

Sustainable Finance Special Interest Commentary

23 January 2024

2023 Sustainable Finance Update – Running Against Time?

The path to sustainability and net-zero remains an unknown one. While the world knows the ultimate destination, we are still trying to work out the best way to get there. As we covered in "*The Amplifying Influence of Sustainability for Financial Institutions*" published 1 February 2023, a material part of the journey is the driving of capital towards sustainable financing while addressing sustainable or climate finance was one of the priorities of the recently held 2023 United Nations Climate Change Conference ("COP28"). The sustainable finance credit market continues to evolve and through 2023, there have been noticeable y/y trends in absolute issuance amounts as well as the composition of issuances by issue type and issuer sector.

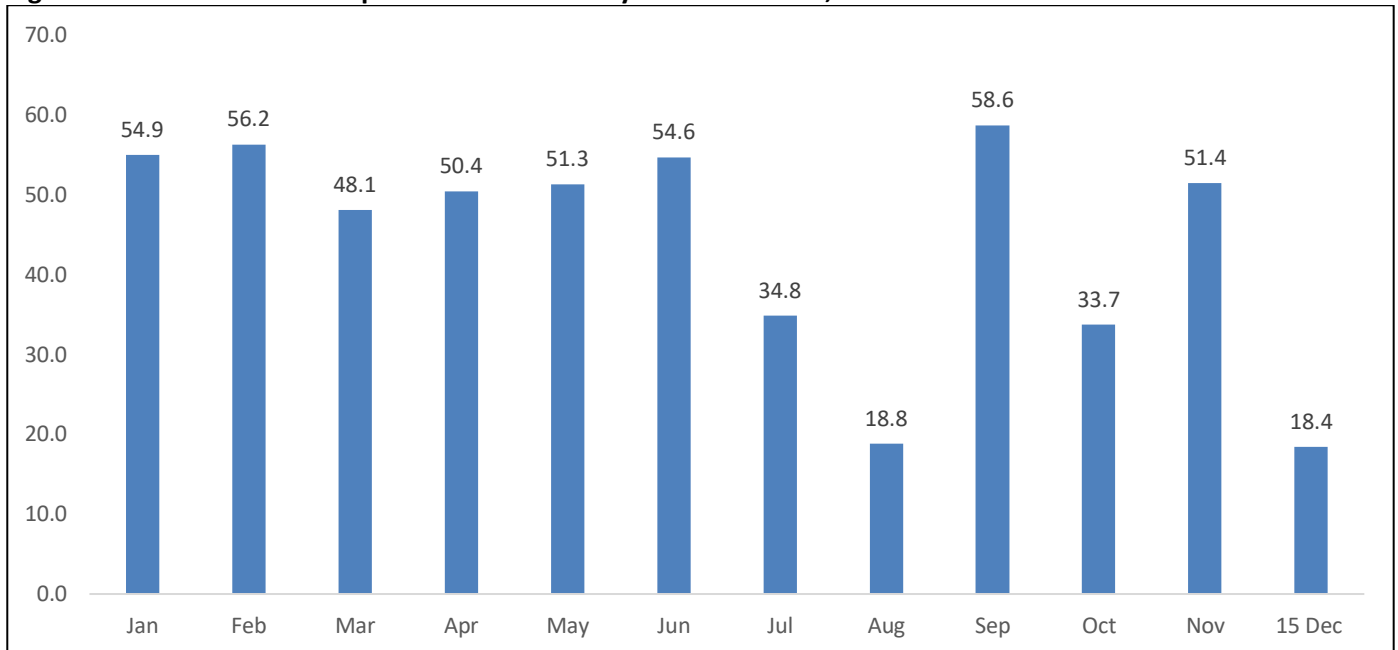
Andrew Wong
Credit Research Analyst
WongVKAM@ocbc.com

Resilience in sustainable finance credit issuances though eroded towards the end of the year.

Sustainable finance credit markets were relatively resilient in 1H2023. Per Bloomberg, green¹, social², sustainability³ and sustainability-linked⁴ ("GSSSL") bond sales from governments and corporates globally up to 30 June 2023 totalled USD315.6bn, up 1.3% from the same period last year. In contrast, the Singapore and the Asia ex-Japan G3 credit markets were down ~24% and ~34% y/y in 1H2023 and similarly, the US corporate credit market was down 0.5% for 1H2023. Influences plaguing global bond markets included interest rate hikes, inflation and geopolitical tensions against the spectre of slowing economies and event driven crises including the US regional banking crisis and the collapse in confidence that contributed to Credit Suisse Group AG's forced merger with UBS Group AG.

