





ESG Financial Product Overview & Outlook

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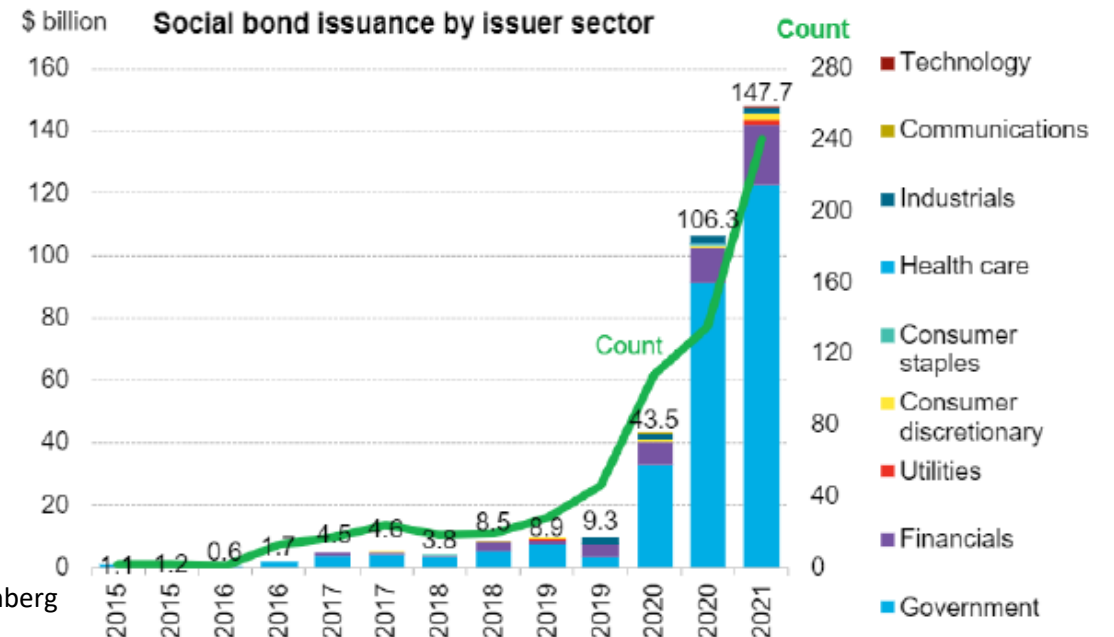
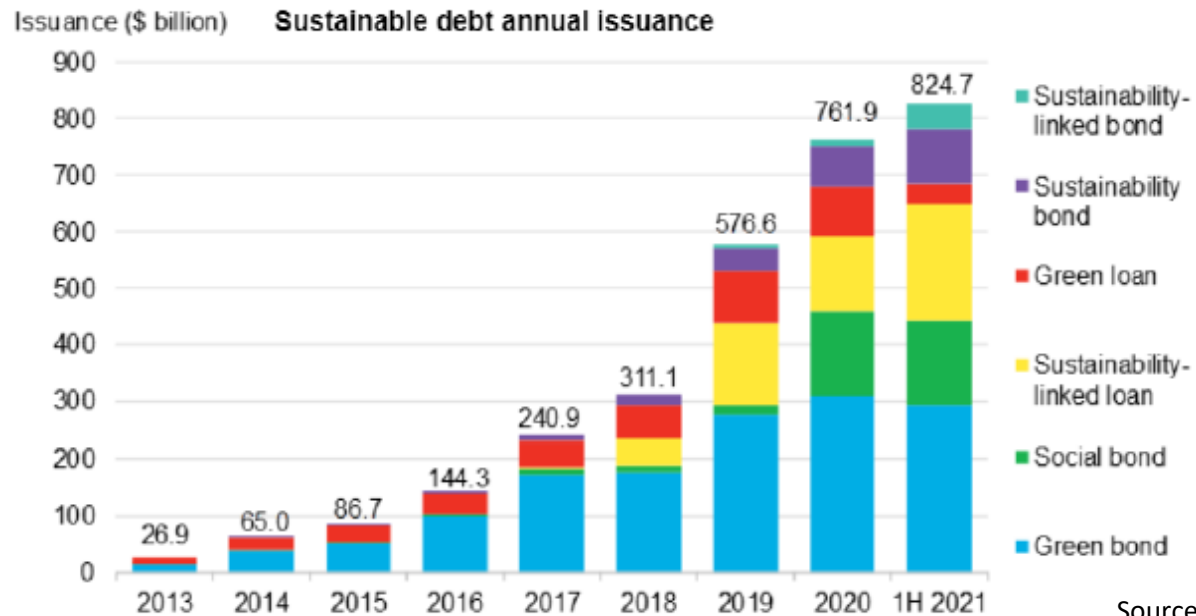
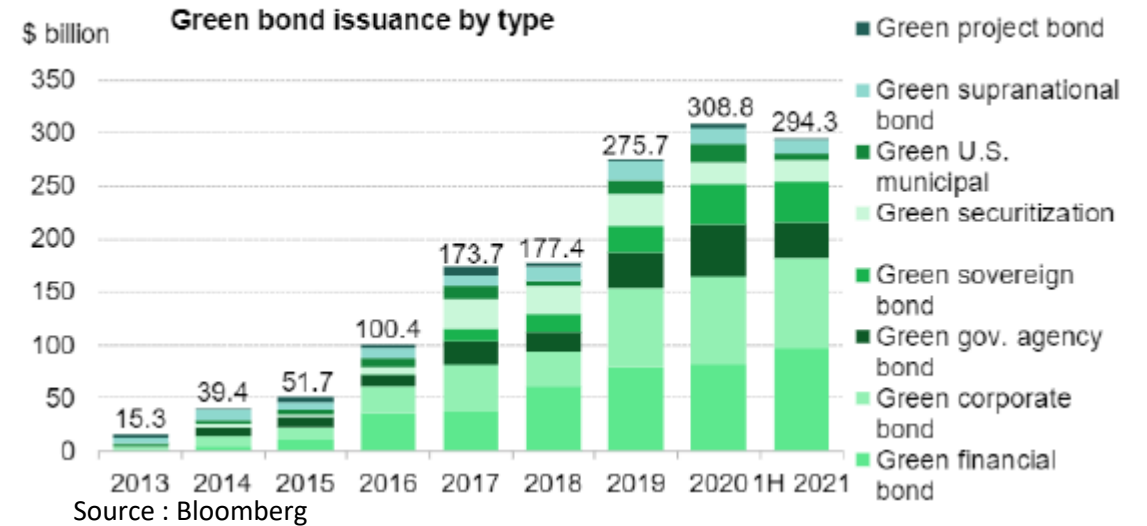


