. This is how we think success would look like across all sectors:

(1) **Increased adoption of cleaner practices** by erstwhile "brown" businesses as they can manage transition risk with the support of transition finance products.

(2) **Widespread acceptance and use of a standardised rating system** for business differentiation and comparison.

(3) **Reduction in transaction costs** for both borrowers/issuers and lenders/investors as a result of harmonised standards.

(4) **Commercial banks increase the proportion of loan portfolios** committed to transition finance, which in turn, will ultimately result in greater allocation to green financing, with improved debt financing terms.

(5) **Increased investment by institutional investors** into locally arranged transition bonds and ultimately green bonds, coupled with the development of a deep bond market with substantial liquidity.

2.3 Sector Focus: Oil & Gas

2.3.1 Overview of eligible transition activities

The oil and gas sector currently emits approximately 12.6 gigatonnes (Gt) of carbon dioxide (CO2) a year, which is roughly equivalent to 42 per cent of global emissions. Direct emissions from the sector make up nine per cent with the balance contributed by fuel use. In a sustainable development scenario, the global oil and gas sector needs to reduce emissions by at least three Gt of CO2-equivalent a year by 2050.

The applicable oil and gas industry sub-sectors and eligible transition activities within each can be divided into upstream, midstream and downstream.

(1) The **Upstream** sub-sector encompasses activities related to the exploration, drilling and extraction of fossil fuels. Eligible transition activities include:

- The use of on-site renewable energy for electrification;
- Carbon capture, utilisation and storage;
- Equipment to reduced flaring;
- Installations for vapour recovery; and

- Leak detection and repair systems at compression stations for preventive maintenance.

(2) Industries within the **Midstream** subsector include oil and gas shipyards involved in building specialised vessels such as drilling rigs, vessels, floating production storage and offloading (FPSO) units, and related components used in the exploration and production phase, as well as transportation via ships and through pipelines. Eligible transition activities include:

- Electric engines driven either by batteries or hydrogen/ammonia fuel cells;
- Use of low greenhouse gas (GHG) fuels such as biofuel, bio-methanol, liquefied natural gas (LNG), hydrogen and ammonia;
- Improved ship design, hull and propulsion efficiency; and
- Renewable energy electrification for pipelines.

(3) The three key areas within the **Downstream** sub-sector are in petrochemicals, agrochemicals and specialty chemicals. Petrochemicals comprise olefins, polyolefins, aromatics, polymers, copolymers, intermediates and derivatives; agrochemicals include crop protection chemicals such as pesticides, fungicides and herbicides, while specialty chemicals are those used in the production of plastic-related products. Eligible transition activities include:

- Energy-efficient production and innovation such as catalytic olefin technologies using naphtha and the use of hydrogen from renewable energy sources to produce ammonia or methanol;
- Carbon capture and storage; and
- Alternative feedstocks such as natural gas, shale gas, biofuels and other unconventional feedstocks.

2.3.2 Key financial solutions

The key financial solutions that we propose for the oil and gas industry include bonds and loans, equity, and other forms of financial instruments. In terms of the scale of the industry, we estimate that based on an average cost of US$50 per ton of CO2 equivalent, the total abatement cost requirement in ASEAN is S$3.7 billion. We believe that the market potential for financial products, including the value-add it creates, totals S$13.3 billion. This consists of long-term debt at S$2.6 billion, working capital at S$428 million, private equity at S$91 million and public equity at S$10.2 billion.

Within the **debt** market, **transition loans** or **transition bonds** could take the form of specific use of proceeds that finance activities or technologies that contribute to better environmental outcomes such as with the use of low GHG fuel including biofuel, bio-methanol, LNG, hydrogen, or ammonia. Similar to the sustainability-linked format, there could also be targets that promote the transition to more energy-efficient and cleaner businesses or operational processes. The target users of these transition loans or bonds would be oil and gas or shipyard companies as borrowers or issuers on the one side and on the other side, banks as lenders or institutional investment funds, especially those with a green mandate, as investors.

Within **equity**, we propose having government-led support to provide risk cover for a sponsor's equity investments in projects that are classified as green projects, especially for investments in developing countries. Target users would be project sponsors such as industry players or buy side funds.

Other proposed financial solutions include financial advisory grants and capital tax allowances. **Financial advisory grants** could be provided to project sponsors to address the long gestation period and additional technical, legal and financial structuring required in taking on technologically advanced, cutting edge projects. We suggest that MAS considers providing grants to project sponsors to pay for financial advisory work undertaken by banks – on a post-completion reimbursement basis – to encourage proper structuring and discipline on financing structures. Target users would be project sponsors, be they industry players or buy side funds. **Capital tax allowance** could also be provided for ship conversion to incentivise ship owners to adopt transition financing and convert their vessels to energy efficient structures or operations. This would target shipyard companies.

2.3.3 Solutions to overcome barriers in implementing financial proposals

The key **barriers** to implementing the proposed financial solutions are as described in 2.2.2 above under features common across all sectors. In addition, we propose the following **solutions** specific to the oil and gas sector:

(1) Policy enhancements by the National Environment Agency (NEA) & Ministry of Sustainability and the Environment (MSE) (formerly known as Ministry of the Environment and Water Resources) in the areas of carbon tax, carbon credits and carbon trading;

(2) For the Maritime Port Authority of Singapore (MPA) and the Port of Singapore Authority (PSA) to institutionalise:

- A Green Tank Terminal programme for LNG storage;
- Ship building and conversion programme for dual fuel vessels and electrification of coastal vessel fleet;
- Government to consider legislation for improving fuel efficiency standards for vessels calling at Singapore. This could be in the form of legislation for all marine fuels refined, stored, or pumped via Singapore, akin to how the Poseidon principles are being adopted by some select parties in the shipping industry; and
- For MAS to co-ordinate with MPA, NEA and other government statutory bodies to ensure clarity on standards to be adopted.

The key **market participants** and stakeholders within the industry include oil and gas companies, shipyards, financial institutions such as commercial banks and private equity firms, government and related policy makers, consumers, legal professionals, specialist consultants, and at a much later stage when policies and products are more mature – retail investors.

We think that the **engagement and motivation** is required to advance transition finance within the oil and gas industry include creating an internationally-aligned taxonomy and harmonised green principles that will provide clarity to all stakeholders. Government support through tax incentives, direct subsidies and risk sharing for project debt or equity financing will also help to keep the key stakeholders engaged and motivated.

In the initial stage, we propose setting up a working group involving the following stakeholders to ensure that viewpoints are solicited from all angles for comprehensive solutions:

- Oil majors and their service companies to spearhead initiatives in these areas;
- Banks and other financial institutions to partner the industry leaders in pioneering such products;
- Institutional investors to provide guidance on their investment mandates and preferred products;
- Specialist consultants to assist in defining qualifying standards and provide guidance on the opinions that can be issued; and
- Legal professionals to provide guidance on legal issues.

2.3.4 Target Outcomes

The role of transition finance in Singapore's transformation to a low-carbon, resilient and resource-efficient economy is critical for the oil and gas industry. Our vision of what success would look like are described in 2.2.3 above under features common across all sectors.

In terms of the timeline to achieve these goals, we think a realistic target can only be set after engagement with various parties. Transition finance cannot be developed in isolation but needs the coordination and cooperation of different government ministries and different stakeholders in the economy, hence the process will be complex, involving numerous parties, and likely the indirect involvement of and interaction with multi-laterals and international standard-setting bodies.

2.4 Sector Focus: Shipping

2.4.1 Overview of eligible transition activities

International shipping is responsible for two to three per cent of GHG emissions from transporting close to 80 per cent of global trade by volume[9]. Progressive efforts are being made to address climate change risks and improve environmental performance. These include the International Maritime Organisation's (IMO's) commitment to reduce at least 50 per cent of GHG emissions by 2050 compared with 2008 levels. All the efforts are in turn leading to a need for significant investments into new technology and infrastructure.

The applicable industry sub-sectors within shipping include companies that own, charter in, or operate vessels. Examples include owners or operators of container vessels, tankers, bulkers, and harbour tugs that support port and terminals, LNG or LPG carriers and dredgers. Vessels excluded would be those used for transportation of fossil fuels.

Eligible transition activities in shipping include:

- Fleet management and voyage plan optimisation;

[9] Global Maritime Forum: Getting to Zero Coalition. Retrieved from https://www.globalmaritimeforum.org/getting-to-zero-coalition/

- The use of vessels with electric engines driven either by batteries or hydrogen/ammonia fuel cells;

- The use of vessels powered by low GHG fuel such as biofuel, bio-methanol, LNG, hydrogen, ammonia;

- The use of open-loop scrubbers for treatment of pollutants, mainly sulphur dioxide (SO2) released from the vessel's exhaust. Open-loop scrubbers use seawater as the scrubbing medium with the used seawater treated and discharged back to the sea; and

- The use of closed-loop scrubbers for treatment of SO2 released from the vessel's exhaust. Closed-loop scrubbers use freshwater with a chemical, usually sodium hydroxide, as the scrubbing medium. Used scrubbing medium will be stored in a holding tank as there will be no discharge to the sea.

2.4.2 Key financial solutions

The key financial solutions we propose for the shipping industry include debt instruments, equity, and other financial programmes. In terms of the scale of the market, the investment required between 2030 and 2050 to reduce carbon emissions from shipping by at least 50 per cent by 2050 is estimated at US$1-1.4 trillion. If shipping was to fully decarbonise by 2050, this would require extra investments of an estimated US$400 billion over 20 years, making the total investments needed between US$1.4 and US$1.9 trillion. Of this, 87% of the investments are needed for land-based infrastructure and 13% are related to the ships[10].

Within the **debt** market, **transition loans** or **transition bonds** could be in the form of specific use of proceeds that finance activities or technologies that contribute to better environmental outcomes such as the use of alternative fuel like LNG, and the installation of scrubbers and ballast water treatment systems. Like the sustainability-linked format, targets could be set relating to the climate trajectory of the borrower. The target users of these transition loans or bonds would be shipping companies as borrowers or issuers on the one side and on the other side, banks as lenders or institutional investment funds, especially those with a green mandate, as investors.

Equity solutions could take the form of **venture capital** that finance start-up companies developing new technologies, particularly those that focus on the invention of zero-carbon fuel options such as ammonia and/or hydrogen fuel cells. These financing options are usually through a combination of equity and loans with target users being private investors and start-up companies. As an example, Enterprise Singapore's (ESG's) investment arm, SEEDS Capital, alongside six co-investment partners, have committed a combined S$50 million into 50 maritime technology start-ups in Singapore[11].

Besides debt and equity instruments, we also propose an **industry-wide programme structured as a guarantee framework** for green projects that replicates the European Union's (EU's) Green Shipping Guarantee Programme. This is a sector risk-bearing facility designed for projects that will improve the environmental performance of transport vessels in terms of reducing the emissions of pollutants as well as increasing fuel efficiency. The programme is structured as a guarantee framework with financial institutions specialised in ship financing. The guarantee programme is intended to finance

[10] University Maritime Advisory Services (UMAS) and Energy Transitions Commission (ETC) (Jan 2020). The scale of investment needed to decarbonize international shipping. Retrieved from https://www.globalmaritimeforum.org/news/the-scale-of-investment-needed-to-decarbonize-international-shipping

[11] Source: The Straits Times (27 June 2020) ESG venture arm Seeds Capital and partners to invest $50m in maritime start-ups. https://www.straitstimes.com/business/economy/esg-venture-arm-seeds-capital-and-partners-to-invest-50m-in-maritime-start-ups

shipbuilding projects including new vessels, conversion and retrofitting of vessels. The scheme will also attempt to identify concrete green shipping investment projects designed to provide proof of concept. The target users would be shipping companies that obtain financing through a Partner Financial Institution (PFI) with the programme supported by a Singapore body equivalent to the European Investment Bank Group. In terms of the potential scale of this market, as a reference, the size of the EU's Green Shipping Guarantee Programme is EUR750 million.

2.4.3 Key barriers to implementing financial proposals and solutions to overcome them

The key **barriers** to implementing the proposed financial solutions include a lack of clear guidelines on what can be considered as "green" or "transitional" for shipping, the availability of green technologies and a lack of motivation from shipping companies.

Solutions to overcome these barriers include:

- Establishing clear guidelines on eligible activities;
- Providing research and development (R&D) incentives to support investment into green technologies;
- A linkage to Singapore's carbon tax to boost motivation;
- Having clear government objectives and target-setting for transition in carbon-intensive industries;
- Having shipping companies undertake annual assessments of climate alignment in line with the Poseidon Principles as best practice; and
- Close collaboration and deliberate collective action among the maritime industry, the energy sector, the financial sector, and government agencies.

The main **market participants** and stakeholders involved in the process are those in the maritime industry, energy sector, financial institutions, government ministries & statutory boards (e.g., MAS, NEA, MSE and MPA); and specialist consultants to verify energy savings and carbon capture.

We think the **engagement** and **motivation** required to steer the stakeholders towards transition finance include regulatory pressure such as having clear GHG emissions targets, and financial incentives such as interest rate adjustment or cost saving through ship energy efficiency design solutions.

2.4.4 Target Outcomes

In terms of **target outcomes** for the development of transition finance for the shipping industry, we think that success in the short- to medium-term would mean double-digit growth in transition finance to shipping from a level that is close to none now. In the long-term, success would mean scaling of transition finance to allow Singapore's shipping industry to contribute to the IMO's target of 50 per cent reduction in GHG emissions by 2050 as compared to 2008 levels.