The sustainable finance credit market was not immune to these trends – FY2022 was the first y/y fall in GSSSL annual bond issuance on record but as seen from 1H2023 issuance trends, there were other unique influences on the sustainable finance credit market in our view. Positive drivers for relatively better 1H2023 performance included improved clarity surrounding regulations at the industry level and better information and clearer sustainability strategies at the company level. This offset negative influences specific for the GSSSL market including rising concerns on green-washing and the measurement of the actual sustainability impact of certain GSSSL bond types that came hand in hand with more awareness and understanding of the sustainability finance space. There was also a recognition that the 'greenium' had diminished, which is likely a necessary incentive for issuers given the higher issuing costs for GSSSL instruments (external audits, second party opinions, additional documentation and disclosures including a sustainable finance framework, project due diligence) as well as the legal and political risks associated with certain sustainability finance instruments such as sustainability linked bonds.

Figure 1: YTD2023 Global Corporate GSSSL Monthly Bond Issuances, USDbn



Source: Bloomberg

2H2023 performance for the sustainable finance credit market however was noticeably weaker compared to 1H2023 with GSSSL bond sales from governments and corporates globally down 4.84% y/y for the year up to 15 December 2023. While this is still an improved performance compared to the Singapore and the Asia ex-Japan G3 credit markets that were down ~18% and ~17% y/y over the same period per Bloomberg data, it is evident that sustainable finance related credit issuance struggled while other credit markets staged a relative h/h recovery in 2H2023. Issuance volumes in the US corporate credit market for the year up to 15 December 2023 for instance was up ~6.0% y/y.

Despite the 2H2023 slowdown, the overall outlook for sustainable finance and GSSSL issuance looks constructive in our view. Global central banks appear closer to the end of their rate hike cycles which will help general demand for credit. On the sustainability front, the incentives for sovereign issuers to issue GSSSL instruments will remain high and increase depending on the success of their net zero strategies. For corporate issuers and investors, the necessity and willingness to be sustainable from an operational, financing/investment and reputational angle will also continue to rise as information, actions and strategies continue to be refined to increase the impact of sustainability focused activities which are becoming increasingly mainstream.

As the GSSSL market further develops, there may be more defined trends and diversification in the future. This could include higher issuance from emerging market sovereigns that are more exposed to the economic impact of climate change as well as more issuance from high emitting industries including airlines that must balance their operating efficiency with the cost of transitioning to a greener future. Stakeholder engagement will also continue to rise, driving the sustainability agenda in both quantity and quality and in both different and converging directions. For instance, almost 160 countries covering nearly 80% of the world's land signed the COP28 UAE Declaration on Sustainable Agriculture, Resilient Food Systems, and Climate Action. This is a commitment to integrate food and agriculture systems into climate plans by 2025 and may unlock more funding for food sector-based decarbonisation solutions and encourage greater awareness on more sustainable diets. For more information, please see *"COP28: Key outcomes and next steps"* published by OCBC's ESG analyst on 19 December 2023. Finally, the higher cost is resulting in additional sustainability pressures including social considerations such as affordable access to housing and healthcare.

Green bonds reaching record heights.

Previously mentioned concerns on green washing, the measurement of the actual sustainability impact of certain GSSSL bond types, and the legal and political risks associated with certain sustainability finance instruments drove a large drop in issuance of sustainability linked bonds in the last one to two years. These concerns are somewhat exemplified in the terms of the HYUELE 6.375% '28s, a sustainability linked bond issued by SK Hynix Inc. in January 2023. Under the terms of this bond, its coupon would

