

Detail of
The Art of Banking by Martin Ding
UOB Art Collection

Macquarie Singapore ESG Insights Webinar:

UOB - Forging a Sustainable Future

March 2021

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Building Our Portfolio Of Green Assets

Group Wholesale Banking ESG Strategy

Delivering Tangible Impact….



- ✓ ***Across all client segments***
- ✓ ***Aligned to respective ASEAN country's ESG agenda and support***
- ✓ ***Tailored to industry readiness and adoption***

OBJECTIVE

Our solutions aim to **maximise impact** across **industries**; **number of customers** and **partners,** leveraging on UOB's core strengths in ASEAN footprint with acceptable risks and returns to the shareholders

Regulations are Moving in the Right Direction

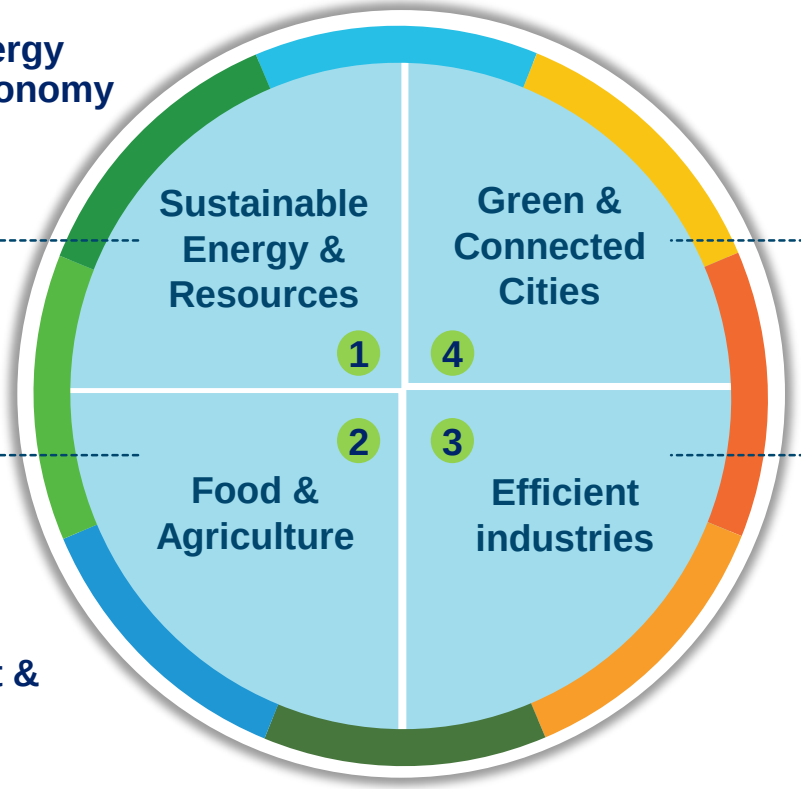
	Banks	Corporates
 **Singapore**	Association Bank of Singapore (ABS) issued guidelines on sustainability reporting by banks in 2015. Monetary Authority of Singapore (MAS) is developing Environmental Risk Management Guidelines for Financial Institutions (FIs) on governance, risk management and disclosure of ESG issues .	Singapore Exchange (SGX) mandated Annual Sustainability reporting on a "comply or explain" basis for listed companies since 2016.
 **Malaysia**	Bank Negara Malaysia (BNM) has initiated public consultation for Value-based Intermediation (VBI) to serve as guidance for Islamic Financial Institutions (IFIs) to incorporate ESG risk considerations into their risk management system.	Bursa Malaysia has mandated Sustainability Reporting for listed companies since 2016.
 **Indonesia**	Otoritas Jasa Keuangan (OJK) mandated FIs to submit their first Sustainable Finance Action plans in 2019 and to publish their first Sustainability Reports in 2020 (POJK51).	OJK requires listed companies to submit action plan on implementation of sustainable finance principals by end 2019, to be followed by securities companies in 2 years.
 **Thailand**	Thai's Bankers' Association (TBA) issued Sustainable Banking Guidelines – Responsible Lending, while Bank of Thailand (BoT) is driving for new guidelines on integrating Environmental & Social factors into their performance.	Stock Exchange of Thailand (SET) places high emphasis on sustainability. The SET is ranked 10th out of 55 global stock exchanges for sustainability disclosure reporting.
 **Hong Kong**	Hong Kong Monetary Authority (HKMA) adopted a 3-step approach to promote sustainable and green banking; 1) developing frameworks to align all banks; 2) developing common targets and 3) implement measures to monitor and evaluate FIs.	Hong Kong Stock Exchange mandated that all listed companies are to provide a board statement setting out its consideration of ESG issues and explain the boundaries and identification process used for specific entities or operations included in the ESG reports.
 **China**	In 2020, the People's Bank of China, the National Development and Reform Commission and the China Securities Regulatory Commission jointly issued the Green Bond Endorsed Project Catalogue (2020 Edition), to govern green bonds market, aligning it with international standards.	Since 2006, the Shenzhen Stock Exchange has required companies to publish certain ESG related information, and from 2021 onwards, it is expected that they will tighten their regulations to increase the standards of ESG reporting*.