ESG Products – Overview & Outlook

Purpose	Cash products	Derivatives (Listed or OTC)
Financing 	Green bond / loan Social bond / loan Sustainability linked bond / loan	Sustainability linked Derivatives (Forward, Swaps, Options)
Investment 	ESG funds, ETF. Structured notes	ESG index and fund derivatives (Futures , Swap, Options)
Hedging 	Insurance linked Securities (Catastrophe bond)	Weather Derivatives (temperature wind....) , Renewable energy certificate
Regulatory / Compliance 		Carbon (EUA, EUAA, CER,)

Sustainable Debt Overview

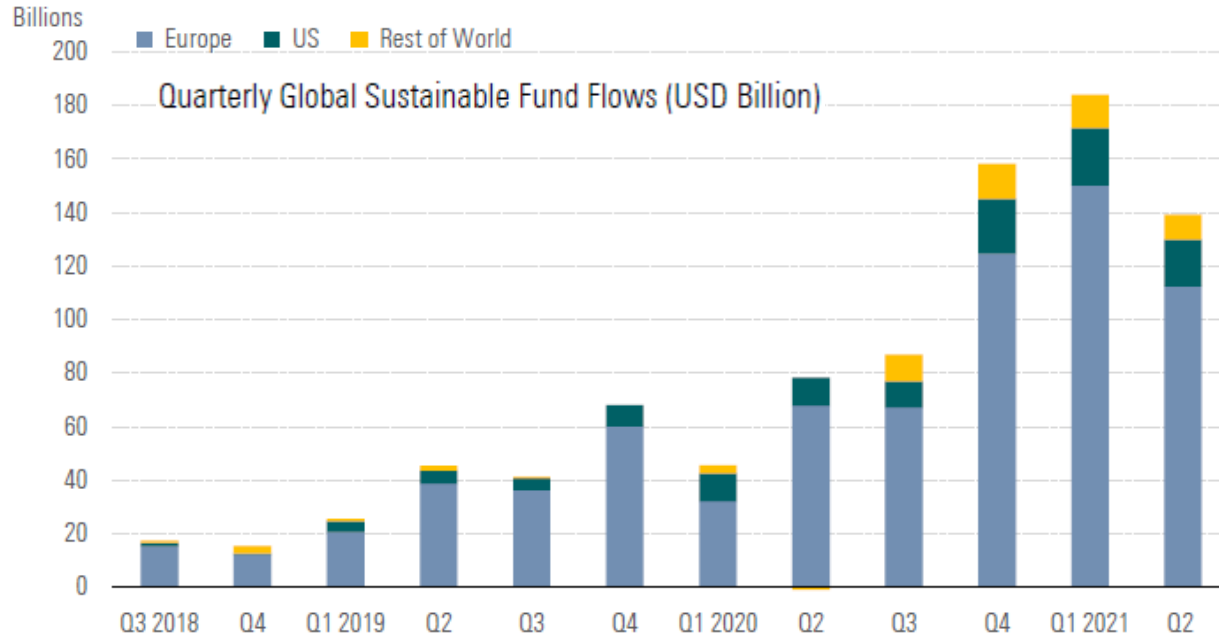
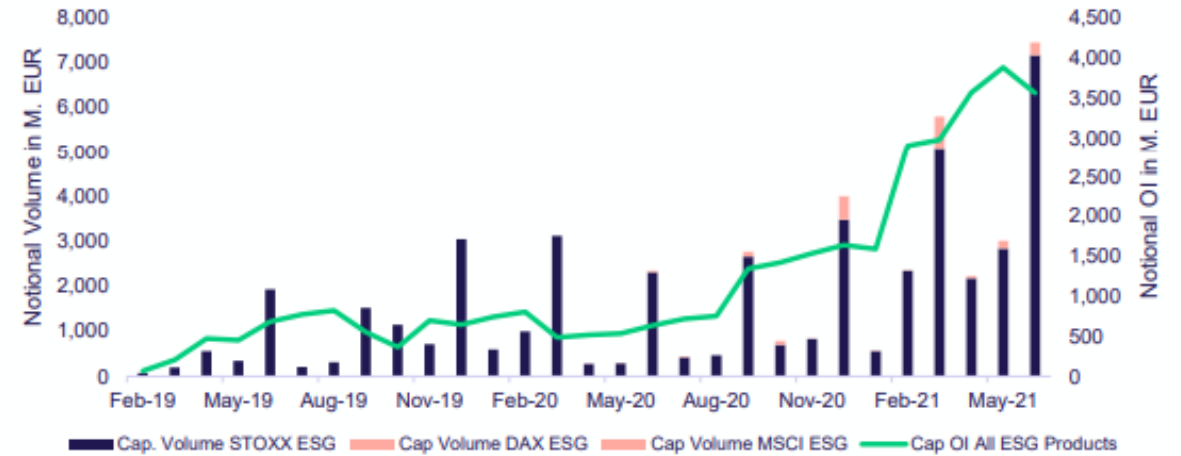
- Remarkable growth in the last 4 years
- Green bond remains the largest in volume while social bond gained shares due to Covid
- Sustainability linked loans & bonds gained momentum
- Sovereign & agencies played critical roles especially in social areas