The **timeline** to achieve the target outcomes would hinge on the degree of complexity and market interest. For **transition loans** and **bonds**, while some banks have internal guidelines on the definition

of “green” and “transitional”, this can only be at full steam with a more uniform industry-wide guiding taxonomy. We would rate the degree of complexity at medium. Within **venture capital**, given the funds launched by SEEDS Capital lately, it is uncertain if there will be a need for new funds soon as this is highly subject to market response. This would also be of medium complexity. The **Green Shipping Guarantee Programme** is considered of a high degree of complexity and we estimate that this will take one to two years depending on interest and viability.

2.5 Sector Focus: Automotive

2.5.1 Overview of eligible transition activities

The automotive sector, including cars, heavy goods vehicles (HGVs), large goods vehicles (LGVs) and buses accounts for 70 per cent of total GHG emissions from the transportation sector globally. Southeast Asia has one of the most dynamic automotive markets globally as the world’s 5th largest market with a growing fleet of over 3 million vehicles. Singapore had around 1,330 Electric Vehicles (EVs) out of a total global fleet of around 950,000 at the end of 2019. Previous surveys have indicated that only 23 per cent of intended new car purchasers in Singapore would certainly consider EVs when they make their next purchase decision[12]. However interestingly, 75% of respondents are willing to make a switch from conventional cars to EVs if taxes are waived. Singapore is uniquely suited to the uptake of EVs given shorter driving distances and strict state controls on car ownership. Hence, we think the country should be at the forefront of scaling up the use of EVs and building best practice that can be shared across Southeast Asia.

We think the applicable sub-industry within the automotive sector lies upstream in system design, manufacturing and integration. **Eligible transition** activities encompass energy-efficient engines including for heavy duty vehicles, and improved aerodynamics and tyre design, especially for heavy duty vehicles.

2.5.2 Key financial solutions

We think proposed solutions to advance transition finance should focus on managing the transition to meet targets of having net carbon neutral vehicle fleets between now and 2050. This approach should be applicable to automotive producers and companies working across their supply chains. A number of major global automotive producers such as Volkswagen and Mercedes-Benz already have public strategies in place mandating a requirement for net carbon neutral vehicle fleets by 2050. We advocate a systems-based approach where incremental improvements to a component of the whole production system are eligible for consideration if they are consistent with the transformation of the system overall.

Our proposed financial solutions encompass not only debt instruments for automotive companies but are also aimed at end-consumers. Within the **debt** market, these include transition loans or bonds which specify use of proceeds that finance activities or technologies that contribute to better environmental outcomes. This could also be in the sustainability-linked format of having targets related to the climate trajectory of the borrower. Target users would be automotive companies as borrowers or issuers on the one side and on the other side, banks as lenders or institutional investment funds, especially those with green mandates, as investors. Another proposed solution targeting automotive companies could be in the form of **trade finance** where eligible transition-

[12] Source: Frost & Sullivan/Nissan – The Future of Electric Vehicles in Southeast Asia (Jan 2018). Retrieved from frost-apac.com/BDS/whitepaper/Nissan_whitepaper.pdf

related trade activities can be financed by transition trade finance products. In practice this is likely to be offered at a later stage after transition loan and transition bond products are better established.

Unlike the oil and gas or shipping industries which do not have clear retail customers, the automotive sector can offer financial products targeted at **retail consumers** that can shape behaviour towards adoption of more environmentally friendly products. **Green Car Loans** is one product that could be considered to drive the uptake of sustainable finance in Singapore. The intention would be for banks to offer preferential commercial terms such as lower interest rates to incentivise consumers to purchase electric vehicles. Singapore has specific targets to phase out internal combustion engine vehicles by 2040, and this product can be aligned with that objective.

2.5.3 Key barriers to implementing financial proposals and solutions to overcome them

The key **barriers** to the implementation of our proposed solutions include:

- Concerns around the environmental and social impact related to the production of EV lithium batteries. For example, the sourcing of raw materials such as cobalt are linked to severe environmental, social and corporate governance (ESG) risks including corruption, exploitative labour practices and environmental damage;

- The market size is still small in Singapore with no integrated roadmaps for development within a green or transition framework;

- A lack of government incentives to shift consumers away from regular vehicles to EVs. The same is true for industrial fleets with heavy usage of HGVs and LGVs; and

- An uneven playing field where the cost of external impacts relating to internal combustion engines is not more clearly considered such as the healthcare costs involved, when compared with the cleaner benefits of using EVs.

A **two-pronged approach to overcome** these barriers could see both the government playing a more active role and issuers taking the lead in adopting transition finance.

The **government** could lead by:

- Adopting better safety standards;

- Facilitating the setup of charging and other required infrastructure;

- Imposing regulations for traceability of lithium battery components; and

- Providing incentives to influence the switch from conventional vehicles to EVs such as tax incentives, free parking, or toll discounts.

Issuers on their part can:

- Adopt clearer regulatory standards on reporting by transportation companies on ESG impacts across their supply chains;

- Have clearer definitions or framework relating to transition with a broader suite of financial market products catered to this; and

- Conduct investor and consumer education in relation to the benefits of clean transportation and the developments of financial market products assisting with investment in this area.

There is a broad range of **market participants** in the automotive sector, depending on the specific product being offered. Transition loans and transition trade finance would be offered by a broad suite of commercial banks already active in the green finance space. Issuers would encompass a broad range of corporates ranging from automotive groups to key companies engaged in their supply chains. Green car loans would represent an interesting market development given that this would provide market access to consumers on a personal basis.

3. Real Estate

3.1 Proposed financial solutions

3.1.1 Key products to increase financing and improve pricing

In the real estate sector, the key financial solutions can be grouped into three categories, namely to:

(1) increase accessibility for and outreach to investors, lenders and small-scale developers with regards to sustainable investments and financing opportunities;

(2) enhance incentive schemes granted by the Monetary Authority of Singapore (MAS) and the Building and Construction Authority (BCA); and

(3) validate the value proposition of green buildings in Singapore.

Solutions can be direct or indirect financial solutions, or non-financial solutions.

To increase accessibility for and outreach to investors, lenders and small-scale developers, the proposed solution is to leverage fintech to establish a green platform for connecting companies or start-ups with like-minded Environmental, Social and Governance (ESG)-centric investors and lenders for them to have a straight through simplified access to ESG funding.

For incentive schemes granted by MAS and BCA, the proposals broadly include the expansion of qualifiable sustainable debt instruments, expanding the categories of reimbursable expenses, increasing caps and funds committed, extending validity periods, expanding eligible target segments to property developers/managers and non-asset managers, and expanding the scope of funding to green or sustainable initiatives. Specifically, the targeted incentive schemes could include the MAS Sustainable Bond Grant Scheme (SBGS), MAS Green and Sustainability-Linked Loan Grant Scheme (GSLS), MAS US$2 billion Green Investments Programme (GIP), BCA Green Mark Incentive Scheme for Existing and New Buildings respectively, the Building Retrofit Energy Efficiency Financing (BREEF) scheme, and the Green Mark Gross Floor Area (GM-GFA) Incentive Scheme.

The working group also proposed potential research studies to be conducted, with the aim of validating the value propositions of green buildings. Firstly, Singapore green buildings and the positive impact on property valuation. Secondly, Singapore green buildings and resultant climate resilience; and the positive impact on sustainable insurance. Lastly, rental or clientele base and its positive link to Singapore green buildings.

Please refer to **3.2 Implementation** for further details.

3.1.2 Target users

The target users of these proposed solutions are primarily real estate developers, investors, lenders, builders, asset managers, building investors and owners, project architects, mechanical and electrical (M&E) engineers and financial institutions (FI). However, certain proposed solutions may extend beyond the real estate sector. For instance, establishing a green platform would also target companies and start-ups who wish to tap on ESG-related funding. Additionally, proposed enhancements to the MAS US$2 billion GIP by extending the scheme to property developers/managers and non-asset managers could cover a broad range of sectors. Particular effort should be made to encourage more small- and medium-sized enterprises (SMEs) (e.g., small-scale developers) to participate as the

engagement and utilisation rates in this segment is currently not high and presents an area of opportunity.

3.1.3 Scale of market and how these solutions will help

The total asset value of S-REITs as of November 2020 is approximately S$174 billion[13]. As a rough estimate, this puts the potential total loan value that may be eligible for sustainable financings at approximately S$50 billion. This excludes the non-REIT sector, which could be an additional source of loan volume.

The direct financial solutions will increase access to and flexibility in adopting sustainable financing and reduce financing-related costs to borrowers or issuers. The indirect financial solution compensates developers through more Gross Floor Area (GFA). Non-financial efforts can connect users with shared ESG goals, pool small-scale green projects to make them more attractive and accessible to ESG-centric investors and increase collaboration with overseas counterparts to support regional sustainable development initiatives. The end effect is to encourage adoption of sustainable practices in property design, enhancement, and development.

3.2 Implementation

3.2.1 Key barriers to implementation and solutions

A key component of increasing accessibility and outreach to sustainable investments and financings via a green platform, is the surveillance function. A robust system capable of evaluating the creditworthiness and viability of green projects will need to be implemented to ensure that projects and proposals listed are compliant with ESG guidelines and risk profiles.

The key barriers to enhancing existing schemes include ensuring that SMEs have access to non-financial support (e.g., technical and implementation support) in addition to direct or indirect financial support. Non-financial support may be provided through education (e.g., workshops and trainings) to raise awareness of available sustainable debt instruments or programmes, requirements, suitability and the related costs involved.

Extending the MAS US$2 billion GIP to property developers/managers and non-asset managers may involve operational challenges as different selection criteria have to be set for different sectors and concurrently or subsequently monitored. To address this challenge, leaders in these sectors could be engaged to embark on and participate in such schemes as first movers to lead the path. In expanding the GM-GFA Incentive Scheme, the cost-benefit analysis to be carried out must result in a net positive impact to ensure an optimal balance. Whilst the working group proposes to increase the GFA cap and grant a higher percentage of additional GFA to developers, research has shown that there may be a need for government bodies to analyse the costs (e.g., canyon effect from clustering of high rises) and benefits (e.g., ease of implementation and environmental benefits of green building development) to arrive at an optimal amount of additional GFA to be granted[14].

Barriers identified for the third solution mainly relates to the requirement of statistical evidence supporting empirical research to validate the proposed value propositions of Singapore green

[13] REITAS: Summary table of Singapore REITs, Retrieved 29 November 2020 from https://www.reitas.sg/wp-content/uploads/2020/11/pdf-for-website-23-Nov-2020.pdf, October 2020
[14] Qian, Fan, & Chan: Regulatory incentives for green buildings: gross floor area concessions, Building Research & Information Volume 44, 2016 - Issue 5-6

buildings. To address this challenge and taking into account the importance of having representative findings, the working group suggest that government bodies (e.g., BCA, URA, MAS) could provide support by leveraging its pool of data to test the hypotheses. Such studies could be implemented using a meaningful sample size on an anonymised basis. Where there is a gap in data and taking into consideration confidentiality, the working group acknowledges that collaboration with real estate developers may be required. Real estate developers together with various institutes of higher education may also be involved to facilitate with data analysis and research initiatives.

3.2.2 Solutions to overcome barriers in implementation

To make the solutions executable, the working group has identified several areas for development and proposed some incentives or policy changes.

Increasing accessibility and outreach to investors, lenders and small-scale developers involves widening access to sustainable investments or financing opportunities. MAS can partner credible fintech companies to set up a platform to drive a seed project that provides a common platform for connecting like-minded ESG-centric investors or lenders with companies or start-ups to have straight-through simplified access to ESG funding. The platform can serve as a one-stop green platform directory for companies or start-ups to list sustainable project initiatives to seek funding (e.g., crowdfunding and bank loans) and for investors to search for ESG investment opportunities. This increases outreach for sustainable investing or financing and connects users with shared ESG objectives. The platform can also facilitate the pooling of small-scale green projects to create green funds which ESG-centric investors can select or invest in. A robust surveillance function capable of evaluating projects or proposals pre- and post-listing on the platform will have to be set up to ensure compliance with ESG guidelines and risk profiles as part of an in-house due diligence process.

Potential enhancements and extensions to several MAS and BCA incentive schemes have been identified. The first is the SBGS which, as of 24 November 2020, MAS has expanded its scope to include sustainability-linked bonds and to cover post-issuance costs of engaging independent sustainability assessment and advisory service providers to obtain external reviews or report for bonds under the scheme[15]. The Working Group's specific additional recommended enhancements include:

- Expanding the category of claimable expenses for issuers to include expenses, as long as they are related to the transaction. This may include:
    - Costs incurred for assessments that assist stakeholders in evaluating ESG or sustainability profiles of companies. For example, green certification assessments (including recertification costs), auditor assessments, external independent reviews to verify attainment of annual ESG targets, ESG risk rating assessments or certifications, and impact reporting.
    - Legal fees incurred for transactions and other related costs to set up the framework for green notes programmes.
- Increasing the per-issuance cap for offsetting eligible expenses by setting it as a percentage of total issuance size and allowing reimbursement of costs incurred over the full facility tenor; and

[15] MAS: MAS Launches World's First Grant Scheme to Support Green and Sustainability-Linked Loans, MAS Media Releases, 24 November 2020

- Extending the validity period (current scheme is expected to expire by 31 May 2023[16]) to allow the sustainable financing market to gain traction and develop in Singapore.