Sources: Central Banks and Stock Exchange Releases, Financial Times Report (5 June 2020)

US$ 1 Trillion in Green and Sustainable Opportunities for Southeast Asia

1 Renewable & Transitional Energy and Circular Economy

4 Green Buildings, Energy Connectivity, Efficient Manufacturing & Shared Mobility



2 Aquaculture, Urban Farming, Sustainable Diet & Supply Chain Monitoring

3 Digitalisation of Supply Chain, Sustainable Packaging & Green Technology

Targeted SDGs*



* Sustainable Development Goals

Benefits to us

- Untapped Market with High Growth Potential
- Dovetailing with our sector focus
- Relevant Frameworks are already in place

Source: Bain & Company – South East Asia Green Economy Pathway to Full Potential (2020)

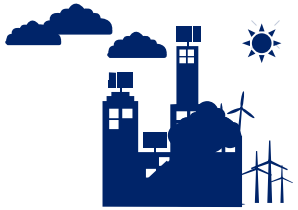
Three UOB Green Umbrella Frameworks

Frameworks and solution suites are applicable across all sectors



Real Estate Sustainable Financing

- Covers both green and sustainability linked financing for global real estate financing across 7 asset classes
  - ✓ Office
  - ✓ Industrial
  - ✓ Residential
  - ✓ Retail
  - ✓ Data Centres
  - ✓ Hotels
  - ✓ Restaurants
- Advised by KPMG



Smart City Sustainable Financing Framework

Previously as Green Infrastructure Framework

- Supports companies contributing to the creation of sustainable and smart cities through the following:
  - ✓ Renewable Energy (Solar, Wind, Geothermal & Mini Hydro)
  - ✓ Green Buildings Construction
  - ✓ Energy Efficiency
  - ✓ Green transport
  - ✓ Water Management
  - ✓ Waste Management
  - ✓ Climate Change Adaptation
- Framework was supported by MAS and Carbon Trust provided Second Party Opinion (SPO)



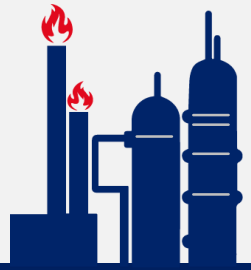
Green Financing for Circular Economy

- Supports companies in the 3R (reduce, reuse and recycle) businesses. Potential applications:
  - ✓ Plastics recycling
  - ✓ Metals recycling
  - ✓ Consumer electronics recycling
  - ✓ Circular designs
  - ✓ Sharing business models
- Innovators and facilitators to facilitate a circular economy network (e.g. reverse logistics)
- SPO on the framework issued by Vigeo Eiris