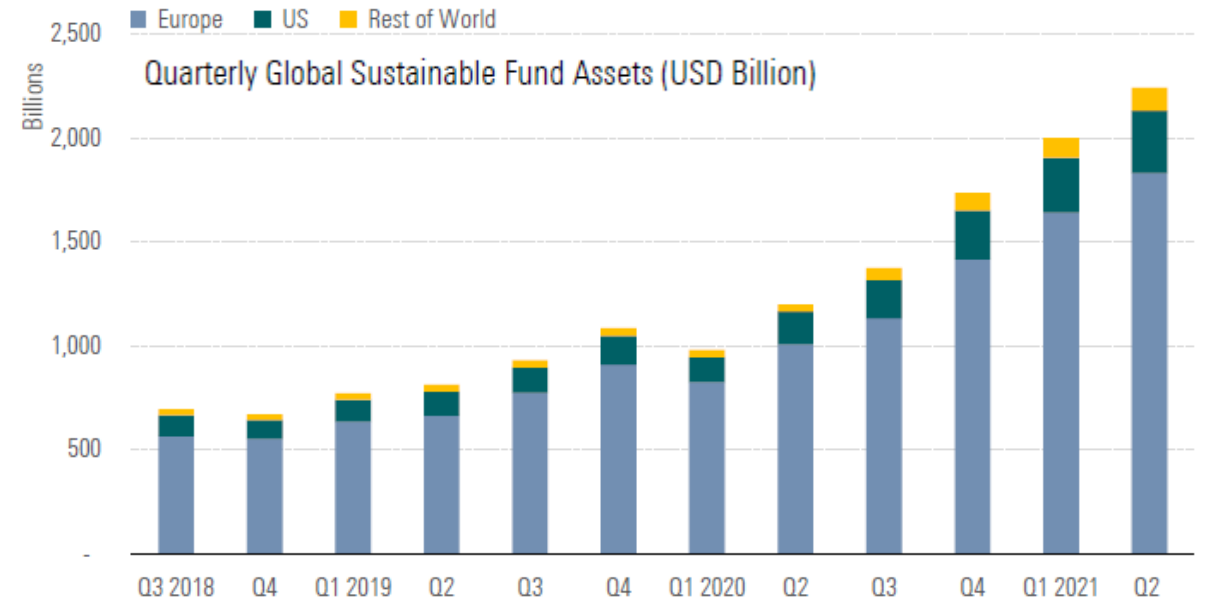
Sustainable Fund Flows

- ESG funds (MF&ETF) continue to attract investors where Europe leads the market development
- ESG index futures shows positive momentum along with fund and ETF growth

Notional Volume and Notional Open Interest



Source : Morningstar Direct



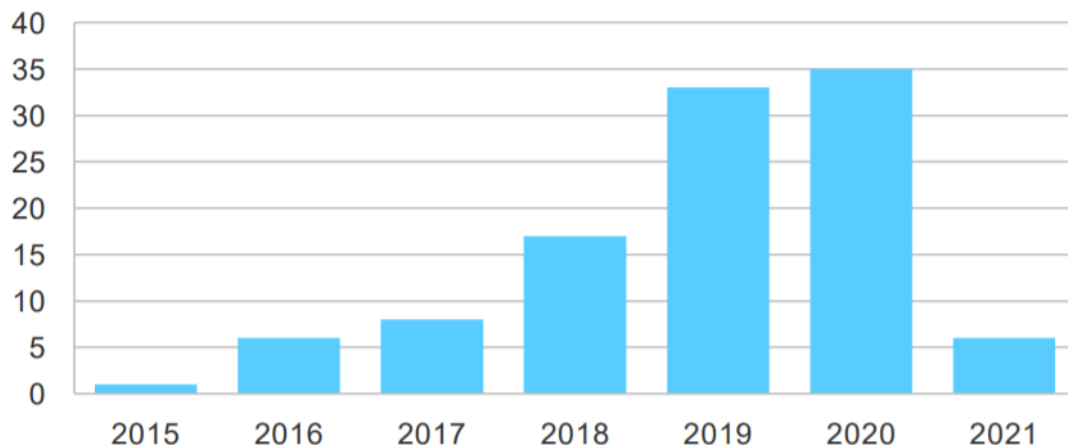
Source : Morningstar Direct

Green Securitization

- Securitization allows banks to focus origination of ESG financing and to offload the risks (concentration, liquidity , market risks .)
- Also allows banks to approach more diversified base of borrowers and projects

GREEN SECURITIZATION

(No. of tranches)