In addition to the SBGS, MAS also launched the GSLS effective from 1 January 2021[17]. The Working Group's proposed enhancement to the GSLS largely mirrors its proposals for the SBGS. The recommended enhancements include: 1) expanding the category of claimable expenses for borrowers to include expenses, as long as they are related to the transaction, and 2) increasing the per-issuance cap for offsetting eligible expenses by setting it as a percentage of total loan size and allowing reimbursement of costs incurred over the full facility tenor.

The third MAS incentive scheme is the MAS US$2 billion GIP. Proposed specific enhancements include increasing the fund's commitment which aims to encourage selected asset managers to actively seek and diversify investments in public market firms with a strong green focus[18], expanding eligibility to property developers/managers and non-asset managers, and expanding the scope of funding to green, ESG or sustainable initiatives. Specific to the real estate sector, the criteria for selection could include track records in energy efficiency, water saving or waste management, and others including health and wellness for building users.

Four existing BCA Green Mark incentive schemes have been identified for proposed enhancements. The first is the S$100 million Green Mark Incentive Scheme for Existing Buildings (GMIS-EB) which aims to encourage the adoption of energy efficient retrofitting design, technologies and practices in existing buildings by providing co-funding for equipment purchase and installation and professional services via a cash incentive scheme, as well as co-funding the cost of energy audits for air-conditioning plants via the "Health check" scheme [19] .Proposed enhancements include increasing the total fund commitment and individual caps for cash incentives, extending cash incentives to co-fund for other forms of green Asset Enhancement Initiatives (AEIs) (e.g. water efficient systems, improved indoor air quality or ventilation and resource efficient building design), and extending the scheme's validity period. It is noted that funds for the cash incentive scheme are fully committed and the "Health check" scheme has expired.

The second BCA-related scheme is the S$20 million Green Mark Incentive Scheme for New Buildings (GMIS-NB), which aims to encourage developers, building owners, project architects and M&E engineers to accelerate adoption of environmentally friendly building technologies and building design practices in the design and construction of new buildings[20]. The proposed enhancement is to increase the fund commitment for this scheme. It is noted that the fund is fully committed.

In addition, in line with its current efforts to encourage "Singapore firms across the entire built environment value chain to consider how to pool their capabilities and resources to venture into new markets overseas"[21], BCA could consider leveraging the two abovementioned schemes to collaborate with overseas counterparts to support Singapore's real estate developers in expanding their green efforts for overseas developments, which will drive regional sustainable developments.

[16] MAS: Sustainable Bond Grant Scheme, Retrieved 29 November 2020 from https://www.mas.gov.sg/schemes-and-initiatives/sustainable-bond-grant-scheme , 2020
[17] MAS: MAS Launches World's First Grant Scheme to Support Green and Sustainability-Linked Loans, MAS Media Releases, 24 November 2020
[18] MAS: New US$2 billion Investments Programme to Support Growth of Green Finance in Singapore, MAS Media Releases, 11 November 2019
[19] BCA: Green Mark Incentive Scheme for Existing Buildings (GMIS-EB), Retrieved 27 November 2020 from https://www1.bca.gov.sg/buildsg/sustainability/green-mark-incentive-schemes/green-mark-incentive-scheme-for-existing-buildings-gmis-eb, 2020
[20] BCA: Green Mark Incentive Scheme for New Buildings (GMIS-NB), Retrieved 27 November 2020 from https://www1.bca.gov.sg/buildsg/sustainability/green-mark-incentive-schemes/green-mark-incentive-scheme-for-new-buildings-gmis-nb, 2020
[21] BCA/Lim: Local building firms lauded for successful overseas ventures, The Straits Times, 29 August 2020

The third BCA-related scheme is the BREEF scheme where participating FIs offer financing to cover upfront equipment and installation costs and professional fees related to energy retrofits of existing buildings through energy performance contract arrangements[22]. Proposed enhancements include increasing the loan quantum cap, extending the scheme's availability beyond 2023, and widening the scope beyond energy efficiency to cover any effort to drive green initiatives, which also increases the accessibility of the scheme to SMEs.

The fourth BCA-related scheme is the GM-GFA Incentive Scheme, which grants additional GFA above the Master Plan Gross Plot Ratio (GPR) for buildings that achieve Gold^{PLUS} or Platinum Green Mark ratings[23]. Proposed enhancements include increasing the GFA cap and granting higher additional GFA percentages beyond the Master Plan GPR and extending the validity of the scheme as it has expired.

The working group identified potential areas for further research development. Firstly, Singapore green buildings and its positive impact on property valuation. Secondly, Singapore green buildings and resultant climate resilience; and positive impact on sustainable insurance. Lastly, rental or clientele base and its positive link to Singapore green buildings. Government bodies such as BCA, URA, MAS and other related regulatory bodies could be involved. Their participation could be in the form of leveraging existing pool of data to provide anonymised data for analysis and committing funds for research. In addition, institutes of higher education and real estate developers could assist with analysing and comprehending the data/results. The objective of such studies is to validate the proposed value propositions with data, potentially motivating developers to drive the shift towards more green buildings' development in Singapore. For instance, findings to support whether green-rated buildings derive higher property valuations compared to non-green or whether ESG performance of buildings could affect the premiums to be paid for property related insurance. This could pave the way towards achieving Singapore's Inter-Ministerial Committee on Sustainable Development target of having at least 80% of the buildings' GFA in Singapore to be green by 2030[24].

3.3 Key market players and ways to motivate them

The key market participants and stakeholders include direct participants in the financing chain such as corporate borrowers, issuers, lenders, FIs and investors. As highlighted, an opportunity to engage smaller-scale developers and expand or extend engagement to the wider real estate ecosystem in particular also exists. The key motivators for this group of stakeholders are financial (either through reduction in financing-related costs, preferential financing terms or pricing and accessibility to liquidity) as well as non-financial (through additional GFA, existing or potential stakeholders increasingly placing importance on ESG efforts as a criterion for doing business, positive public relations, and achieving corporate sustainability goals).

Other key stakeholders include government bodies (MAS, BCA and URA) and fintech companies. The motivators for these participants are disparate but also largely converge around the importance of forward development of the ESG space in the growth of their organisations or environment.

[22] BCA: Building Retrofit Energy Efficiency Financing (BREEF) Scheme, Retrieved 27 November 2020 from https://www1.bca.gov.sg/buildsg/sustainability/green-mark-incentive-schemes/building-retrofit-energy-efficiency-financing-breef-scheme, 2020
[23] BCA: Green Mark Gross Floor Area Incentive Scheme (GM-GFA), Retrieved 27 November 2020 from https://www1.bca.gov.sg/buildsg/sustainability/green-mark-incentive-schemes/green-mark-gross-floor-area-incentive-scheme-gm-gfa, 2020
[24] Ministry of Foreign Affairs: Towards a Sustainable and Resilient Singapore, 2018

3.4 Target Outcomes

The working group has sought to define what success would look like, the timeline for implementation and degree of complexity and risk of implementation.

Success would be to navigate and drive the entire real estate value chain and ecosystem to focus on ESG as one of the important aspects of the business environment. According to the 2019 Global Status Report for Buildings and Construction, the building and construction sector accounted for 36 per cent of final energy use and 39 per cent of energy and process-related CO_2 emissions in 2018[25]. Increasingly, corporations are measured not just by their top-line revenue and profit numbers but also by how they incorporate ESG responsibilities in achieving these numbers.

In terms of timeline for implementation, immediate action that can be taken in the near term should involve setting various milestones such as raising awareness and emphasis among various stakeholders on ESG-related issues, setting corporate standards and sustainability frameworks for adherence and alignment to international standards, introducing ESG-related financial products, and integrating sustainability considerations along the entire investment and operational process. This should be followed by constant review of such milestones or targets. The achievement of such milestones will provide the momentum and impetus to the industry and allow for further development of the ESG space.

The working group holds the view that the degree of complexity or risk in implementation depends on the willingness and mindset of corporations to overcome such complexities and set aside resources to commit to the ESG movement. It should be noted that the financial rewards could be indirect, hard to quantify or may indeed sometimes seem intangible and should hence not constitute the prime motivator when embarking on ESG initiatives.

[25] Global Alliance for Buildings and Construction: 2019 Global Status Report for Buildings and Construction – Towards a zero-emission, efficient and resilient buildings and construction sector, 2019

4. Infrastructure

4.1 Proposed financial solutions

4.1.1 Key products to increase financing and improve pricing

To improve the availability of financing and pricing of green projects, the working group has identified the following solutions:

(1) Early-stage capital and green development funding;

(2) Project Loans;

(3) Project Bonds;

(4) Green Securitisation; and

(5) Green Standards for Infrastructure financing.

Each of these solutions complements and contributes to the growth of the market for financing of sustainable infrastructure and will be discussed herein.

(1) **Early-stage funding**

It is important to cultivate green projects at the early stages to serve as a base to generate the financing opportunities down the road. The access of developers to meaningful high-risk early-stage development funding is critical to build the pipeline of sustainable/green projects that can be commercially funded as these projects progress to the later stages of Ready-to-Build.

An expanded role of the multilateral and regional development finance institutions (DFIs) in mobilising blended finance either through development assistance programme or investment in and management of specialised funds overcomes the challenges of mobilising private development capital, such as: 1) high premiums required by developers; 2) de-risking exit to the developer, to consider exclusive partnerships with risk-adjusted equity providers (e.g. infrastructure funds, construction funds); and 3) reporting requirements and transparency, through establishment of standards and best practices.

(2) **Project loans**

When projects pass the initial stages of evaluation, the funding from banks, particularly in Asia, becomes the primary source of long-term capital for greenfield projects, except in Malaysia where the sukuk holders in Malaysian ringgit infrastructure market have historically provided long-term debt and can accept construction risks.

(3) **Project bonds**

For projects that progress beyond construction to the stage where the cashflows achieve steady state, the Project Bond market is an excellent source of long-term financing. Of all the solutions proposed, this market is relatively well developed in terms of structuring, expertise, distribution, and market acceptance. Examples can be seen in Indonesia, Vietnam, Malaysia (local currency

issuance) and India (in the renewable energy space). However, the scale is still small relative to the overall financing debt capital markets.

(4) **Green securitisation**

As sustainable finance is now top priority for the global finance community, the G20 has identified securitisation as a potential tool for driving sustainable infrastructure investments, mirroring the development of other asset classes such as real estate, auto loans and consumer loans historically.

To successfully develop the securitisation market for financing sustainable infrastructure, it requires participation from various stakeholders such as multilateral development banks, hedging providers, rating agencies, Environmental & Social (E&S) consultants, research institutes and government agencies.

(5) **Green standards**

While there is a fair number of regulations and guidelines defining the sustainable green infrastructure space, there is asymmetry in the adoption of standards in the various markets. In some cases, the regulatory front is developing quickly, e.g., EU Regulation – Article 501a, the question is the potential applicability beyond Europe and how quickly Singapore can keep pace and lead the market in South East Asia.

4.1.2 Scale of market and how these solutions will help

Investing in sustainable infrastructure is key to tackling the three central challenges facing the global community: 1) reigniting growth, 2) delivering on the United Nations' Sustainable Development Goals, and 3) reducing climate risk in line with the Paris Agreement.

According to the Global Commission on the Economy and Climate, it is estimated that approximately USD100 trillion of sustainable investments will be required over the next 15 years. The G20 has studied the potential role of securitisation in financing low carbon, climate resilient infrastructure, particularly given the scale of investment needed to transition to a 2 degrees Celsius world in line with the Paris Agreement.

In the coming years, infrastructure spending is a key driver for growth in South East Asia (SEA). According to an estimate by the Asian Development Bank, countries in SEA require investment in infrastructure of around USD210 billion per annum to maintain the growth momentum.

Traditionally, infrastructure projects have been funded by project loans mainly due to 1) flexible provisions allowing modification, including prepayment, 2) all sizes and tenors catered to with no minimum, 3) credit rating or public disclosure is not needed, and 4) availability during construction phase.

However, project loans suffer from, amongst others, higher costs from long tenors, currency hedging mismatch, non-standard documents, and size of projects. Here, project bonds have emerged as a more suitable funding option for refinancing of existing project loans. Bond investors are attracted to the certainty of cashflow over the longer tenor that matches the maturity of such bonds.

Despite the enormous financing potential, the total amounts of sustainable infrastructure investments by institutional investors remain limited to date. Having a green securitisation platform will provide institutional investors with a new avenue to gain exposure to low carbon infrastructure and allow banks to recycle their capital and liquidity to support other projects.

This has become particularly relevant since the advent of Basel III, with punitive credit risk charges on specialised lending (which covers commodity finance, operational and pre-operational phase project finance) making it less economical for banks' Return on Risk Weighted Assets to engage in long term infrastructure lending.

An example of securitisation is the effort by Bayfront Infrastructure Management (Bayfront), a Singapore-based platform established in 2019 in connection with the Infrastructure Take Out Facility initiative that is sponsored by the Monetary Authority of Singapore to help mobilise private institutional capital into infrastructure financing.

In 2018, through its sister company Clifford Capital, Bayfront demonstrated a successful pilot securitisation of 37 project and infrastructure loans domiciled in the Asia Pacific and Middle East regions. Securitised notes were issued by an SPV named Bayfront Infrastructure Capital (BIC).