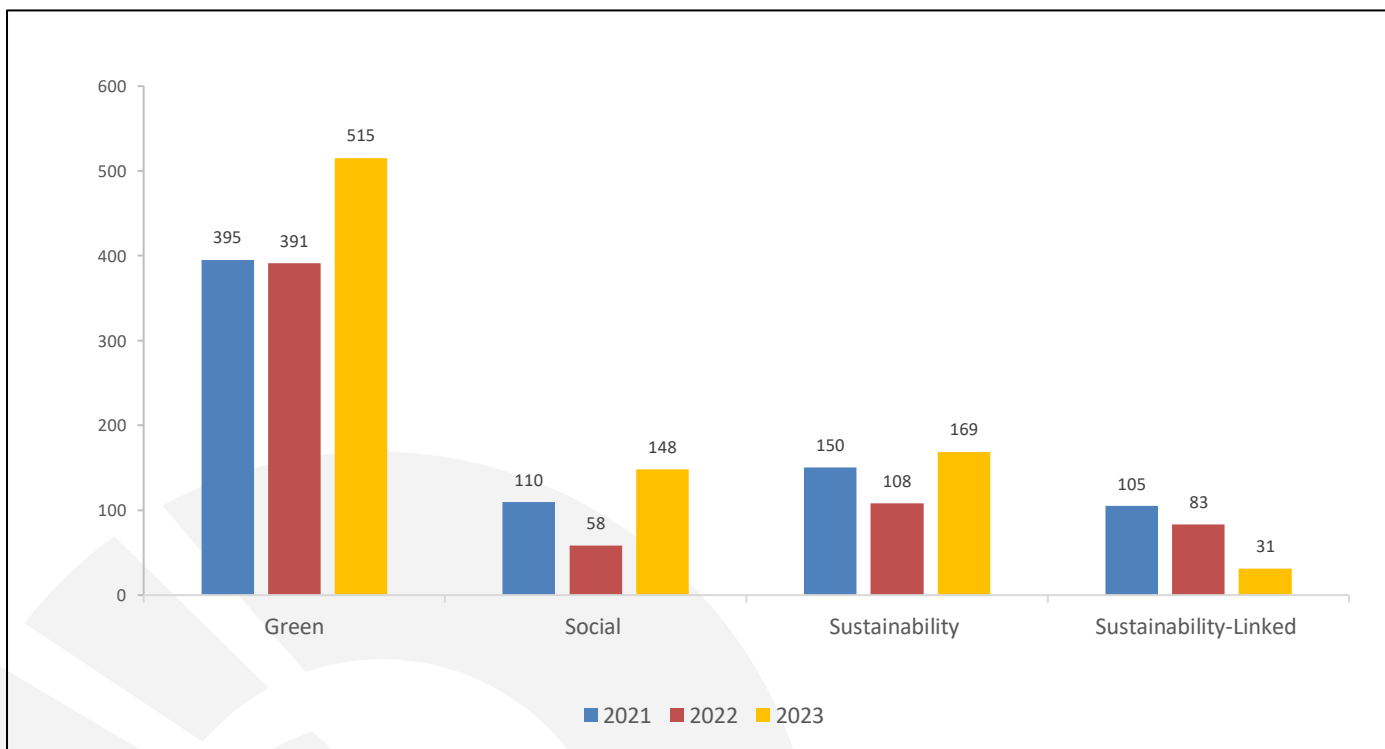
reset to 7.125% should SK Hynix Inc. fail to meet its Sustainability performance targets. However this increase would happen only on 17 July 2027 when the bond matures on 17 January 2028 with the ‘penalty period’ just six months, raising a question on the actual sustainability impact.

Other subtypes to see a drop in the last one to two years included social bonds given the lower influence of the pandemic and related social considerations as well as rising concerns on the quantifiable and visible impacts of climate change. Social causes or impact on the other hand can be somewhat hard to quantify. That said, 2023 did see some recovery in social bond issuance which may be due to:

1. A higher focus on housing and healthcare affordability concerns given the rising cost of living from inflation (for example, just over 75% of the solid 3Q2023 social bond issuance in the Asiadollar space was from Korean issuers including Korea Land & Housing Corp, Korea Housing Finance Corp, Shinhan Financial Group Co Ltd and Industrial Bank of Korea. Korea Land & Housing Corp and Korea Housing Finance Corp are government linked enterprises that provide housing supply and finance for low to moderate income families, respectively); and
2. An update in June 2023 of the International Capital Market Association’s Social Bond Principles and Harmonised Framework for Impact Reporting for Social Bonds (2023) that seeks to provide transparency and consistency in issuers’ reporting of the use of Social Bond proceeds to determine impact.

Conversely, global issuance of green bonds reached record levels according to Bloomberg data in 2023 with large deals from sovereigns to fund climate goals. This was helped by increasing awareness of environmental issues and the clearer strategies at the company and country level to fight climate change.