Sustainable Energy and Resources

1 US$270 billion in annual economic opportunities by 2030 through:

- **Renewable and Transitional Energy**
  Doubling down on renewable energy sources and utilising gas as a transitional fuel
- **Circular Economy**
  Utilising business models that focus on reducing, restoring & regenerating resources which lowers costs and attains alternative revenue streams



Relevant Frameworks



Smart City Sustainable Financing Framework



Green Financing for Circular Economy

Sector Opportunities

Renewable and Transition Energy

- Construction & Infrastructure
- Oil, Gas & Chemicals

Circular Economy

- Construction & Infrastructure
- Consumer Goods
- Industrials
- Oil, Gas & Chemicals
- Real Estate & Hospitality
- Technology, Media & Telecommunications

Source: Bain & Company – South East Asia Green Economy Pathway to Full Potential (2020)

Agriculture and AgriTech

2 **US$205 billion** in annual economic opportunities by 2030 through:

- **Sustainable Aquaculture & Urban Farming**
  Promoting technologies that increase yield and enhanced aquaculture systems and localising production
- **Sustainable Diet**
  Pivoting to functional foods & animal protein at affordable prices
- **Traceability**
  Enabling digital solutions that provides visibility in supply chain





Relevant Frameworks



Smart City Sustainable Financing Framework



Green Financing for Circular Economy

Sector Opportunities

Sustainable Aquaculture & Urban Farming

- Consumer Goods

Traceability

- Consumer Goods
- Construction & Infrastructure
- Consumer Goods
- Industrials
- Oil, Gas & Chemicals
- Technology, Media & Telecommunications

Source: Bain & Company – South East Asia Green Economy Pathway to Full Potential (2020)

Digitalising Supply Chain and Logistics

3 US$200 billion in annual economic opportunities by 2030 through:

- **Digitising Supply Chains**

  Track, trace & monitor the supply chain in real time. Utilising Internet of Things (IoT) & analytics to optimise fleet and manage inventories

- **Reducing Carbon Footprint**

  Utilising new technology to provide efficiency in delivery services. Pivoting to alternative fuel - Liquefied Natural Gas (LNG) & Hydrogen for mobility

- **Sustainable Packaging, Efficient Manufacturing**

  Circular design, circular input and adoption of industry 4.0



Relevant Frameworks



Smart City Sustainable Financing Framework



Green Financing for Circular Economy

Sector Opportunities

Sustainable Packaging

Consumer Goods | Industrials | Oil, Gas & Chemicals

Digitalisation of Supply chain & Reducing Carbon Footprint

Construction & Infrastructure | Consumer Goods | Industrials | Oil, Gas & Chemicals | Real Estate & Hospitality | Technology, Media & Telecommunications

Source: Bain & Company – South East Asia Green Economy Pathway to Full Potential (2020)

Green and Connected Cities

4 **US$185 billion** in annual economic opportunities by 2030 through:

- **Smart City**
  Smart Urban city planning & integration of waste management solutions
- **Mobility**
  Promoting shared mobility services, promoting adoption of Electric Vehicles (EVs)
- **Energy Efficiency & Connectivity**
  Enhancing Internet of Things (IoT) Systems & installing efficient household and office fixtures



Relevant Frameworks



Real Estate Sustainable Financing



Smart City Sustainable Financing Framework

Sector Opportunities

Smart City


Construction & Infrastructure


Industrials

Mobility


Construction & Infrastructure


Real Estate & Hospitality

Energy Efficiency & Connectivity


Construction & Infrastructure


Technology, Media & Telecommunications


Industrials

Source: Bain & Company – South East Asia Green Economy Pathway to Full Potential (2020)