Based on the growing demand and allocation by institutional investors for green/sustainable finance products, there will be opportunities in the market to issue sustainable (or green) securitisations when the underlying assets meet certain sustainability criteria. This also has a signalling effect for originating banks, who may allocate capital to such sustainable/green assets if they know there are reliable platforms ready to purchase these loans on a rolling basis.

4.2 Implementation

4.2.1 Key products to increase financing and improve pricing

At this stage, smaller developers lack the funding capacity and favourable cost of capital to deliver and scale sustainable infrastructure projects in South East Asia. They also face issues of reporting, disclosure and sometimes, valuation. Another area of concern is the lack of human resources and expertise to properly execute the identified opportunities.

Such project development costs include 1) resources to undertake feasibility studies (may be 2-5 per cent and up to 10 per cent of total project cost), 2) obtaining permits and approvals, and 3) securing connectivity to infrastructure for their projects. Such costs either limit developers to evaluate fewer projects and/or reduce the scale of projects pursued.

To grow the pipeline of projects, some form of **seeding platform** can be established in Singapore, anchored by development finance institutions (DFI) or the government, to aggregate the interests of developers, equity parties, DFIs and government bodies. This can be a marketplace to allow the various parties to connect such as to centralise the expertise of the smaller developers, connecting with investors seeking early-stage development funding and/or de-risk opportunities.

Whilst banks have been dominant in providing project loans, there are constraints that limit the availability of such liquidity for sustainable financing. These are listed below.

Constraints	Details	Solutions
1) Tenor and Cost of Capital	Regulations increase cost of capital, especially for long tenors	– Export Credit Agencies (ECAs) through guarantees and direct funding, a very efficient tool for greenfield projects; – DFIs with guarantees and direct funding – capital relief mechanism by regulators e.g., EU Regulation Article 501a, a capital relief mechanism for green projects – infrastructure loan securitisation platforms e.g., Bayfront Investment Management – ECA-covered bonds, to diversify the pool of liquidity during the construction phase – project bonds as refinancing, post-construction
2) Currency mismatch	– local currency financing versus traditional USD – International banks have limited access to local currency while local banks are not familiar	– work with ECAs and the likes of Credit Guarantee and Investment Facility (part of Asian Development Bank) that provide (AAA-rated) wrap for local currency bonds to attract local investors – innovative currency swaps arrangements, where possible
3) Bankability/ contractual framework	– current format of power purchase agreements does not offer allocation of risk suitable for financing	– collaboration between government-to-government, banks and DFIs to establish agreements with more balanced risk allocation – international bank collaborating with domestic banks to allocate risks
4) Size of projects	– smaller projects are overlooked by banks	– aggregate various such projects into a portfolio which could comprise cross technologies (e.g., wind, solar, hydro) and cross borders, to access the financing.
5) Connectivity	– support for underlying infrastructure and environment	– capital available to support the government to build or improve underlying infrastructure will significantly help the bankability of these green infrastructure projects.
6) Lack of technical expertise/knowledge	– certain technologies are less understood, e.g., tidal and floating offshore wind farms	– governments to fund prototype projects to demonstrate the technologies and its feasibility. – identify gaps in technical expertise in ASEAN and establish Singapore as the centre of excellence/expertise.

The key challenges in the issuance of **project bonds**, along with some suggested solutions are:

(1) **Currency mismatch and ratings**

Investors require credit ratings for project bonds. For projects generating local currencies and funded by project bonds denominated in US Dollars, appropriate hedging is a key consideration of the rating agencies. Hedging for long-dated risk is a challenge in most jurisdiction in South East Asia as liquidity is weak in the longer tenors.

(2) **Hedging**

Financers typically require developers/sponsors to enter into interest rate swaps to fix rates of loans granted for green field financing. If such loans are refinanced by project bonds ahead of maturity of the loans, break cost of the swaps is prohibitive. Possible solutions include: 1) an institution can be established that participates with banks to house the credit risk for long (generally illiquid) tenors and give comfort to rating agencies that the instrument is hedged for the instrument tenor instead of rolling hedges, and 2) development of project bond markets denominated in local currencies and to grow the acceptability of the longer tenors.

(3) **Scale**

Several projects in the renewable energy space, especially in South East Asia, are relatively small in scale and this limits their ability to access the bond market that typically requires a minimum benchmark size of USD300 million.

A possible solution is the development of a **Private Placement** (PP) market for project bonds in South East Asia. This PP market, which is well developed in the US, adopts loan style documents and places to institutional investors.

As the cost of issuance of project bonds can be prohibitive, given the smaller size of issuance, regulators can provide incentives to issuers (e.g., the existing MAS schemes for green bonds fee and cost rebate) and investors (through the establishment of an institution to provide liquidity for small size project bonds).

Incentives for regional infrastructure funds to focus on investment in bonds issued under private placement may be beneficial as well.

(4) **Greenfield risk**

Fixed income investors are typically less inclined to assume greenfield risk primarily as the credit rating is impacted as well. A solution is to encourage banks to provide Standby Letters of Credit (SBLC) or DFIs to provide credit enhancement during the construction stage. These credit enhancements would support the credit ratings and encourage the issuance of project bonds during the greenfield construction phase.

Whilst project loans and project bonds have made significant progress in financing green and sustainable infrastructure projects, **securitisation** is at a nascent stage and there is great potential for Asia to lead here. In developing the potential of securitisation in Asia, the key considerations are:

(1) **Sufficiency of Green Assets**

To reach a critical market size, there must first be sufficient volume and velocity of new sustainable assets generated in Asia. In the securitisation transaction issued by BIC, only approximately 17 per cent of the portfolio at inception related to sustainable assets, of which approximately 13 per cent was in renewable energy and approximately four per cent in water desalination.

While the number of renewable projects is growing in the region, such securitisation effort typically targets brownfield assets due to their mature operational and established cashflow generating characteristics and where the construction risk is behind the project. The supply of projects for securitisation remains limited.

Furthermore, some banks are reluctant to recycle their green loans as they may have started to target certain percentage of their assets in green sustainable assets and/or issued green bonds themselves with the proceeds to be deployed in such green assets. We believe this trend will change as the current projects under construction achieve operational status. For example, we expect that it is possible for Bayfront to acquire a sufficient pool of sustainable assets in the next 3-5 years.

(2) **Investor Demand and Pricing**

There is growing momentum in the project finance market to originate sustainable or green assets by banks. Inevitably, this greater interest and underwriting appetite by banks to finance such assets is expected to tighten pricing, which has been observed in the Australian and Taiwanese renewable assets originated over the last few years.

Hence, there is potential of a **green tranche** as part of securitisation, to cater to specific demands of investors. Over time, this could turn into a **fully green securitisation**, as the terms and format, including pricing, evolve to meet the expectation of investors.

There is no clear evidence, from discussions with intermediaries and investors, about there being an ability or willingness for investors to accept **tighter pricing** by virtue that it is a green asset. This distinction has not risen but in time, we expect it to rise as demand for green assets rises and there is better appreciation around its scarcity value and the premium value of green assets. Some of this price tightening has been seen in the Australian and Taiwan renewable assets market over the last few years.

On the other hand, the additional 'Green' requirement for such transactions will add material resources required by originators and investors to review, validate, monitor, and report such transactions, more so than regular project finance transactions.

(3) **Currencies**

Some of the key renewable energy markets in Asia Pacific are local currency based, including Australia, Taiwan, and India to a lesser extent. Hence, there is a need to develop the ability or structure to access these local currency markets, in order to build a broad-based portfolio of sustainable assets.

Some possible options considered are

- USD-equivalent funded risk participations where originating banks take up the foreign currency risk; and

- local currency securitisations.

To progress on our vision of **green securitisation**, it would be imperative to progress on the following streams:

(1) **Green Asset Framework**

Laying down the core tenets and criteria will assist in guiding investors, banks and aggregators, securitisation platforms on structuring potential green assets. A proposed framework by Bayfront includes these four main components

- Green Asset Taxonomy or Eligibility Framework specific definitions and delineations on what may be tagged as "Green Assets";

- Environmental and Social (E&S) Ratings Methodology to establish a clear methodology and framework where one would look to assess E&S risk and derive a final E&S score for each specific loan;

- Review and Validation Process to establish a robust review and validation process for the onboarding of sustainable/green assets to meet investors' requirements and expectations; and

- Monitoring and Reporting ongoing disclosure and reporting that will aim to track and disclose relevant E&S metrics meaningful to the investors.

(2) **FX Solutions**

The securitisation platforms need to be able to manage local currency risks and this can be done in a number of ways, subject to the economic costs involved in specific cases.

- At project level: This is however constrained by project counterparty hedge providers' ability to provide long term cross currency/FX swap instruments, particularly for unwinding or mark-to-market costs related to prepayment or refinancing risk which can be quite prevalent for project finance.

- At platform level: The platform itself may or may not be able to manage a certain amount of foreign exchange risk with the help of the diversification of the portfolio and may also explore hedging at this level to manage a portion of this risk. To also consider collaboration with DFIs or other multilateral organisations that are able to take local currency risks overlaid with local currency hedging and/or guarantee products.

(3) **Greenfield Assets**

There is still a need for bridging of early-stage financing needs to the stage where renewable assets reach operational phase. To a certain extent, banks and/or Bayfront's warehousing facility plays this role but beyond these avenues, a supply/demand gap still remains. Potential ideas for exploration for bridging this greenfield risk include leveraging on

ECAs/DFIs/Multilaterals who can provide construction risk insurance, completion guarantees or warehousing facilities (such as Bayfront's).

4.2.2 Solutions to overcome barriers in executing financial solutions

The work group proposes the following action points to improve the situation for banks to provide project loans:

(1) Capital relief mechanism for qualifying green infrastructure projects located in or booked by banks in Singapore and/or partner countries. In June 2020, the European Union introduced Regulation Article 501a to provide capital relief to banks to free up capacity to finance more qualifying infrastructure transactions. A similar initiative can be tailored to the local needs in South East Asia that will be helpful to overcome the different regulatory/PPA framework across the region;

(2) To collaborate with DFIs and encourage inter-governmental discussion to develop a knowledge portal to share best banking practices among countries. The portal should promote the design of agreements (e.g., power purchase agreements, concession agreements) to improve the acceptance by banks for financing;

(3) To promote solutions for capital recycling of green loans booked in Singapore, e.g., Bayfront and others;

(4) To promote closer partnership and co-lending with DFIs to deliver solutions such as cover/A-B loans so as to increase the credit comfort of domestic commercial banks; and

(5) To establish Singapore as a centre of excellence and expertise for all green technologies, e.g., standardise the definition of a green project. Perhaps projects below a certain size can qualify as green with fewer criteria.

For project bonds, we propose widening the scope of existing incentives under the MAS scheme for bond issuances to include green and sustainable project bonds.

Managing of local currency risk is a constant theme across all financing solutions due to the absence of long-term hedging solutions in many of the local currencies in South East Asia. Singapore can lead discussions with the other governments to consider establishing **multilateral currency swap agreements** specifically for green infrastructure assets to facilitate the growth of this market.

4.3 Key market players and stakeholders

4.3.1 Early-stage financing

The early-stage financing market is very fragmented with many small developers spread over different sectors and technologies, e.g., solar, wind, hydro, waste-to-energy. There are gaps in early-stage development stage funding of green projects due to a high degree of risk/uncertainty leading to lower conversion to Ready-to-Build and then Operation stages.

Traditionally, funding at this early stage comes from large corporates and strategic investors with their favourable cost of equity and funding on their own balance sheet. Multilateral and national development finance institutions (DFIs) have also provided capital for such early-stage evaluation, e.g., through funded feasibility studies and provision of advisors/consultants for specific sectors.

For example, Asian Development Bank (ADB) provided high-risk seed capital in the geothermal energy sector that allowed a developer to conduct geothermal energy assessment which led to a development financing four years later.

The scarcity of development capital at this early stage is somewhat alleviated by the presence of funds from DFIs (e.g., ADB-managed Clean Technology Fund) and specialist fund managers (e.g., Infraco and Climate Fund Managers) that have deployed a blended mix of commercial and concessional investments to mitigate the cost of funding and exit requirements. The amount of such capital is still limited, compared to the pipeline of opportunities.

Under the leadership of several international climate foundations e.g., Sea Change Foundation International, Wellspring Climate and High Tide Foundation, a South East Asia Clean Energy Facility (SEACEF) was launched in August 2020 as a philanthropic fund to offer high-risk venture capital type funding to finance the development of early-stage clean energy projects in South East Asia.

SEACEF has a target of USD50 million assets under management and aims to facilitate USD2.5 billion of clean energy investments. It is hoped that more small developments projects will be funded to reach the Ready-to-Build stage for subsequent project financing.

4.3.2 Project bonds

Investors in project bonds are attracted to the characteristics of these projects, i.e., operational assets with established track record of cashflow that rating agencies can assess and grade. It allows banks to recycle its lending capacity and support other projects in the early greenfield stage.

Furthermore, fixed income investors have shown flexibility in taking on tail-end risk and price bonds for longer tenors closer to the expiry of power purchase agreements. There has been some supply of project bonds, approximately USD4 billion, issued in South East Asia (mainly from Vietnam and Indonesia).