Figure 2: YTD2023 Global Corporate GSSSL Bond Segment Issuances, USDbn



Source: Bloomberg

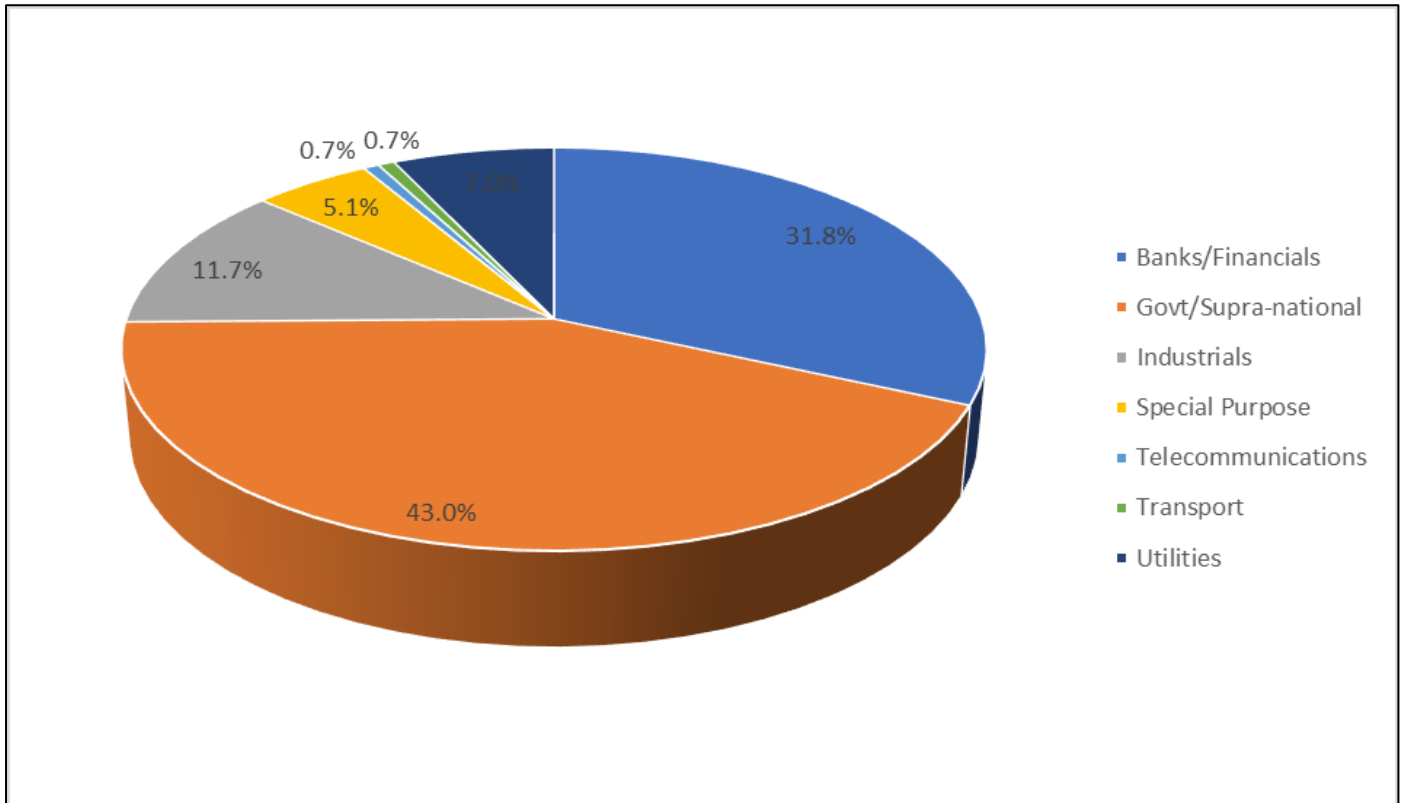
Sovereigns increasingly leading the way

Finally, another recent trend has been the development in issuer composition with a rise in sovereign issuers looking to raise sustainability finance instruments to meet increasingly urgent (and well publicised) climate goals and build economic resilience. An example is the Nationally Determined Contributions (“NDCs”) that are each country’s self-defined national climate pledges under the Paris Agreement covering (1) an action plan to limit global warming to 1.5°C, (2) adaptation plans to climate impacts and (3) allocation of sufficient financing for the first two efforts. According to a study published in the Management Science journal on the economic impact of climate change on sovereign credit ratings, rising carbon emissions have the potential to lower

sovereign credit ratings and thereby increase debt servicing costs for 59 countries in the next 10 years. Other impacts include reduced economic output from extreme weather events.











Sovereign issuers are also less impacted by the issuance conditions in global credit markets that prevailed in 2023 and that influenced corporate issuers more. As such, sovereign issuers had a higher capacity and willingness to issue sustainable finance instruments in 2023.