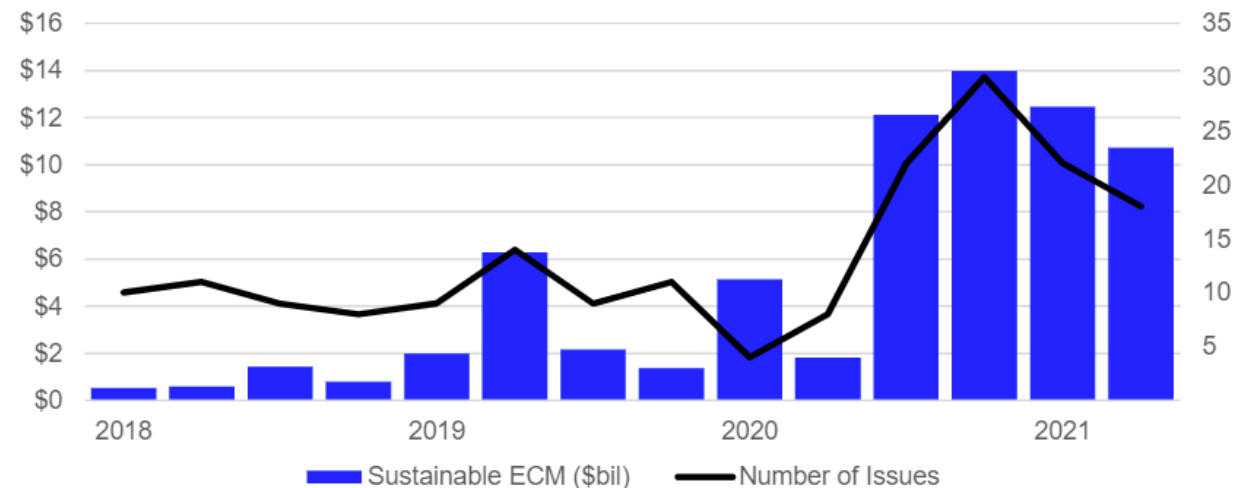


Source : Fitch / Bloomberg

Sustainable ECM

- Sustainable Equity development lagged behind debt market, yet visible growth was observed since H2 2020
- First EU green CB Bond executed in May 2020
- First EU sustainability linked CB executed in Nov 2020