Project developers/sponsors are attracted to issuing project bonds due to:

- Greater flexibility in the distribution of dividends which is an attractive feature for developer/sponsors seeking funding for further expansion;
- Ability to increase the size of debt/leverage on the project supported by the underlying cashflows and debt service coverage ratios;
- Desire to tap the global bond market with its deep pool of liquidity for bond issuers (more than ten times that of the bank loan market). These bonds can be distributed to a pool of large, diversified global investors;
- In some cases, bond issuance alleviates the pressure on borrower limits imposed by banks, even though project loans are on a non-recourse basis. This creates borrowing capacity for future greenfield projects; and
- Project bonds do not require periodic operational and financial reporting primarily because these bonds themselves are a small portion of investors' portfolio.

Fixed income investors are attracted to project bonds for the following reasons:

- These bonds offer a predictable source of income for long-term investors such as infrastructure funds, pension funds and insurance companies;

- Furthermore, it allows such investors to diversify their portfolio away from the traditional corporate bonds; and

- Project bonds are a suitable instrument for long-term investors to gain exposure to green and sustainable financing.

4.3.3 Securitisation

The potential partners in the securitisation process are:

- **Commercial banks** to discuss green asset origination targets, pipeline etc. and a framework for a platform like Bayfront to participate early in the process to increase the bank's primary underwriting bandwidth (e.g., through forward commitments).

- **Hedging providers** to provide foreign exchange/cross currency hedging products to allow such platforms to take on multi-currency assets, or local currencies where financed renewable/green projects are advancing rapidly but the corresponding local currency structured debt is underdeveloped.

- **Rating agencies** to develop the agency's own E&S scoring and monitoring methodology, for individual loans as well as securitisation portfolios, which can be used by Bayfront and disclosed to potential investors.

- **E&S consultants** knowledge sharing on latest sustainable/green asset financing trends, and ongoing improvements to Bayfront's Green Asset Framework to remain up to date with the latest standards and regulations.

- **Research institutes** such as EDHECinfra and Preqin to use data analysis to develop green securitisation as an asset class, and to develop appropriate pricing benchmarks for investors to compare against other fixed income products, other green/sustainable securities, or other securitised products.

- **Multilateral development banks** to co-develop applicable green securitisation standards particularly in Asia Pacific, to improve underwriting and monitoring standards for sustainable assets, or to offer another credible source of sustainable loans available for acquisition by Bayfront.

- **Government agencies** such as Infrastructure Asia and MAS to promote the sustainable finance agenda and green securitisation technology amongst the local, regional, and global finance communities, and potentially offer grants or incentive schemes for market players involved in developing green securitisation.

4.3.4 Green standards

The existing standards adopted in infrastructure financing and development include:

(1) **Equator Principles** – broadly adopted but not necessarily wide ranging in local banks in specific markets

(2) **IFC Performance Standards** – broadly adopted but not wide ranging

(3) **World Bank Environmental Health & Safety (EHS)** Guidelines

(4) **ADB Safeguard Policy Statement**

(5) **IDB Framework** to guide sustainability across the project cycle

(6) **LMA/APLMA Green Loan Principles**

The other industry certifications NOT adopted by financial institutions are CEEQUAL, LEED, SITES, BEAM Plus, BCA Green Mark, ISI Envision, BREEAM estimated over 600 green certifications globally.

The various Sustainability disclosure standards (though not widely adopted) include SASB, GRI, AA1000, CDP, ISO26000.

The key challenges to the adoption of standards include:

(1) Multitude of assessment criteria, ratings, indicators, performance standards;

(2) Evolving criteria and standards moving from greenfield to mature assets;

(3) Non uniform adoption of standards within individual FI's framework and policies;

(4) "Same but different" time and effort of having to understand and incorporate varying sets of requirements with likely significant overlap;

(5) Existing focus on greenfield infrastructure with inadequate guidance for non-greenfield related financings; and

(6) Delineating between sponsors versus project requirements (especially with smaller projects).

Potential approach and solutions include:

(1) Coordinating work on a taxonomy;

(2) Agreeing on a set of acceptable standard setters applicable to each segment, making it more seamless as projects get refinanced with different products across their lifecycle;

(3) Establishing a uniform set of guidance for non-greenfield infrastructure project financing e.g., mezzanine;

(4) Establishing a baseline standard across all FIs, including institutional investors with each FI clearly establishing incremental requirements (e.g., World Bank's Aligned Set of Sustainability Indicators (ASSI) initiative);

(5) Establishing a uniform set of sustainability reporting guidelines; and

(6) Promoting more widespread formal adoption through regulation and incentives.

4.4 Target Outcomes

The following factors contribute to the success of the financing market for Sustainable Infrastructure in Asia:

- Encouraging early-stage projects to develop a meaningful pipeline to reach the financing stages;

- Establishment of seeding platform(s) in Singapore to connect the various parties, e.g., centralise the expertise of the smaller developers, connecting with investors seeking early-stage development funding and/or de-risk opportunities;

- Singapore leading the market in Asia, setting the standards, formats and regulations for clearing ideas and financing in sustainable infrastructure; and

- Connecting with other similar bodies globally.

The working group would like to take forward a few pilot projects that lead to working cases for green and fund management industry to showcase the various products and solutions raised in this paper.

The establishment of **industry-wide platforms** to aggregate the players in this space (i.e., developers, financial institutions, investors, regulators) will greatly speed up the development of sustainable financing in South East Asia and reinforce the role of Singapore as the leader in South East Asia.

Through these platforms, parties can access pertinent ESG expertise/information, greenfield and brownfield opportunities, trends in regulations and standards, green trade and working capital solutions and market news.

Collaboration with similar platforms elsewhere (e.g., Europe) is envisaged. The demand for green assets is growing globally and developers in South East Asia can feed into this demand.

Development of regulations in Singapore to provide capital relief to banks financing qualifying long-term green infrastructure assets will go a long way to creating an environment conducive to the growth of sustainable green infrastructure assets and the overall green agenda.

5. Fund Management

5.1 Introduction

Environmental, social and governance (ESG) investing has been gaining momentum since the implementation of the UN Sustainable Development Goals in 2015. Although ESG strategies existed prior to that, they represented a niche area of the asset management universe. In the last five years, however, changing investment patterns have seen ESG migrate into the mainstream – assets in global sustainable funds now surpass USD 1 trillion[26].

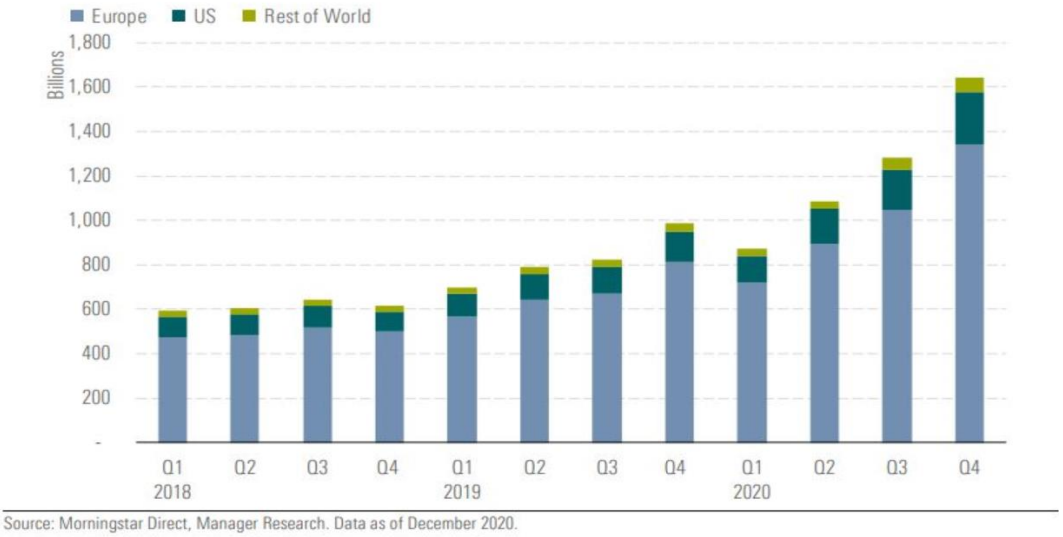
The COVID-19 crisis has also been a catalyst for ESG investing, as investors and policymakers draw parallels between the risks of high-impact global events such as a pandemic, and climate change. This growing acceptance of ESG investing presents asset managers an unparalleled opportunity to play a leading role in reducing climate risk by redirecting capital towards sustainable businesses and projects.

In this segment, we aim to examine potential avenues for promoting sustainable financing in Singapore and specifically, how to achieve a lower carbon footprint in the asset management industry. We will also highlight potential financing solutions that the asset management industry can offer, a roadmap to implementation, as well as barriers and risks to execution.

5.2 Recent Trends

Traditional mutual funds participating in the broad trend of sustainable investing have seen meaningful inflows in recent years. Indeed, investor demand has been resilient even during the COVID-19 crisis. The momentum in sustainable investing reflects a sea change in attitudes towards sustainability issues. Asset owners, such as insurance companies, pension funds and sovereign wealth funds, are widening the lens on ESG to go beyond risk mitigation and encompass value creation. Asset managers, in turn, are seeing broadening demand for ESG products from both large institutions and socially conscious consumers.

Chart 1: Quarterly Global Sustainable Fund Assets (USD Billion)



Source: Morningstar Direct, Manager Research. Data as of December 2020.

[26] Morningstar Direct, as of end December 2020

Although the trend in ESG investing is positive overall, the response by region has been fractured. In the mutual fund space, where flow data is readily available, Europe has been the overall leader in terms of ESG product development and investor flows. The trend there has been for actively managed sustainable funds, which afford greater opportunity for shareholder engagement. By contrast, Asia ex-Japan has trailed behind, accounting for 3.3 per cent of total assets under management as at end December 2020.

Table 1: Global Sustainable Funds 2Q 2020 Statistics

Region	Q4 2020 Flows		Assets		Funds	
	USD billion	% Total	USD billion	% Total	#	% Total
Europe	120.8	79.3	1,342.8	81.3	3,196	77.0
United States	20.5	13.4	236.4	14.3	392	9.4
Asia ex-Japan	5.0	3.3	25.4	1.5	208	5.0
Australia/New Zealand	1.2	0.8	19.8	1.2	126	3.0
Japan	3.7	2.4	17.7	1.1	138	3.3
Canada	1.2	0.8	10.2	0.6	93	2.2
Total	**152.3**		**1,652.3**		**4,153**	

Source: Morningstar Direct. Morningstar Research. Data as of December 2020.

The region's lag may be attributed to several barriers. First, Asia ex-Japan's ambitions for sustainable development has generally been more muddled compared to other regions. This is due in part to the heterogeneity of the region. Absent a unifying policymaking body like the European Commission, individual countries will prioritise their own needs. The lack of contextualisation of climate standards to the region, as well as inconsistent definitions in measuring carbon footprints, have also led to uneven progress on the ESG agenda. Second, limited knowledge and a skill resource gap have also resulted in hesitancy on the part of some Asian investors to embrace ESG investing. Next, a still-developing ecosystem for climate financing means that regulations are absent or unclear. Finally, a lack of regulatory or legal consequences for inaction and scattered leadership by financial institutions means there is little impetus to integrate ESG factors into investment processes.

With ESG emerging as one of the main drivers of change in the global asset management industry, it is clear that Asian asset managers must adapt their existing capabilities, as well as investment, risk and operational structures, or risk being left behind by their European and US counterparts. Rising demand for sustainable investment solutions is spurring some managers to respond but relying on market forces alone will not be sufficient to ensure an industry-wide shift. Regulation must also play a leading role in encouraging ESG adoption.

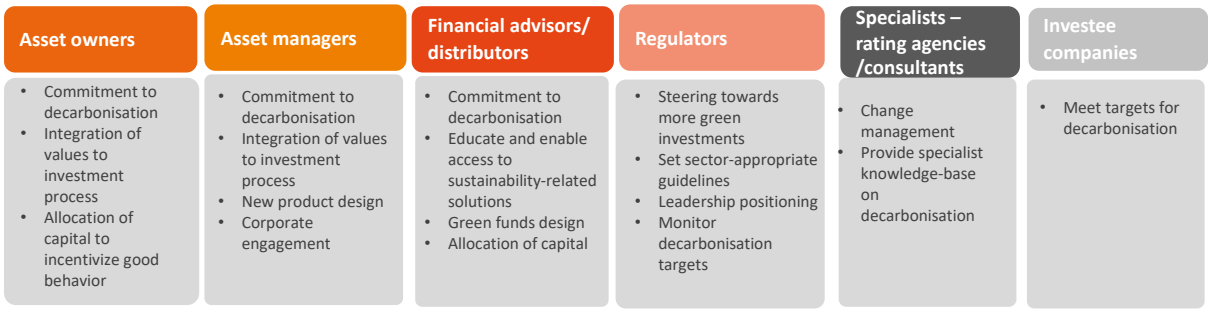
5.3 Possible roadmap

As a possible roadmap to implementation, we would suggest the following combination of measures to stimulate investor demand and widen the availability of ESG investment options. These measures will need to be supported by the appropriate regulations and taxonomy.

5.3.1 Strategic top-down commitment to carbon targets

We believe that a multi-pronged approach is needed to dismantle the existing barriers to ESG adoption. Achieving a lower carbon footprint will require broad industry commitment to decarbonisation targets, as well as new solutions to incentivise behaviour. Indeed, strategic commitment to a net zero or climate target for industry participants is a critical first step that will drive activity and meaningful action e.g., dedicating appropriate resourcing, ensuring that investment targets are aligned.