Figure 3: YTD2023 Global Corporate and Government GSSSL Bond Breakdown by Industry



Source: Bloomberg

Table 1: Outstanding SGD-denominated GSSSL issues, SGDmn

Icon	Type	Issuer	Issue	Amount Outstanding (SGD million)
	Green	Manulife Financial Corp	MFCCN 3.0% '29s	500
	Green	National University of Singapore	NUSSP 1.565% '30s	300
	Green	Ascendas Real Estate Investment Trust	AREIT 2.65% '30s	100
	Green	Ascendas Real Estate Investment Trust	AREIT 3.0%-PERP	300
	Sustainability-linked bond	Surbana Jurong Pte Ltd	SRBJNG 2.48% '31s	250
	Green	National University of Singapore	NUSSP 1.62% '31s	300
	Green	Sembcorp Industries Ltd	SCISP 2.45% '31s	400
	Sustainability bond	Frasers Logistics & Commercial Trust	FLTSP 2.18% '28s	150
	Green	National Environment Agency	NEASP 1.67% '31s	350
	Green	National Environment Agency	NEASP 2.5% '51s	1,300
	Sustainability bond	Frasers Property Ltd	FPLSP 3% '28s	300
	Sustainability-linked bond	Sembcorp Industries Ltd	SCISP 2.66% '32s	675
	Sustainability-linked bond	Nanyang Technology University	NTUSP 2.185% '36s	650
	Green	Housing & Development Board	HDBSP 1.845% '27s	1,000
	Social	First Real Estate Investment Trust	FIRTSP 3.25% '27s	100
	Green	Ascendas Real Estate Investment Trust	AREIT 3.468% '29s	208
	Sustainability-linked bond	Ascott Residence Trust	ARTSP 3.63% '27s	200
	Sustainability-linked bond	Sembcorp Industries Ltd	SCISP 3.735% '29s	300
	Green	Housing & Development Board	HDBSP 2.94% '27s	1,100
	Green	Public Utilities Board	PUBLSP 3.433% '52s	800
	Green	Frasers Property Treasury Pte Ltd	FPLSP 4.49% '27s	500
	Green	Housing & Development Board	HDBSP 4.09% '27s	1,200
	Green	Sembcorp Industries Ltd	SCISP 4.6% '30s	350
	Green	Mapletree Pan Asia Commercial Trust	MCTSP 4.25% '30s	150
	Green	National University of Singapore	NUSSP 3.268% '33s	340
	Green	CapitaLand Integrated Commercial Trust	CAPITA 3.938% '30s	400
	Green	Apeiron AgroCommodities Pte. Ltd.	APEIRO 4.487% '28s	50
	Green	Housing & Development Board	HDBSP 3.104% '28s	740

Source: Bloomberg, OCBC Credit Research as at 15 December 2023

Sustainable finance trends in SGD

2023 GSSSL issuances in the SGD space was also weaker y/y with GSSSL issuances from governments and corporates down 10.7% as at 15 December 2023 to SGD4.83bn. This included the SGD2.8bn retap of the SIGB 3.0% '72s in early August 2023. While sustainability remains a key concern for Singapore (eg: Singapore Statutory boards will be required to publish annual sustainability disclosures from FY2024 while the government will publish an annual report from FY2023 tracking the public sector's efforts, progress and plans in rolling out its sustainability initiatives), sustainable finance credit markets in Singapore are competing with the sustainable finance activities of Financial Institutions. Recently, Starhill Global REIT secured a SGD50mn revolving sustainability-linked credit facility while Suntec Real Estate Investment Trust entered into a SGD500mn sustainability-linked loan facility agreement.

The total issue size of the 50-year SIGB 3.0% '72s Sovereign Green Bonds is now SGD5.2bn, comprising the retap and the inaugural SGD2.4bn issue in August 2022. Per the Impact Report provided by Sustainalytics for bonds and loans under the Singapore Green Bond Framework as at 21 September 2023, SGD709mn has been allocated to clean transportation. This specifically relates to the financing of the Jurong Region Line and Cross Island Line in support of the Singapore Green Plan 2030. These projects are expected to eliminate 1.23-1.84 kilotonnes of annual carbon dioxide equivalents as greenhouse gas emissions with a project timeline of 99 years.

The Ministry of Finance published the first Singapore Green Bond Report in September 2023 that also includes a discussion of the use of proceeds for the inaugural SGD2.4bn issue in August 2022 and its expected environmental impact. The report is consistent with the government's commitments under the Singapore Green Bond Framework and covers the period from 15 August 2022 to 31 March 2023. Other topics included in the report are Singapore's Climate Commitment and climate target to achieve net zero emissions by 2050 through its Long-Term Low-Emissions Development Strategy.

Singapore is committed to issue up to SGD35bn in green bonds by 2030 and these will come from the government as well as Singapore's Statutory Boards including Housing & Development Board, Public Utilities Board, and the National Environment Agency. Including the SGD5.2bn sovereign green bond, SGD11bn has been issued so far under its commitment in the areas of clean transportation, waste management, green buildings, and sustainable water. Public sector green bonds are expected to further develop the corporate green bond market in Singapore.