Singapore's Green Plan 2030

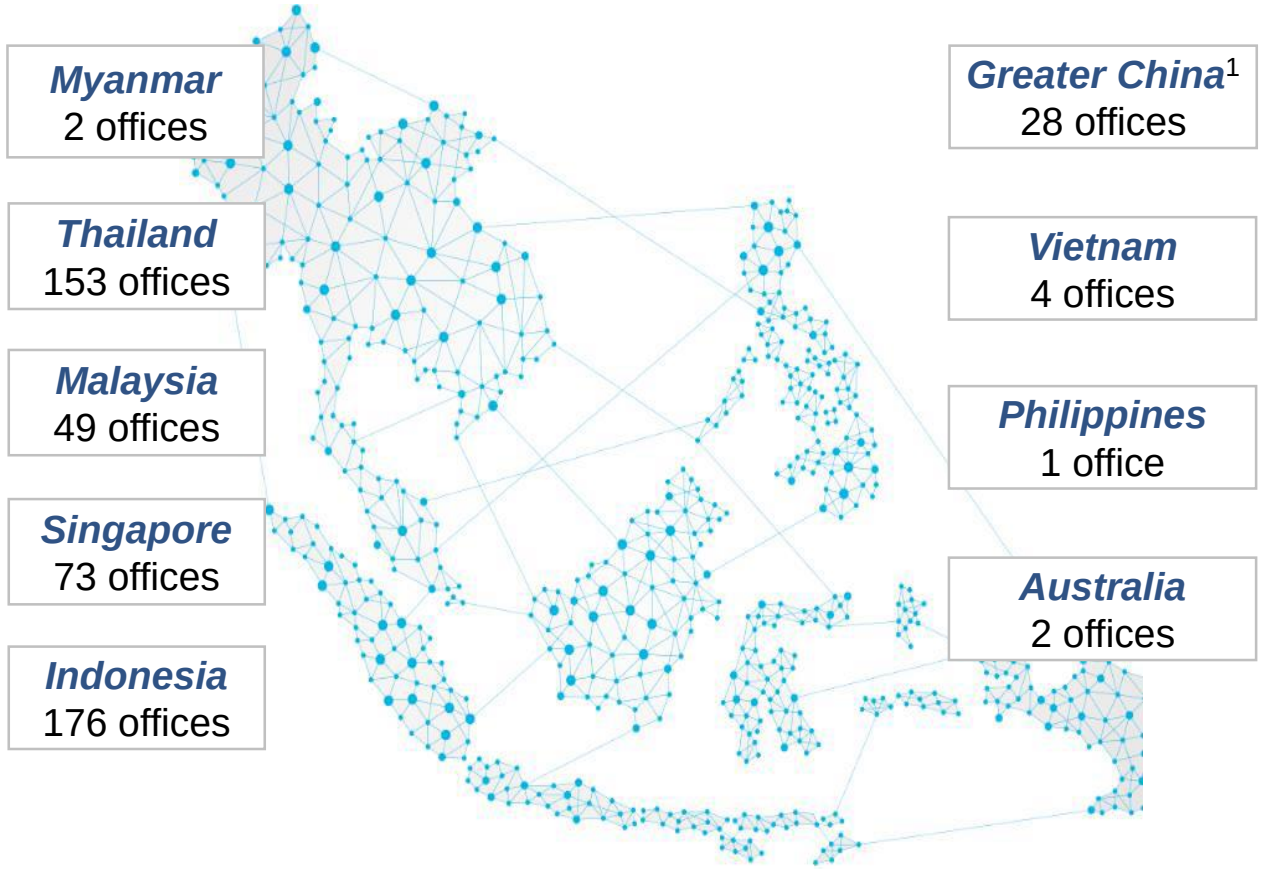
	Real Estate Sustainable Financing Opportunities	Smart City Sustainable Financing Opportunities	Circular Economy Financing Opportunities
Green Economy Green Finance, standards, frameworks & innovation pursuits	To be the **Green Finance Hub in Asia** through MAS's **Singapore Green Finance Action Plan (FCAP)**	Become a leading **Carbon Trading and Services Hub**, projected to be a multi-billion dollar industry	Attract **R&D activities in Singapore to develop new sustainability solutions** under Research, Innovation and Enterprise 2025 Plan (RIE2025)
Sustainably Living Circular Economy, Smart cities & Green Commuting	**Aim to introduce zero waste, recycling and closed loop systems** in managing our waste and water resources	**75% reduction of net carbon emissions from pre-tertiary schools by 2030, and at least 20% of these schools to be carbon neutral by 2030**	**Expand rail network by 1.5x to 360km and cycling network by 2.9x to 1,320km by 2030**
Energy Reset Electric Vehicle adoption, solar power & green buildings	All newly registered cars to be cleaner-energy models from 2030 and **phase out Internal combustion engine (ICE) vehicles by 2040**	**Quadruple the solar deployment by 2025 and five times by 2030** (base year 2020) with at least 2 gigawatt-peak	Reduce energy consumption from public housing by 15% through smart, energy efficient methods. **Target 80% of all buildings to be green by 2030**
Resilient Future Food supply chains, Cooling cities & rising sea level mitigation	**Climate adaptation infrastructure for coastal areas** to tackle rising sea levels	**Moderate rise in urban heat** with greenery and by design (ie use of cool paint) to cool our cities	Aim to improve self-sufficiency in **local food production to 30% by 2030**
City in Nature Biodiversity & Living spaces	Approx. one third of total land space in Singapore will be covered by trees	**One million more trees** to be planted across the island, which will **sequester additional 78k tonnes of CO_2**	**Promote harmony** between people and wildlife