Figure 1: Role of various key players



5.3.2 Process upgrade

Commitment to environmental standards will also need to be anchored by investment processes. For asset managers beginning their ESG journey, the Global Sustainable Alliance for Investment (GSAI) offers a progress glidepath for integration. It lists seven types of sustainable investment strategies, from the passive (negative/exclusionary screening) to the more active (corporate engagement and shareholder action). The exclusion approach is a sensible first step for managers and asset owners looking to start incorporating ESG into their investment processes.

Figure 2: Incorporating ESG into investment processes

Source: http://www.gsi-alliance.org/wp-content/uploads/2019/06/GSIR_Review2018F.pdf

5.3.3 Education

Building up the financial eco-system requires strategic initiatives in ESG education and propagating the talent pool. ESG considerations are broad, evolving and differ by industry, creating a challenging environment for early-stage ESG investors to navigate on their own. Many lack the human capital resources with the appropriate skill set and are daunted by the complexity of measuring ESG factors and considerations. Diverse stakeholders are thus needed to build the knowledge base. These include:

- Academia: Universities to play a leading role in developing know-how and proof points.
- ESG consultants/Rating agencies: Risk analysis and development of frameworks and risk mitigation process.
- Financial advisors: Investor education and product development; embed ESG and sustainability investing elements in client's wealth advisory and engagement journey.
- Media: To educate on climate risk; trends and leading examples; and
- Government: To implement standards for ESG-integration across investment processes. We recognise that the MAS is already working on several initiatives in this area and recommend working alongside these existing programmes to ensure alignment.

5.3.4 Engagement with investor coalition

To establish commitment and set climate change strategies and targets, we recommend collaborating with internationally recognised industry groups and relevant initiatives. Taking a coalition-led approach would provide a forum to exchange ideas and facilitate the contextualisation of environmental standards for the region, the better to marshal industry support and drive adoption.

There are multiple industry groups that focus on raising climate action awareness, of which Climate Action 100+ is pre-eminent, both in terms of its membership and its agenda. Launched in 2017, this investor-led initiative seeks to engage with systematically important greenhouse gas emitters in order to curb emissions and achieve the Paris Agreement goals. With more than 500 investor signatories and over 160 focus companies (of which more than 30 are Asian), Climate Action 100+ aims to deliver climate action outcomes by providing a common engagement platform.

There are numerous advantages to voluntary commitment to Climate Action 100+, beyond the valuable engagement framework for market participants and companies. For asset owners (sovereign wealth funds, pension funds, insurance companies), membership would secure more foundational disclosure from companies in affected sectors, as well as higher scrutiny of said disclosures, thereby ensuring that investee companies are aligned with investors' positions on carbon policies. As institutional investors' comfort level with ESG investing grows, asset managers and financial advisers would benefit from increased asset allocation to sustainable investments. Finally, investee companies would gain clarity on goals or targets for emissions reductions, particularly with regards to the implementation of the recommendations by the Task Force on Climate-related Financial Disclosures (TCFD). This would result in credible TCFD reporting, including climate scenario analyses that test the financial resilience of businesses.

At the same time, we would also recommend signing with the Asia Investor Group on Climate Change (AIGCC). A partner organisation of Climate Action 100+, the AIGCC aims to create climate change awareness and encourage action among asset owners and financial institutions in Asia. As a regional body, the AIGCC offers capacity and a trusted forum for investors in Asia to share best practice and to collaborate. Crucially, as part of the Global Investor Coalition which collaborates with the Principles for Responsible Investment (PRI), CDP and the United Nations Environment Programme Finance Initiative (UNEP FI), the AIGCC also provides a valuable Asian investor perspective at global discussions on climate change. It should be noted that in November 2020, Singapore's GIC became a signatory to both Climate Action 100+ and the AIGCC as part of its intention to engage more actively with portfolio companies on climate risks and opportunities.

Case study : How AIGCC uses investor advocacy to promote change: Maitri Asset Management and KEPCO

Maitri Asset Management was among a group of investors with concerns over Korea Electric Power Corporation's (KEPCO) investments into a number of overseas coal-fired power projects, as well as related governance issues. Despite KEPCO's recent steps to mitigate climate change, the investors believed that KEPCO was still at risk of failing to reduce emissions in line with the goals of the Paris Agreement.

To address this issue, Climate Action 100+, which Mitri was a member of, sent a private letter to South Korea's Deputy Prime Minister and Minister of Strategy and Finance, Mr Nam-Ki Hong. The letter urged the government to consider its role as KEPCO's majority shareholder and ask the board whether:

- *Kepco's management and board have carried out sufficient due diligence into the firm's exposure to climate-related policy risks, and fully examined the viability of fossil fuel projects*
- *The Audit Committee has fulfilled its duties in assessing plans for overseas coal power investments, particularly with respect to investment principles and valuation assumptions.*

The group of investors was also keen to highlight the crucial role of the Korean government in the transition towards a low-carbon economy, particularly as it has ratified the Paris Agreement. In October 2020, following the investor letter, KEPCO's CEO announced at the Korean National Assembly that the company intends to cancel or convert to LNG two of its four overseas coal power projects.

Source: Asia Investor Group on Climate Change, as of December 2020

Figure 3: Overview and structure of the AIGCC

5.3.5 Product development

As climate risks mount, demands for action are on the rise. As such, investors are increasingly asking for investments that are good for the environment and society, as well as for their portfolios.

To meet investor demand for ESG investment products, product development, particularly solutions that focus on carbon risk and climate friendliness, will require a coordinated response from stakeholders across the investment spectrum, from regulators to market participants to investee companies.

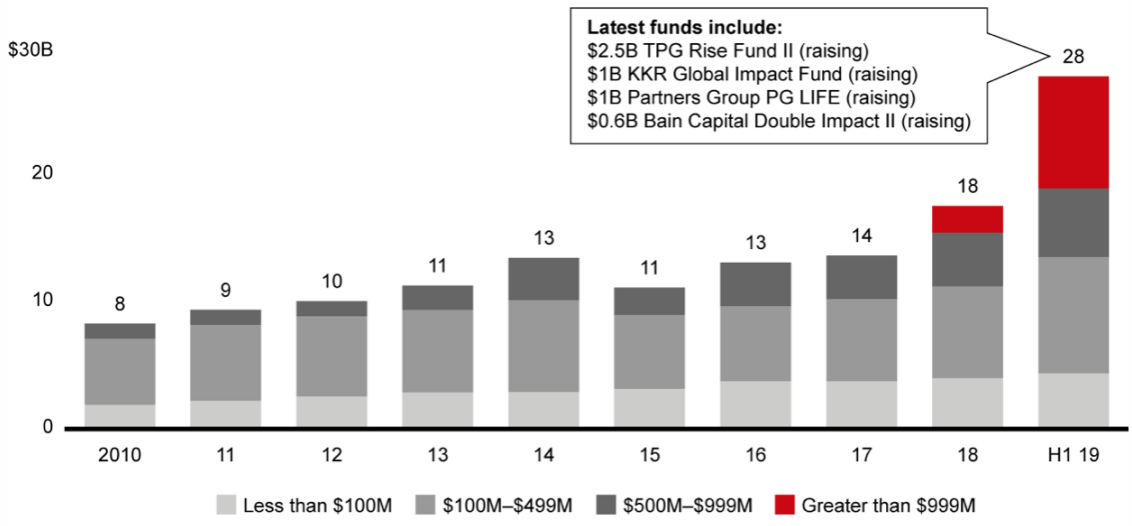
(1) **Private equity funds**

The main appeal of ESG investing is that it offers a level playing field in terms of investment approach as it can be tailored for different types of investors, asset classes and geographies. With the investment landscape still in its nascent stages, both private equity funds and mutual funds can play a role in driving climate action, given their respective advantages.

Private equity (PE) funds have long been at the core of activist and impact investing. Although the average private company owned by PE is much smaller than the average publicly owned firm, the number of private businesses far exceeds listed ones, giving PE funds significant influence on ESG outcomes. Impact funds, in particular, are raised with the explicit promise of generating both competitive returns and measurable results.

Although longer investment horizon and the current lack of standardised performance metrics make it challenging to gauge results, it is evident that investors are buying into the idea that it is possible to make money and make a difference. Increased investor appetite for stakeholder capitalism – the idea that a company's focus should not only be on profit generation but also on achieving ESG objectives – has fuelled the rise of impact mega funds (those with USD 1 billion or more in assets under management (AUM)) over the past two years.

Chart 2: Total AUM of dedicated impact PE/VC funds



Notes: Data as of December 2019; includes private equity and venture capital funds classified as "socially responsible" or "environmentally responsible" by Preqin; total AUM calculated as sum of AUM for all funds launched in the past seven years (i.e., lifetime of each fund assumed to be seven years)
Sources: Preqin; Bain analysis

(2) **Mutual funds/ETFs**

Compared to their PE counterparts, mutual funds usually have less scope to steer an investee company's policies and operations. However, this is counterbalanced by their advantage of scale. There are more than 3,400 sustainable funds globally with assets exceeding USD 1 trillion, which allows them to invest in a large number of companies. Moreover, mutual funds are a more efficient vehicle for leveraging the change in investment patterns as they are accessible to a greater breadth of investors and offer better transparency of performance measurement over a PE fund.

The construction of passive country/regional low-carbon benchmarks would further help to support the development of climate conscious mutual funds and ETFs. Such market-driven precedents are available in other regions, which offer several equity indices linked to climate transition and decarbonisation. In addition to providing a basis for new investment products and performance measurement, such a benchmark would also enable institutional investors to devise new asset allocation strategies by providing a systematic way (such as via ETF) to gain market exposure to a lower carbon footprint. At the same time, it would act as a powerful motivator for companies to accelerate decarbonisation efforts.

(3) **Other financial instruments**

Policymakers are in a position to mobilise private finance by stimulating the development of the market for green investments. This could be accomplished via public/private partnerships, investment mandates from government bodies and sovereign wealth funds, strategic issuance of green bonds by public entities, and aggregation of small green assets to make them investable. The MAS and Singapore Exchange (SGX) could also look to incentivise green IPOs. As acceptance and adoption broaden, other ESG investment products such as green/social bonds, structured products and other listed securities may come into play.

(4) **Transitional financing**

Given the lack of reliable carbon data and relative paucity of renewable companies in Asia, it may be difficult to extract a complete picture regarding the carbon footprints of investee companies. In the short term, a more effective way to promote climate action may be to target transitional improvements in investee companies. The market is already beginning to develop investment vehicles for rewarding responsible behaviour.

Product innovation case study: ING and Quadria Capital

Quadria Capital is a Singapore-based private equity sponsor with AUM of more than USD 1.8 billion, focusing on companies that provide access to healthcare services in South and Southeast Asia. As a healthcare focused investor in a highly underserved region, Quadria aims to make a positive, transformational impact to its portfolio companies and their local communities above and beyond significant financial returns.

For the Quadria Capital Fund III, ING provided a USD 65 million three-year revolving capital call facility, which pegs the interest rate to a set of ESG performance targets on the Fund. Performance of the Fund against these metrics are assessed annually and if pre-determined targets are met, the interest rate will be reduced in the following year.

This facility is the first of its kind globally and represents a significant milestone for the global fund finance industry. For Quadria, the adoption of a sustainability-linked financing structure incentivises further engagement of its portfolio companies and embeds socially responsible behaviour into Quadria's investment decisions. As a lender, ING, in turn, has moved from influencing companies to influencing their shareholders to achieve better ESG performance.

Source: ING, as of December 2020

The above Quadria case study is one example of an innovative financing structure that can help investors make a difference where they invest. Such a structure can be replicated in other transactions and sectors. With ESG as a proxy for the sustainable quality of investment, we could see a convergence of the private and public markets, with all asset classes directionally aligned.

At the same time, the Quadria transaction is useful for addressing one of the main challenges to ESG financing: the question of whether doing good can be profitable. Although in this case a commercial hurdle was met, the benefits to ING came in the form of more intangible benefits, such as lower reputational and counterparty risk and stronger client relationships. Looking ahead, as such transactions become more common, volume and scalability should help to address profitability. In the shorter term, supportive tax schemes could also help to offset the issue of commercial viability.

5.3.6 Addressing the information gap

Investors who wish to invest sustainably often have difficulty finding information on a company's climate risk exposures. Although the MAS has introduced environmental risk management guidelines, these only extend to financial institutions, and do not apply to corporate entities. There is also insufficient data for linking performance and risks of companies to the quality of their ESG practices. Policymakers should look to address the problem of data transparency, as access to more comprehensive sustainability data would have the knock-on effect of spurring investors and asset owners to think more deeply about the importance of sustainability in their investments. Suggestions on ways to overcome this barrier include:

(1) **Disclosure**

Bottom-up measures notwithstanding, the impetus for real industry change would have to be provided by regulators. If we look to Europe where ESG integration is more advanced, it is evident that the European Securities and Markets Authority's prioritisation of a regulatory framework and sustainability-related disclosure obligations has been a key driver for ESG integration. For example, the European guideline for pension funds (IORP II) has required that from 2019 these funds report whether they have integrated environmental aspects, social factors, and governance factors in their entire investment cycle.

A more recent piece of legislation, the EU Sustainable Finance Disclosure Regulation (EU SFDR), seeks to increase transparency on how financial market participants like asset managers and financial advisers integrate sustainability risks and opportunities into their investment decisions and recommendations. An offshoot of the EU Action Plan for financing sustainable growth, the SFDR, which takes effect in March 2021, aims to provide transparency for investors, as well as improve the quality of disclosures from portfolio investee companies. Such disclosures will be key to helping investors distinguish between asset managers and companies who have real green practices versus those who pay lip service to the concept of sustainability.