Sensitivity to Sustainability on the Rise

In our Singapore Credit Outlook 2023 published in early January 2023, we introduced our Sustainability Sensitivity Score ("SSS") which is our attempt to evaluate issuers' sensitivity to sustainability issues and risks. Our aim is to highlight the key sustainability risks and hence sensitivities for the issuers we cover rather than how well issuers actually mitigate them. Sustainability in our view remains a developing field and will continue to be influenced by improving disclosures, the impacts of actions by issuers, governments, and society, and ongoing shifts in the environment (both physical and regulatory) itself.

We assess an issuer's SSS as either Low, Medium, or High over the duration of each issuers' issuances. Our approach is top-down through the following:

- Identifying the sector in which the issuer operates in. This is because sustainability influences and megatrends are typically consistent within industries.
- We then look at the issuer's key ESG policies, strategy, and targets as well as recent developments in executing its strategy.
- Finally, corporate governance and disclosure quality are highlighted as key indicators in supporting the final SSS.

Although the vast majority of the scores are assessed as 'Medium,' the reasons behind them vary. That said, the scores generally reflect the mostly adequate actions taken by issuers to date and that sustainability risks have a longer-term impact. The content is neither exhaustive nor complete and we expect that our views will be refined and improved over time as we (and the market) become more familiar the concept of sustainability.

In our previous assessments, we identified only one company with a "low" sensitivity and four with a "high" sensitivity. One of the issuers with a "high" SSS was Credit Suisse Group AG ("CS") that reflected fundamental developments and governance concerns surrounding adequate risk management and oversight. Questions on governance quality and the bank's material restructuring increased the bank's systemic risk in our view. Uncertainty on CS's outlook and future composition at the time resulted in poor

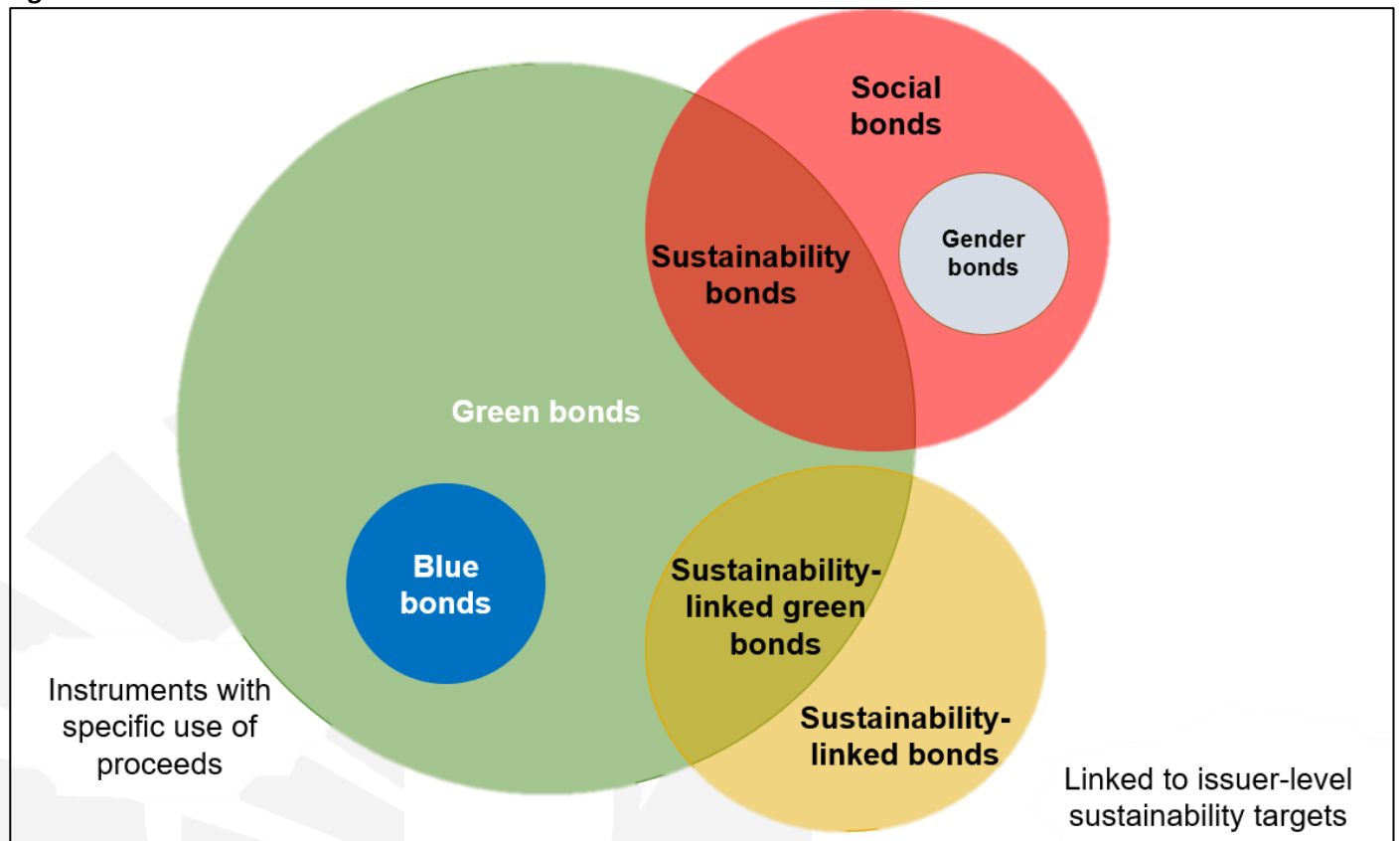
employee retention and a crisis of confidence that peaked in late March from the US regional banking crisis and resulted in its forced merger with UBS Group AG.