Source: Ministry of Sustainability and the Environment, Singapore

Our Solutions Leveraging Our Footprint

Comprehensive Regional Banking Franchise

Extensive regional footprint with ~500 offices



- Most diverse regional franchise among Singapore banks; effectively full control of regional subsidiaries
- Integrated regional platform improves operational efficiencies, enhances risk management and provides faster time-to-market and seamless customer service
- Organic growth strategies in emerging / new markets of China and Indo-China

1. Comprise Mainland China, Hong Kong SAR and Taiwan

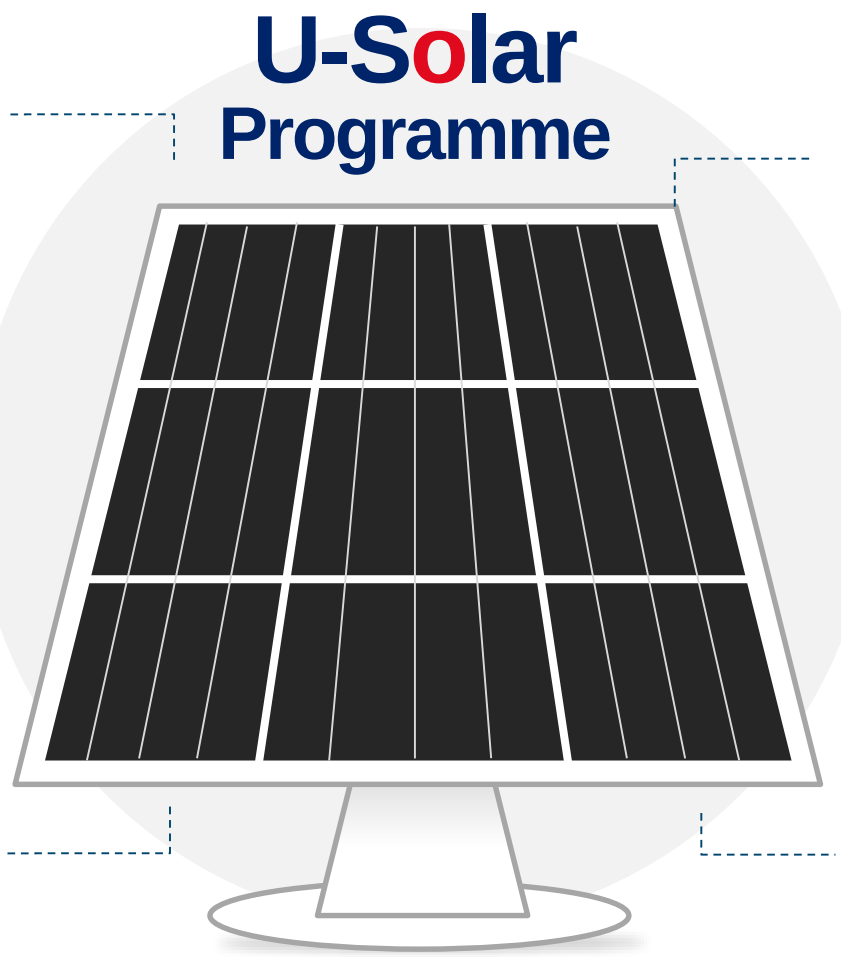
U-Solar is *Asia's first Integrated Solar Energy Platform* launched by UOB in 2019