Crucially, any ESG legislation and regulatory supervision would also need to be matched with supportive tax incentives. For example, the MAS could provide incentives or accreditation for companies that are willing and able to provide sustainability disclosures. This would encourage more market players to commit voluntarily to the ESG agenda, accelerating industry adoption.

(2) **Certification**

On the supply side, a certification scheme for green products could improve consistency, transparency, and sufficiency of disclosures. Environmentally minded investors are demanding higher standards of disclosure in order to ascertain the sustainability contribution of a green financial product. Improving and aligning green disclosure standards voluntarily across funds via market and educational efforts would therefore support a more informed investment decision-making process, allowing investors to choose funds whose values align with theirs. We envisage a set of voluntary certification standards that utilise a science-based approach, created by the Ministry of Environment in conjunction with the respective industry bodies, which would give investors a sense of how 'green' a fund is. Such certification should be designed to allow investors to assess how the fund evaluates, selects, and manages green assets, and could also be extended to other financial instruments, such as bonds, equities and structured products.

(3) **Systems**

Another solution would be the creation of a platform geared towards providing quality data on companies' sustainability contributions. An example of this is the SDI Asset Owner Platform, an asset owner-led programme that facilitates sustainable investing by enabling asset owners to define the investable universe. The SDI AOP creates a standardised taxonomy and rules for identifying companies that meet financial risk and return goals, as well as contribute to sustainability goals. Artificial intelligence and machine learning are then used to provide scale and continuous improvement to the dataset. We believe that there is room for ASEAN and Singapore to develop their own technology platform, driven by region-appropriate targets and anchored by strategic owners such as the MAS or the SGX.

5.4 Conclusion

With each year, the threat from climate change is growing. Based on a 2018 report by the Intergovernmental Panel on Climate Change, we could only have as little as a decade left to halt runaway climate change. Although global energy emissions stabilised in 2019, this is not enough to make a difference. Limiting global warming to the critical threshold of 1.5°C requires emissions to fall by 45 per cent from 2010 levels by 2030 and reach net zero by 2050[27]. The human cost of failure could be catastrophic.

To make meaningful advances in reducing carbon emissions and transition to a low-carbon global economy, a new sustainable finance system is required, one that has climate risk awareness embedded in the heart of financial decision making. For Asia, that entails creating an enabling environment for sustainable investing. This can be accomplished through strategic intentionality, by tackling information gaps, securing industry support, and fostering product innovation.

In summary, we would recommend that the MAS consider the following immediate next steps:

- Strategic commitment to climate target (net zero or an equivalent);
- Product development targeting lower carbon equivalents or to incentivise responsible transitional behaviour; and
- Green fund certification and disclosure.

[27] Special Report: Global Warming of 1.5°C, The Intergovernmental Panel on Climate Change, 2018 (https://www.ipcc.ch/sr15/chapter/spm/)

Appendix 1: Existing green finance initiatives by MAS and other Singapore government agencies

Green finance and sustainability-related initiatives:

Topics	Resource
Singapore Green Plan 2030	• Singapore Green Plan 2030
MAS Green Finance Action Plan Initiatives	• MAS Green Finance Action Plan • The Future of Capital is Green • Harnessing the Power of Finance for a Sustainable Future • MAS Green and Sustainable Bond and Loan Grant Schemes • MAS Green Investments Programme • Insurance and Risk Financing
Energy Efficiency	• Resource Efficiency Grant for Energy • BCA: Building Retrofit Energy Efficiency Financing (BREEF) Scheme

General initiatives:

Trade Finance and Working Capital / Enterprise Financing	• MTI: Trade Infrastructure Development Fund • ESG: Enterprise Financing Scheme
Infrastructure	• Clifford Capital: Infrastructure Take-Out Facility • Bayfront Infrastructure Management • Infrastructure Asia

Appendix 2:

Green and Sustainable Trade Finance and Working Capital Industry Framework

15th February 2021

Industry Framework for Green and Sustainable Trade Finance and Working Capital Solutions

1. Introduction

Climate change and addressing transition risks, i.e. the risks inherent in Banks and Non-Bank Financial Institutions (NBFIs) portfolios as the world moves to a low carbon economy, thereby impacting an obligor's ability to meet its financial commitment, presents both, opportunities and challenges.

Many opportunities exist in the form of financing renewables, investments towards a circular economy and electrification of mobility. Equally, there are challenges that will need to be addressed for example, increasing the pace of replacement of traditional fossil fuel energy sources, addressing the risks of higher temperatures and increased flooding in low lying areas, impacting crop yields negatively.

The need for Banks and NBFIs to establish a robust framework for putting in place financing solutions both short and medium/long term, to help clients transition to a low carbon economy is an immediate imperative. While the market for long term green solutions is well developed, this paper seeks to establish a framework for short-term trade and working capital, both funded and contingent for green and sustainable purposes, leveraging in part, the principles established by institutions such as the Loan Market Association (Green Loan Principles) and the International Capital Market Association (Framework for Impact Reporting) as well as International Chamber of Commerce (ICC) Sustainable Trade Criteria: Customer Due-diligence Guidelines, to better understand and assess their client's environmental, social and governance risk factors.

Approach to Sustainability

Sustainability is a key issue for businesses and will only increase in importance. Today, different businesses and industries are at different stages in their own journey. Broadly speaking, traditional 'brown' sectors need to transition to a low-carbon model while emerging 'green' sectors seek more growth opportunities. Sustainable finance aims to facilitate and support environmentally sustainable economic activity. This can be delivered by looking into what we finance (assessing the 'greenness' of end use) and how we finance (developing financial instruments and products). As a leading financial hub in Asia, Singapore has the potential to be the Sustainable Finance hub for the region and facilitate Asia's transition to a sustainable future.

Approach to Green and Sustainable Trade Finance and Working Capital

Currently, the prevalent green finance solutions are mostly long-term capital financing consisting of green bonds, club, and syndicated term loans. There is a need in terms of providing shorter term (< one year) solutions such as trade facilities and working capital. Green and Sustainable Trade Finance and Working Capital solution aims to fill the need by providing green or sustainability linked financing along the value chain. The financial solution will be based on providing short-term working capital needs to seller and buyer along the value chain, including cross-border transactions, such as issuing a letter of credit for a buyer, financing receivables for a seller, or providing a guarantee to support a bid.

The approach will be principles based and the merits of the transaction will be determined by the purpose on the use of funds. In addition, the activity must "do no significant harm" to any other environmental or social objectives. The implication is that economic activities, even when making a substantial contribution to climate change mitigation and/or adaptation or United Nations Sustainable Development Goals (UN SDGs), will not be eligible if they cannot be performed in a way which avoids significant harm to other environmental or social objectives.

Intended Application

The aim of this document is to outline Green and Sustainable Trade Finance and Working Capital Framework ("Framework") and set out the principle-based approach to qualify potential transactions.

The framework helps banks determine the type of financing the transaction qualifies for, based on the product type or sustainability credentials of the seller and buyer for each transaction. The key aims of the solution are:

- Support the growth of green companies or corporates with recognised green certifications
- Enable non-green corporates to transition via a principle-based approach, and
- Support corporates of various sizes to improve their sustainability practises

Roles and Responsibilities in Developing the Industry Framework

The Singapore Green Financial Industry Taskforce (GFIT) and the Association of Banks (ABS) are responsible for developing and maintaining the Framework as well as underlying themes and activities, with inputs and guidance from member financial institutions.

At inception, GFIT is responsible for setting up the requirements for qualified transactions under the solution. Banks and NBFIs who adopt the Framework will need to:

1. Select, assess and determine on a case-by-case basis, transactions that meet the Environmental Objectives;
2. Ensure that policies are in place to mitigate any potential negative environmental impact from the eligible financing;
3. Validate annual reporting;
4. Monitor the on-going evolution of sustainable capital markets in terms of disclosure and/or reporting in order to be aligned with market best practices; and
5. Align its sustainability strategies and initiatives relating to any green and sustainable trade finance and working capital.

2. Scope of Green and Sustainable Trade Finance and Working Capital Framework

Green and Sustainable Trade Finance and Working Capital refers to financing that are dedicated to projects or activities that address key areas of environmental concern. In line with the GFIT Taxonomy, the projects and activities must meet the following Environmental Objectives:

a) Climate change mitigation
b) Climate change adaptation
c) Protect biodiversity
d) Promote resource resilience

Environmental Objectives	Description	Examples[28]
Climate Change Mitigation		
1. "Green" activities i.e. Low-carbon activities	Activities that are already having low or near zero emissions and are compatible with a net zero carbon economy.	• Renewable power generation • Clean transportation • Near to zero carbon electricity generation • Battery storage
2. "Greening of" activities i.e. Transition activities	Activities that contribute to the transition to a net-zero emissions but are not currently operating at that level. These activities are critical to the economy but must significantly enhance their performance beyond the industry average, without lock-in to carbon intensive assets or processes.	• Alternative Electricity generation <100g CO2/kWh • Hybrid Vehicles <75g CO2/p-km
3. "Greening by" activities i.e. Enabling activities	Activities that enable low carbon activities or those with substantial emissions reductions.	• Manufacture of wind turbines • Upgrading of existing heating/cooling systems in buildings • Carbon Capture and Underground Storage (CCUS)
Climate Change Adaptation		
4. Reduce adverse impact	Activities that substantially reduce the adverse impact of the current and expected future climate on either (i) other people, nature, or assets or (ii) the economic activity itself, in each case without increasing the risk of an adverse impact on other people, nature and assets.	• Activities that increase the resilience of eco-systems, including public health, food security, drainage, network infrastructure and biodiversity protection • Sensors for flood monitoring • Water storage solutions
Protect Biodiversity		
5. Restoration and Protection	Activities that restore ecosystems restoration, reducing the carbon load in the atmosphere and protecting water basins and support biodiversity, includes the sustainable management and conservation that help people adapt to the adverse effects of climate change.	• Protection and restoration of coastal and marine environment • Afforestation, reforestation and maintenance of forest ecosystem health and vitality • Diverse agroforestry

[28] Not exhaustive

Promote Resource Resilience		
6. Waste & Water Management, including Circular Economy	Activities that promote resource efficiency and resilience, management of waste, sustainable water management, sustainable management of living natural resources and land use and circular economy adapted products, processes, and production technologies.	• Processes and equipment to collect, segregate and recycle waste materials • Water pollution control and wastewater collection, treatment plants, related distribution networks and sewage networks • Climate-smart farm inputs - biological crop protection, drip-irrigation, or closed-loop agricultural techniques • Eco-friendly packaging • Circular products

The Framework is applicable to all Banks and Non-Bank Financial Institutions (NBFIs) looking to develop Green and Sustainable Trade Finance and Working Capital solutions, which can be qualitatively or quantitatively demonstrated to have long-term positive environmental/social impact. Banks and NBFIs are to establish their own in-house frameworks to assess the eligibility of the financing in meeting the above four environmental objectives.

3. External review process

GFIT/ABS is responsible for developing the Framework. An oversight committee is recommended to be the owner of the Framework and subject the Framework to an independent review by a competent third party. In addition, as information and understanding on environmental matters continues to evolve, it is recommended that the Framework be reviewed, including the guiding information used in the implementation process, on an annual basis and update accordingly, together with the Singapore GFIT Taxonomy.

4. Suitability of the Borrower

Assessment on Eligibility Environmental Objectives

Banks and NBFIs should establish in-house processes to assess the eligibility of green trade and working capital finance facilities in meeting the Environmental Objectives.

Individual facilities should be assessed on a case-by-case basis for whether the level of “green” is sufficient, whether the borrower and the lenders have mutually agreed to classify such facility as “green” or “sustainable” and to put measures in place to avoid the risk of greenwashing.

Minimally, borrowers must commit to “Do no Significant Harm” and companies involved in the following prohibited activities should not qualify for green and sustainable trade finance and working capital:

- illegal logging operations and/or land clearance by open burning;
- animal cruelty;
- trade of endangered species as defined by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);
- operations or projects that threaten the outstanding universal value or special characteristics of UNESCO World Heritage Sites, Ramsar Wetlands, forests of high conservation value and would impact critical natural habitats;
- exploitation of labour (including forced labour and child labour);

- violation of the rights of local communities;
- lacking measures to manage or mitigate the risk of air, soil, and water pollution; and
- development of nuclear power plants.

5. Use of Proceeds

Documentary evidence for the underlying transaction (Pillar 1)

The fundamental determinant of a green facility is its purpose. The project or activity that the facility is earmarked for must demonstrate sustainability benefits or objectives in line with the Environmental Objectives.

Eligible use of facility can be categorised by:

- Pure-play green company – A company focused on only one line of "green" business, with dedicated cash flows and revenues from this business

- Specific green projects or activities that contribute to any of the 4 Environmental Objectives

The underlying activity can be projects, business activities or commodities trading with underlying needs. The purpose of the facility could be for the purpose of funding the procurement of goods or services that are sustainably sourced, produced and/or delivered or that deliver positive sustainability outcomes, or an asset or commodity with a green accreditation. The Borrower should submit relevant certifications and/or documentations showing environmental and/or social benefits that will be assessed, measured or quantified.

Given the transactional nature, trade facilities are invariably ring-fenced for specific purposes.