Table 2: Definitions

	Icon	Type of bonds	Definition
1.		Green bond	Proceeds from these bonds are specifically allocated to financing new and existing projects or activities with positive environmental impacts.
2.		Social bond	To qualify as a social bond, the proceeds must be used to finance or refinance social projects or activities that achieve positive social outcomes and/or address a social issue.
3.		Sustainability bond	Sustainability bonds are issues where proceeds are used to finance or re-finance a combination of green and social projects or activities.
4.		Sustainability-linked bond	These bonds are structurally linked to the issuer’s achievement of climate or broader United Nations Sustainable Development Goals (“UN SDG”) targets. Sustainable performance target (“SPT”)s that are not met then results in an increase in the instrument’s coupon rate. Conversely, a SPT that is met or exceeded could result in a decrease in the instrument’s coupon rate.
5.		Gender bond	A type of social bond where proceeds are used to support the specific purpose of raising awareness on gender inequality and women empowerment.
6.		Blue bond	A type of green bond where proceeds are used on projects or strategies leading to a healthy and productive ocean and marine life environment.

Source: OCBC Credit Research

Figure 4: Classification of GSSSL bonds



Source: OCBC Credit Research

Note: As far as we are aware, there have not been any SGD blue, sustainability-linked green bond, or gender bonds (also known as orange bonds) yet

Explanation of Issuer Profile Rating / Issuer Profile Score

Positive (“Pos”) – The issuer’s credit profile is either strong on an absolute basis or expected to improve to a strong position over the next six months.

Neutral (“N”) – The issuer’s credit profile is fair on an absolute basis or expected to improve / deteriorate to a fair level over the next six months.

Negative (“Neg”) – The issuer’s credit profile is either weaker or highly geared on an absolute basis or expected to deteriorate to a weak or highly geared position over the next six months.

To better differentiate relative credit quality of the issuers under our coverage, we have further sub-divided our Issuer Profile Ratings into a 7-point Issuer Profile Score scale.

IPR	Positive		Neutral			Negative	
IPS	1	2	3	4	5	6	7

Explanation of Bond Recommendation

Overweight (“OW”) – The bond represents **better relative value** compared to other bonds from the same issuer, or bonds of other issuers with similar tenor and comparable risk profile.

Neutral (“N”) – The bond represents **fair relative value** compared to other bonds from the same issuer, or bonds of other issuers with similar tenor and comparable risk profile.

Underweight (“UW”) – The bond represents **weaker relative value** compared to other bonds from the same issuer, or bonds of other issuers with similar tenor and comparable risk profile.

Please note that Bond Recommendations are dependent on a bond’s price, underlying risk-free rates and an implied credit spread that reflects the strength of the issuer’s credit profile. Bond Recommendations may not be relied upon if one or more of these factors change.

Other

Suspension – We may suspend our issuer rating and bond level recommendation on specific issuers from time to time when OCBC is engaged in other business activities with the issuer. Examples of such activities include acting as a joint lead manager or book runner in a new issue or as an agent in a consent solicitation exercise. We will resume our coverage once these activities are completed. We may also suspend our issuer rating and bond level recommendation in the ordinary course of business if (1) we believe the current issuer profile is incorrect and we have incomplete information to complete a review; or (2) where evolving circumstances and increasingly divergent outcomes for different investors results in less conviction on providing a bond level recommendation.

Withdrawal (“WD”) – We may withdraw our issuer rating and bond level recommendation on specific issuers from time to time when corporate actions are announced but the outcome of these actions are highly uncertain. We will resume our coverage once there is sufficient clarity in our view on the impact of the proposed action.