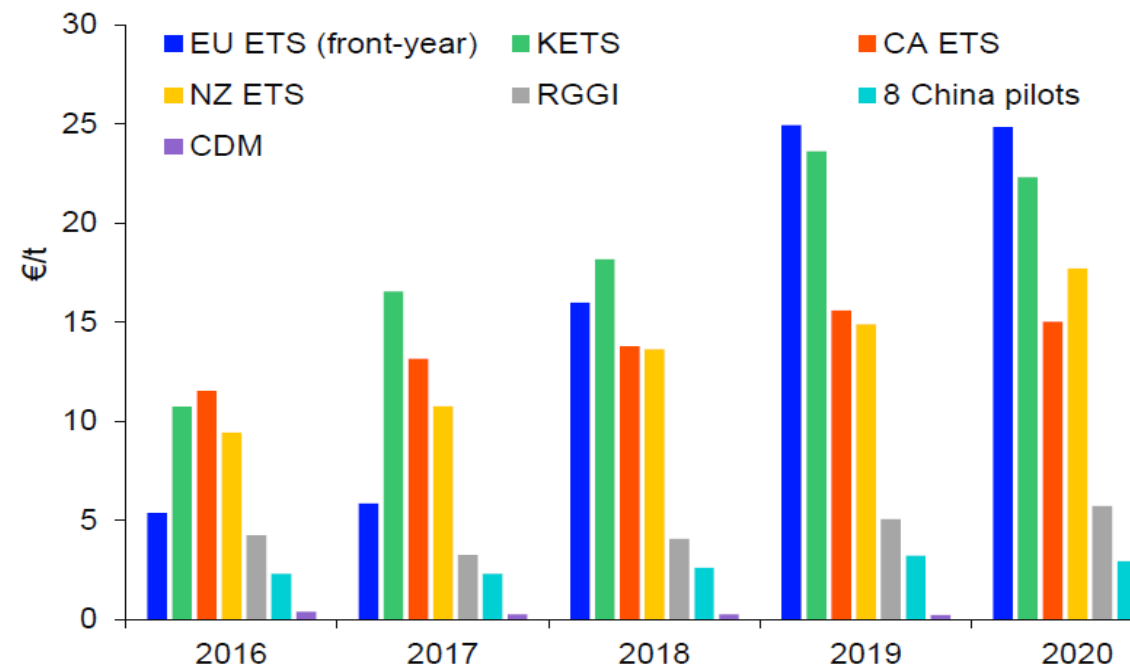
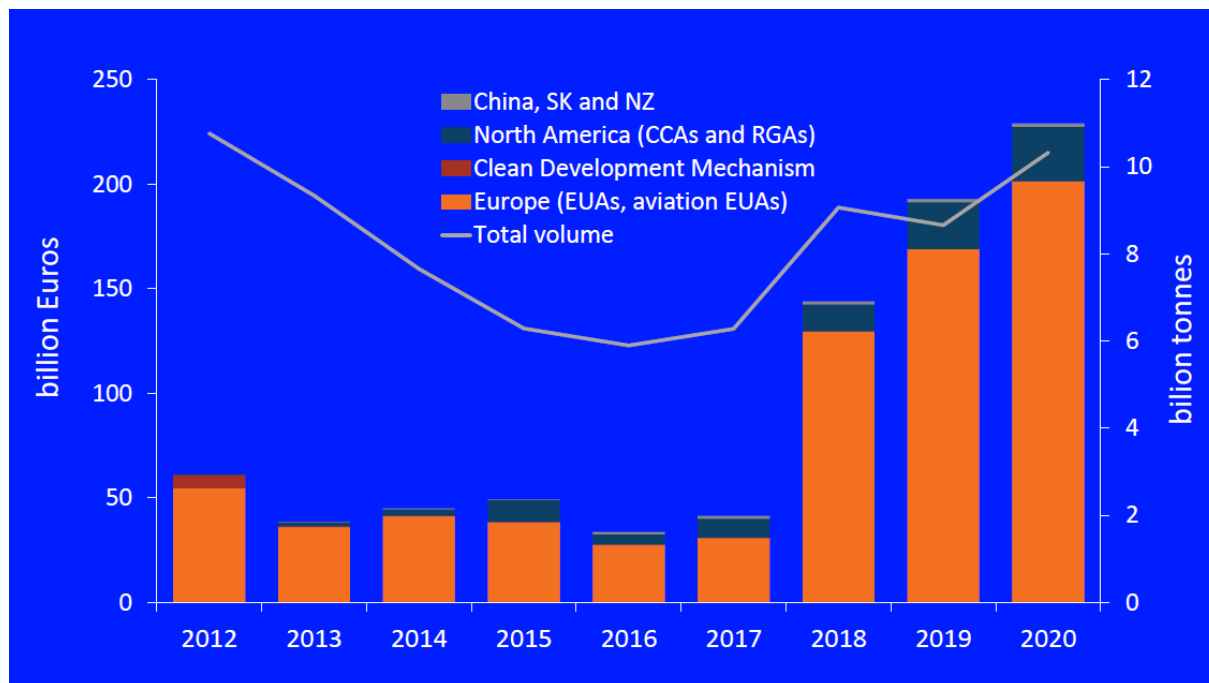
SUSTAINABLE EQUITY CAPITAL MARKETS



Source : Refinitive

Carbon Trading

- Climate Change and Carbon emission has world recognized imminent topics
- EUA trading volume continue to grow and EUA price in an upward trend
- Korea (KETS) was launched in 2015
- China formally launched ETS in July 2021
- Singapore to establish carbon exchange by end of 2021