As per the current trade financing processing, transaction (commercial) documents such as contract, purchase order, documentary credit, transport document, sales invoice etc. are normally submitted by customers against drawdown in these facilities. These transaction documents provide visibility for the underlying goods/services purchased by the buyer or supplied by the seller, and therefore are also documentary evidence for "greenness" of the facility purpose.

Project Evaluation - Evidence of green objectives and credentials (Pillar 2)

The borrower must clearly communicate to Banks and NBFIs:

- Its corporate sustainability objectives and strategy;
- How the proposed underlying activity fits within the objectives
- The related objective (such as any green/social standards or sustainability certifications to which they are seeking to conform)

Green accreditation associated with the intended projects and activities may also be required.

Industry Green Standards

For business activities or product categories associated with material ESG issues or increased controversies, any industry-wide green standards and eco labels, certifications, or indexes, if available, should be considered as reference points to evidence the '"greenness" of associated projects or activities, for example:

- BRREAM: sustainability assessment method for master planning projects, infrastructure, and buildings
- LEED: independent verification of resource-efficient, high-performing, healthy, cost-effective buildings
- Roundtable on Sustainable Palm Oil (RSPO): certificate of global standards for sustainable palm oil production
- Forest Stewardship Council (FSC): forest certification and license for forest products
- In addition to these examples, more credible sustainability standards can be found from the ISEAL Alliance, which sets standards of good practice for certification schemes and requires its members to commit to meet them

Industry 3rd Party Verification may be required as defined by an industry green assessment standard, provided by qualified certifiers and technical consultants. For example, this could include a manufacturer's "stamp of endorsement" for its energy efficiency, contractor or engineer assessments, alignment to the International Organisation for Standardisation (ISO) for an energy management system, and industry specific certifications.

Where an industry standard (including certification, index, or label) is not available, an external validation is recommended from reputable third parties.

As a reference, a full list of verifiers approved by the Climate Bond Initiative can be found here: https://www.climatebonds.net/certification/approved-verifiers. Such external validations are categorised into:

- **3rd Party Verification** – where alignment with **internal** environmental standards or claims are verified by qualified parties such as auditors or independent ESG experts

- **3rd Party Assessment / Rating** – where a borrower obtains an assessment or ESG rating by qualified parties such as rating agencies or specialised research providers

- **3rd Party Consultant Review** – where a borrower seeks advice from technical consultants and/or institutions with recognised expertise in sustainability aspects. "Second party opinions" may also fall into this category

Generally, evidence may be in the form of an industry green standards specified in the underlying commercial transaction between the buyer and seller or 3rd party verifications. If both are absent, then an appropriate 3rd party assessment/rating or consultant review may be collected as green credentials.

6. Management of the use of proceeds

Management of Proceeds - Post disbursement evidence (Pillar 3)

For contingent facilities such as guarantees or letters of credit, the issuance of individual instrument must be designated under the sustainable facility for pre-agreed purposes and based on information about the intended activity provided by the borrower when the issuance is requested. Such information may reside in transaction documents such as the underlying commercial contract or shipping documents along with relevant pre-agreed sustainability credentials or accreditation.

It is recommended that the borrower should report to the lender, along with relevant information, if the underlying activity (e.g. individual transaction or commercial contract) is funded by any sustainable financing such as a green loan, to allow consistency in criteria and reconciliation to impact accounting.

For funded facilities such as loans, the transactional nature of trade provides assurance for the ongoing transparency and integrity of the green facility. This is because along with each drawdown request the borrower

will provide transaction documents such as invoice, transport document, proof of payment etc. (and the supplier's account details in the case of buy-side facilities) as per current business processes. Each disbursement will be subject to verification of transaction documents to make sure disbursed proceeds are used for the intended project/activity. This ensures end-use monitoring at the time of each drawdown.

In addition, the lender must ensure that the borrower has an appropriate mechanism to track the facility utilisation towards the intended green project/activity, for example, the borrower will maintain a designated register to keep the allocation of all disbursements under the particular facility. Further, a pre-agreed mechanism is in place so that the borrower will regularly provide such documented records post-facto, for example, within 3 months or 30 days of each drawdown and/or at the final drawdown.

In the circumstances where the lender is not certain about the management or end use of the facility pertaining to the intended green project or activity, a dedicated account for the green facility may be necessary, so that it is easier for the use of the facility to be verified. This requirement will depend on the size and nature of the green project/activity and borrower's internal monitoring processes, which is not expected to take place in the case of sophisticated borrowers with green credentials and track record.

7. Impact Reporting

Reporting – Impact reporting (Pillar 4)

With regards to reporting, the borrower must provide the impact reporting outlined below, on an annual basis or until termination of the facility.

For facilities with multiple drawdowns and maturity over 1 year, the borrower should report to the lender the facility usage on an annual basis, until fully drawn or attrition of the facility, the following information:

- Allocation reporting – the use of all disbursement under the particular facility in demonstrating that the proceeds have been used for the agreed green projects/activities.
- Impact reporting – the positive environmental impacts resulting from the green projects/activities preferably in quantitative terms (e.g. greenhouse gas emissions reduced/avoided, energy efficiency, electricity generation etc.), along with the green standards that the borrower has conformed to and relevant the accreditation.

The annual reporting can be a standalone Green Loan Compliance Certificate or Green Finance Report assured by the borrower's auditor or published as part of the borrower's Annual Report and Accounts, Sustainability Report or ESG Report.

In the case of facilities for receivables-backed working capital such as Post-Shipment Seller Loans, Receivables Finance, Discounting and Negotiation of Export Letter of Credit – the borrower must report to the lenders at a pre-agreed frequency (e.g. upon discounting or periodically) the positive environmental impact resulting from the use of proceeds. No allocation reporting is needed in these cases.

Any evidence should be made available to all institutions participating in the transaction on request. When appropriate, and taking into account confidentiality and competitive considerations, borrowers should make publicly available the external review, or an appropriate summary, via their website or otherwise.

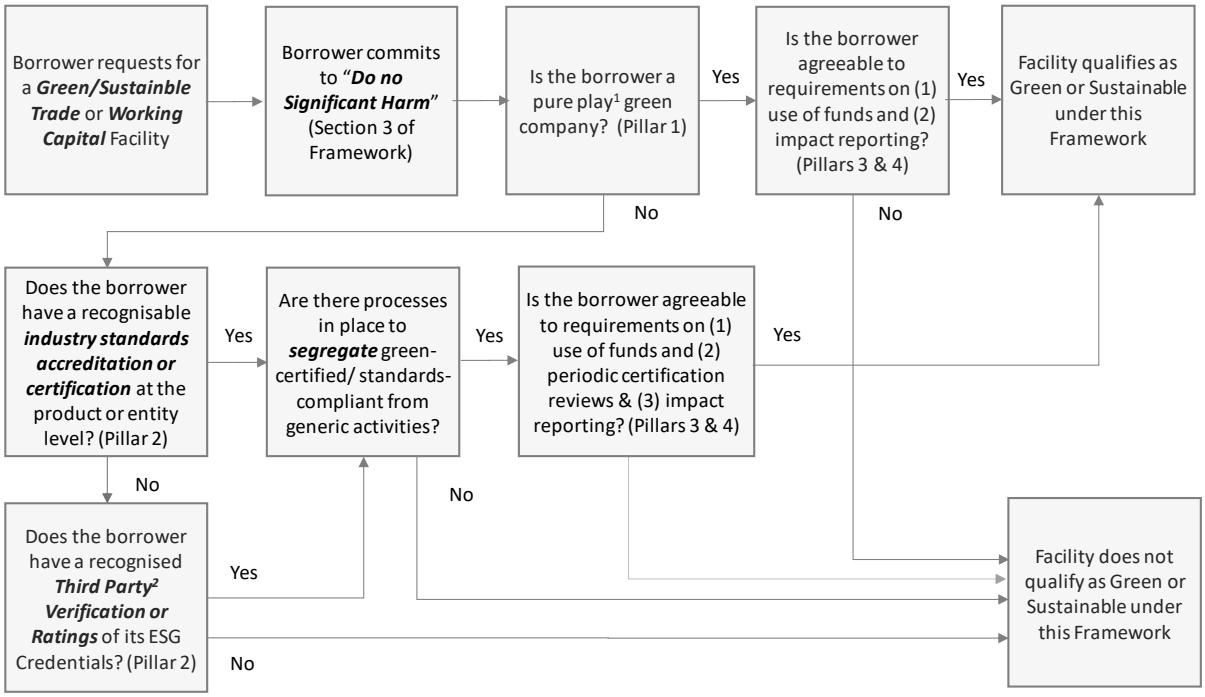
8. Declassification

The borrower and the bank should pre-agree on a declassification mechanism. Should the borrower fail to maintain the integrity and compliance with the Green / Sustainable Facility at any point of life of the financing, this ensures there is a reasonable process in place for the facility to be 'declassified', in which case the client and the bank should refrain from reporting or publicising the facility as green or sustainable in any publication and other materials.

9. Decision-making Flowchart and Checklist

Complementing this industry framework, a decision-making flowchart on the application and qualification for Green and Sustainable Trade Finance and Working Capital and an associated sample checklist can be found in Appendix 2.1 and 2.2.

Appendix 2.1: Decision-making flowchart on the application and qualification for Green and Sustainable Trade Finance and Working Capital



[1] A company focused on only one line of green business with dedicated cash flows and revenues from this business or 90% of its revenue is attributable to this green business

[2] Recognised Third Party Ratings may include acceptable Internal Performance Rating qualified by its buyer as an ESG criteria for goods supplied.

Appendix 2.2: Green and Sustainable Trade Finance and Working Capital Framework

On boarding Checklist – Sample Only

Client Details

Name of Client: _____ **Client Group:** _____

Segment: _____ **Project Name:** _____
(if applicable)

Note: All fields must be affirmative in order to be eligible for the facility.

Section 1: Green Trade Financing & Working Capital Qualification		
1a) Is the client involve in any prohibited activities?	Yes ☐	No ☐
1b) Is the Trade and Working Capital facility granted to a client in the following pure play sectors[29]? If no, please proceed to 1d.	Yes ☐	No ☐

1c) Please identify the eligible green project category/criteria and proceed to Section 3

Renewable Energy

Energy Generation

- ☐ Solar
- ☐ Small – hydro
- ☐ Wind
- ☐ Geothermal

Manufacturing of energy components

- ☐ Solar
- ☐ Hydropower
- ☐ Wind
- ☐ Geothermal

Construction, Maintenance / Expansion of associated energy distribution networks ☐

Sustainable Water Management and Treatment

- ☐ Water infrastructure distribution and treatment

Green Buildings Construction

- ☐ Commercial, public and residential buildings (existing and new construction)

Energy Efficiency

- ☐ Improvement on commercial, public and residential buildings (existing and new construction)
- ☐ Public utility networks
- ☐ Improvement on agricultural processes, aquaculture processes
- ☐ Improvement on industrial processes and supply chains
- ☐ Transmission and distribution systems

[29] A company focused on only one line of green business with dedicated cash flows and revenues from this business or 90% of its revenue is attributable to this green business

☐ Energy efficiency technologies

☐ Improvement on transportation infrastructure

Green Transport

☐ Vehicle energy efficiency

☐ Urban transportation systems and infrastructure

Waste management

☐ Waste and wastewater infrastructure and treatment

Climate Change Adaptation

☐ Resilience Infrastructure ☐ Pollution Prevention and Control

Material/resources recovery

☐ Plastics

☐ Metals

☐ Consumer Electronics

☐ Others (pls state) _____

Other Circular Economy Themes

Circular Inputs

Circular Design

Life Time Extension

Product as a Service

Circular Facilitators and Enablers

1d) Is the Trade and Working Capital facility granted to a client with a recognisable sustainable certification or standards in the given industry at the product or entity level? If no, please proceed to Section 2.	Yes ☐	No ☐
1e) Are there systems in place to accurately segregate certified or standards compliant goods and trade flow from the generic goods? If yes, please proceed to Section 3. If no, please proceed to Section 2	Yes ☐	No ☐

Section 2: Sustainability-Linked Trade Financing & Working Capital Qualification

2a) Please identify if the client has the following sustainability credentials :

☐ Recognised ESG Rating

☐ Recognised Third Party Rating

☐ An internal performance rating of the anchor buyer

If yes, please proceed to Section 3.

If no, client does not qualify.

Section 3: Use and Management of Proceeds

3a) Does the client have a designated loan account(s) set up or an appropriate manner to track the proceeds of the facility for the proposed Green Project(s)? If no, please proceed to 3d.	Yes ☐	No ☐

3b) The client undertakes to provide the necessary supporting documents (e.g. certified invoices) to the Bank for each drawdown.	Yes ☐	No ☐
3d) The client undertakes to provide annual allocation reporting on the use of proceeds.	Yes ☐	No ☐
Section 4: Reporting		
4a) For Green Trade Financing & Working Capital facilities, the client undertakes to report the use of qualitative performance indicators and, where feasible, quantitative performance measures (for example, energy capacity, renewable energy generated, greenhouse gas emissions reduced/avoided, etc.) and disclosure of the key underlying methodology and/or assumptions used.	Yes ☐	No ☐
4b) For Sustainability-Linked Trade Financing & Working Capital faciiities, the borrower undertakes to disclose annual ESG ratings, third party ratings and/or internal performance rating of the anchor buyer on an annual basis.	Yes ☐	No ☐