Macro Research

Selena Ling
Head of Strategy & Research
LingSSSelena@ocbc.com

Tommy Xie Dongming
Head of Greater China Research
XieD@ocbc.com

Keung Ching (Cindy)
Hong Kong & Macau Economist
Cindyckung@ocbc.com

Herbert Wong
Hong Kong & Macau Economist
HerbertWong@ocbc.com

Lavanya Venkateswaran
Senior ASEAN Economist
LavanyaVenkateswaran@ocbc.com

Ahmad A Enver
ASEAN Economist
Ahmad.Enver@ocbc.com

Jonathan Ng
ASEAN Economist
JonathanNg4@ocbc.com

Ong Shu Yi
ESG Analyst
ShuyiOng1@ocbc.com

FX/Rates Strategy

Frances Cheung, CFA
Rates Strategist
FrancesCheung@ocbc.com

Christopher Wong
FX Strategist
ChristopherWong@ocbc.com

Credit Research

Andrew Wong
Credit Research Analyst
WongVKAM@ocbc.com

Ezien Hoo, CFA
Credit Research Analyst
EzienHoo@ocbc.com

Wong Hong Wei, CFA
Credit Research Analyst
WongHongWei@ocbc.com

Chin Meng Tee, CFA
Credit Research Analyst
MengTeeChin@ocbc.com

Analyst Declaration

The analyst(s) who wrote this report and/or her or his respective connected persons held financial interests in the following above-mentioned issuers or companies as at the time of the publication of this report: Singapore Airlines Ltd, GuocoLand Ltd, Oxley Holdings Ltd, Frasers Centrepoint Trust, Suntec Real Estate Investment Trust, Mapletree Pan Asia Commercial Trust, Frasers Hospitality Trust, Lendlease Global Commercial REIT, CapitaLand Ascott Trust, Frasers Property Ltd.

This publication is solely for information purposes only and may not be published, circulated, reproduced or distributed in whole or in part to any other person without our prior written consent. This publication should not be construed as an offer or solicitation for the subscription, purchase or sale of the securities/instruments mentioned herein. Any forecast on the economy, stock market, bond market and economic trends of the markets provided is not necessarily indicative of the future or likely performance of the securities/instruments. Whilst the information contained herein has been compiled from sources believed to be reliable and we have taken all reasonable care to ensure that the information contained in this publication is not untrue or misleading at the time of publication, we cannot guarantee and we make no representation as to its accuracy or completeness, and you should not act on it without first independently verifying its contents. The securities/instruments mentioned in this publication may not be suitable for investment by all investors. Any opinion or estimate contained in this report is subject to change without notice. We have not given any consideration to, and we have not made any investigation of the investment objectives, financial situation or particular needs of the recipient or any class of persons, and accordingly, no warranty whatsoever is given and no liability whatsoever is accepted for any loss arising whether directly or indirectly as a result of the recipient or any class of persons acting on such information or opinion or estimate. This publication may cover a wide range of topics and is not intended to be a comprehensive study or to provide any recommendation or advice on personal investing or financial planning. Accordingly, they should not be relied on or treated as a substitute for specific advice concerning individual situations. Please seek advice from a financial adviser regarding the suitability of any investment product taking into account your specific investment objectives, financial situation, or particular needs before you make a commitment to purchase the investment product. OCBC Bank, its related companies, their respective directors and/or employees (collectively "Related Persons") may or might have in the future interests in the investment products or the issuers mentioned herein. Such interests include effecting transactions in such investment products, and providing broking, investment banking and other financial services to such issuers. OCBC Bank and its Related Persons may also be related to, and receive fees from, providers of such investment products. This report is intended for your sole use and information. By accepting this report, you agree that you shall not share, communicate, distribute, deliver a copy of or otherwise disclose in any way all or any part of this report or any information contained herein (such report, part thereof and information, "Relevant Materials") to any person or entity (including, without limitation, any overseas office, affiliate, parent entity, subsidiary entity or related entity) (any such person or entity, a "Relevant Entity") in breach of any law, rule, regulation, guidance or similar. In particular, you agree not to share, communicate, distribute, deliver or otherwise disclose any Relevant Materials to any Relevant Entity that is subject to the Markets in Financial Instruments Directive (2014/65/EU) ("MiFID") and the EU's Markets in Financial Instruments Regulation (600/2014) ("MiFIR") (together referred to as "MiFID II"), or any part thereof, as implemented in any jurisdiction. No member of the OCBC Group shall be liable or responsible for the compliance by you or any Relevant Entity with any law, rule, regulation, guidance or similar (including, without limitation, MiFID II, as implemented in any jurisdiction).