Game changer for the solar energy ecosystem in Asia

- **First in Asia to have an integrated solar platform** across the value chain.
- Making **sustainable energy accessible** with competitive financing packages.

Supporting the solar ecosystem with end-to-end solutions

- **Partnering with leading and reliable** local solar developers, EPC contractors and suppliers.
- Providing **support to U-Solar partners with access to multi-channel marketing avenues** to reach its intended customer base.



Coordinated 'One Bank' effort across segments, products and multiple stakeholders

- **Mobilising** Group Wholesale Banking and Group Retail to develop the U-Solar programme for the entire ecosystem
- **Collaborating** with multiple stakeholders across the bank, **regulators and ecosystem partners** to raise public awareness.

Tangible environmental impact*

- **Removed 77.2K tonnes of CO_2** equivalent to **1.3mn trees** planted.
- **Removal of ~17K cars** off the road.

** Estimated as of 2020*

Powering Solar Projects Across Southeast Asia

UOB



Thailand

BANPU
BECIS
BSP
SYMBIOR SOLAR
KG SOLAR

Launched on 5 February 2020

Malaysia

ditrolic solar
Pekat
+SOLAR The Next Energy Revolution
ers
SOLARVEST

Launched on 22 October 2019

Singapore

SUNSEAP
SolarGy
SOLARPV EXCHANGE

Launched on 26 November 2019

Indonesia

TMLEnergy Solar Energy Solution
SEDAYU

Launched on 8 November 2019

Real Estate Sustainable Financing in the Region

Selected headlines*

Park Hotel Group secures its first green loan of S$237 million under the UOB Real Estate Sustainable Finance Framework

Marks the largest green loan for hotel properties in Singapore from a single financial institution

The Farrer Park Company partners UOB on Singapore's first green loan for a healthcare facility

Issued under the UOB Real Estate Sustainable Finance Framework, the S$120 million green loan is a first for The Farrer Park Company

UOB, DBS and Standard Chartered provide S$945 million green loan to finance Allianz and Gaw Capital's acquisition of DUO Tower and DUO Galleria

Standard Chartered and UOB provide a HK$5.29 billion green loan to Gaw Capital-led consortium for its acquisition of 1111 King's Road



Singapore

17 Real Estate Sustainable Financing Deals



Australia

1 Real Estate Sustainable Financing Deal



Hong Kong

1 Real Estate Sustainable Financing Deal

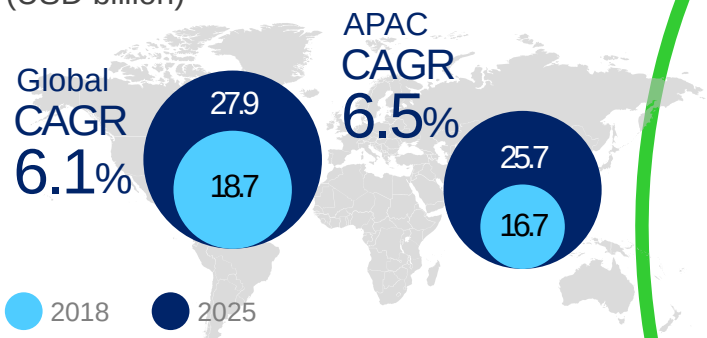
* Selected headlines from UOB press releases.