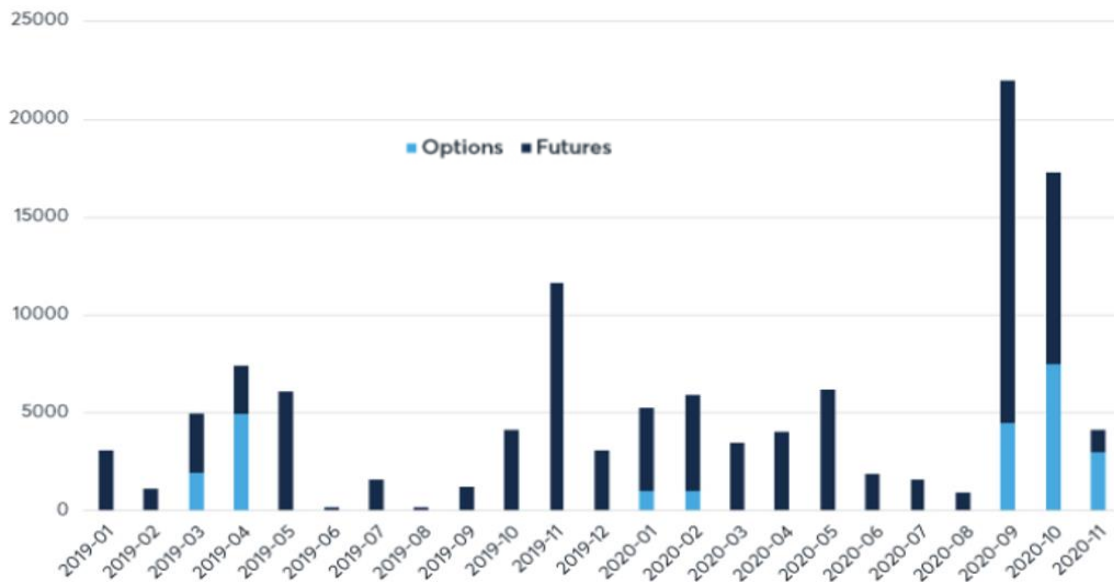


Source : Refinitve

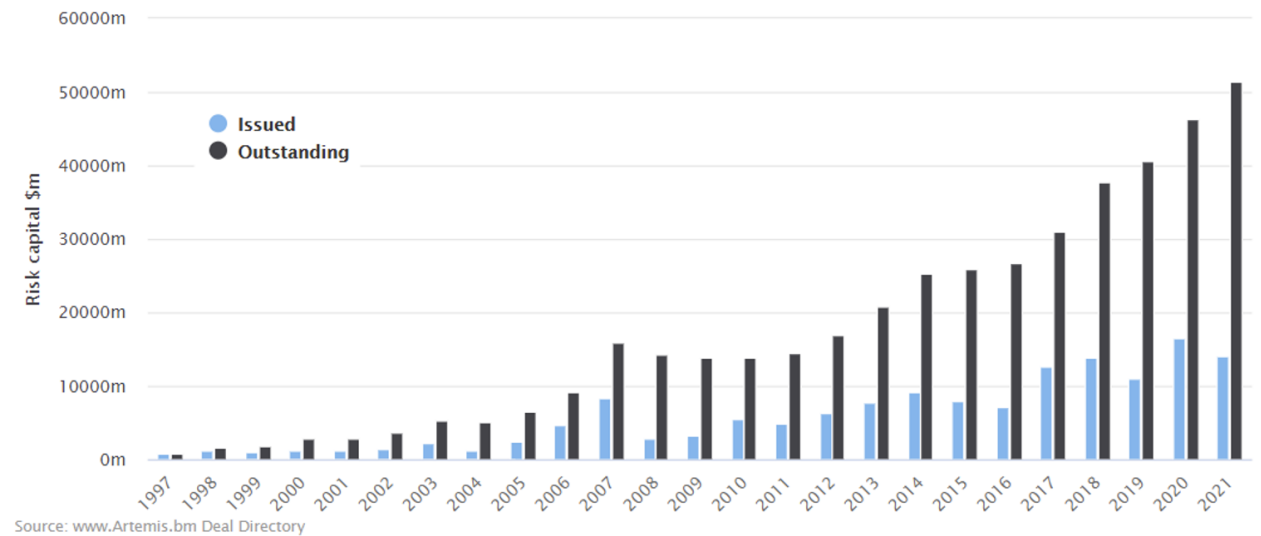
Managing Environmental Risks

- Climate risk has become a major threat to business operations and human life
- Currently 15-20% of natural disaster is insured
- Market based hedging solutions provide a risk transfer tool as well as an incentive for technology advancement to tackle environment risks.

CME weather Futures & Options Trading Volume



Catastrophe bond & ILS flows and outstanding



Source: www.Artemis.bm Deal Directory

Next Steps ?

▪ TWD Sovereign Green & Social bonds



▪ Green Project Bonds

▪ Green Securitization



▪ Carbon Emission Trading

▪ Green or Sustainability linked Equity (e.g. Convertible Bonds)



Thank You