Plastics Recycling Industry Growth

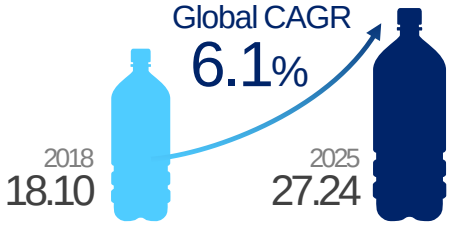


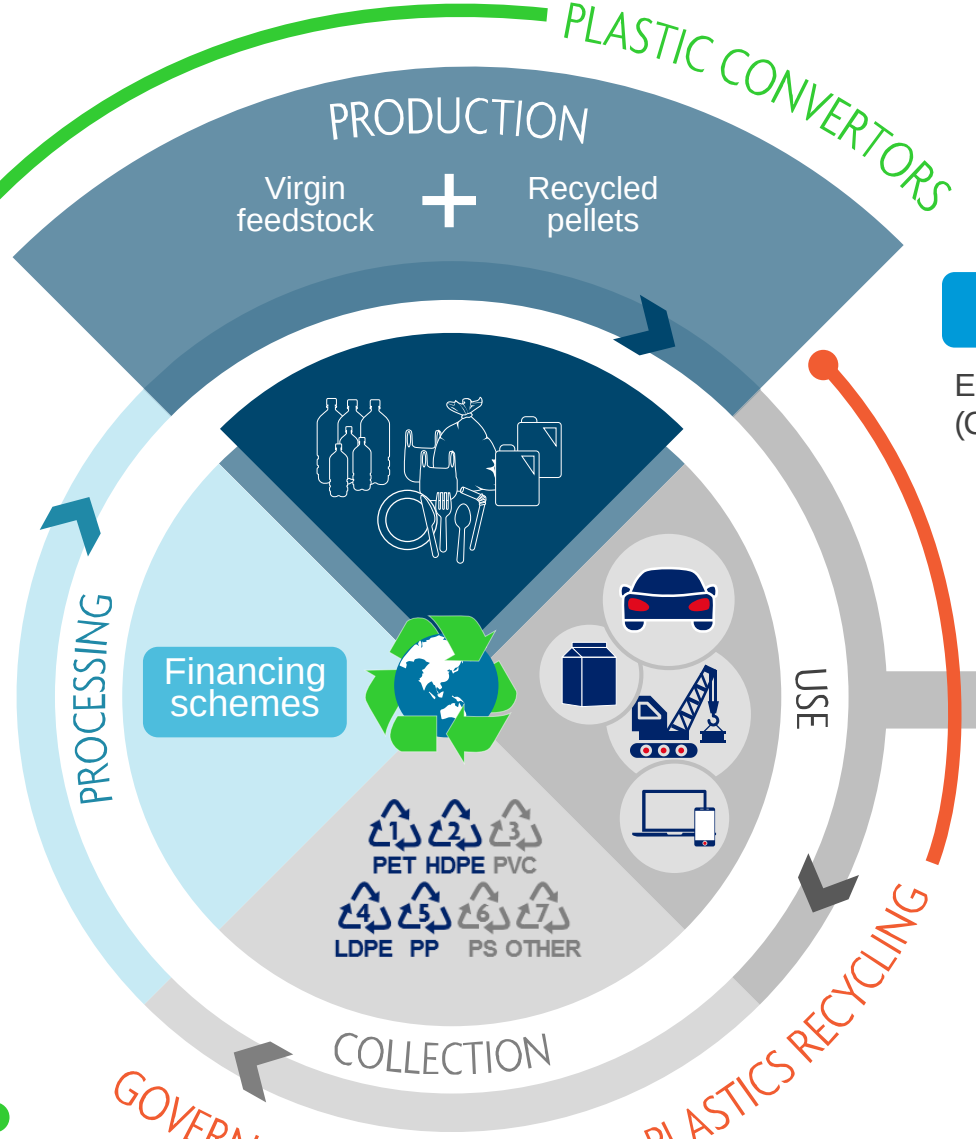
Plastics recycling trends

Plastics recycling industry market value
(USD billion)



Plastics recycled
(% of global plastics produced)





Government Roadmaps

- **Malaysia:** A circular economy roadmap for bottles by 2022-2025
- **Thailand:** To use 100% recycled plastics in various form by 2027

Recycled plastics consumption

End-use sectors 5-year outlook
(CAGR)

Construction & Infrastructure	7.1%
Packaged Food	7.0%
Automotive	6.5%
Electronics	4.6%

Source: UOB internal company data.

UOB's Responsible Financing Journey: Pragmatic and progressive

2018

- Implemented ESG risk classification to better manage ESG risk in portfolio
- Led industry efforts via ABS[1] to develop:
  i. minimum ESG representations and warranties for Singapore banks, and
  ii. responsible financing e-learning module
- Enhanced ESG monitoring and reporting to improve oversight on potential controversies

2019

- Discontinued (i) new project financing of coal-fired power plant projects, (ii) project financing of greenfield thermal coal mines and (iii) new financing of greenfield oil palm plantations in view of rising threats of environmental risks
- Endorsed TCFD[2] recommendations and outlined implementation roadmap, led by cross-functional TCFD Working Group
- Part of MAS[3]' working group to co-create the Environmental Risk Management (ENRM) Guidelines

2020

- Strengthened due diligence process with enhanced checklist and climate-related questions
- Completed pilot transition risk climate scenario analysis in line with TCFD[2] roadmap
- MAS' ENRM Guidelines issued; involved in MAS Green Finance Industry Taskforce (GFIT)
- All employees in relevant roles completed industry-wide e-learning module on responsible financing

1. The Association of Banks in Singapore 2. Task Force on Climate-related Financial Disclosures 3. Monetary Authority of Singapore

ESG Ratings, Rankings and Indices

Recognised by extra-financial rating agencies and included in leading sustainability indices

Ratings

A
As at Nov 2020
MSCI ESG Ratings

C
As at 2020[1]
CDP Climate Change Score

25.9
Medium Risk[2], as at Aug 2020
Sustainalytics ESG Risk Rating

Rankings

Top 20
Among ASEAN companies
ASEAN Corporate Governance Scorecard (ACGS)

#2
Among Singapore companies
ASEAN Corporate Governance Scorecard (ACGS)

#2
Among ASEAN banks in 2021
WWF Sustainable Banking Assessment

Indices

Inclusion
In 2021
Bloomberg Gender Equality Index

#3
By market cap, as at Jan 2021
FTSE4Good ASEAN-5 Index

#2
Largest constituent, as at Dec 20
iEdge Singapore ESG Leaders Index

#10
Among Singapore companies
Singapore Governance & Transparency Index (SGTI)

1. An improvement from 'D' score in 2019. 2. In September 2020, UOB received an ESG Risk Rating of 25.9 and was assessed by Sustainalytics to be at Medium Risk of experiencing material financial impacts from ESG factors.
Source: Bloomberg, CDP Worldwide, Centre for Governance and Sustainability at National University of Singapore Business School; FTSE Russell; MSCI Inc.; Singapore Exchange (SGX); Sustainalytics; and World Wide Fund for Nature.

Thank You

