

Scaling Renewable Energy Financing via application of Permissioned Blockchain and Al. Deep Learn Strategies Limited and the Deep Alpha Strategies (DAS) platform



#### **ESG INVESTING:**

We apply Artificial Intelligence (AI) and private, permissioned blockchain to tokenise green debt and equity. This results in "deeply reducing" the cost of issuance (e.g. for Green Bonds) and "deeply increasing" the value for asset managers by enabling efficient portfolio diversification to maximise portfolio returns.

Our aim is to facilitate primary market issuance and creation of a liquid secondary market in green assets via tokenisation whilst also applying innovative technology solutions to facilitate KYC / AML checks and applying advanced Machine Learning techniques for

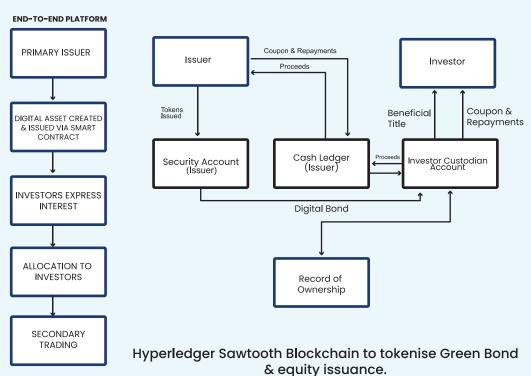
anomaly detection to prevent fraudulent anti-money laundering activity. We also provide an innovative solution by making the KYC documentation a Non-Fungible Token (NFT) with permissioned access.

Research has shown that issuance of Green Bonds via blockchain may reduce issuance cost as much as ten times. However, our mission extends to assisting the asset management community to manage risk and maximise the return potential from green assets.

#### **OUR TECHNOLOGY:**

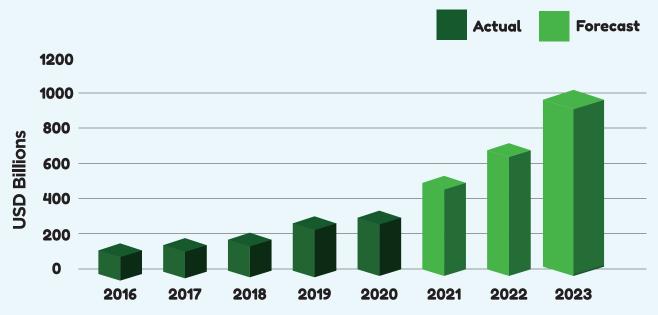
Machine Learning techniques for index replication and Factor Investing (replicating "Taming the Factor Zoo" paper by Professor Xiu of Chicago Booth et al. (2020) with 124 factors) whilst excluding fossil fuel and tobacco stocks. State-of-the- art Time-Series Fusion Transformers for interpretable Multi-Horizon Time Series Forecasting.

Deep Neural Networks with explainable AI for natural language with Knowledge Graphs to due diligence an issuer including from legal, ESG and financial performance. And sentiment scores too. We curated our own dataset for the text analytics



#### **APPENDIX**

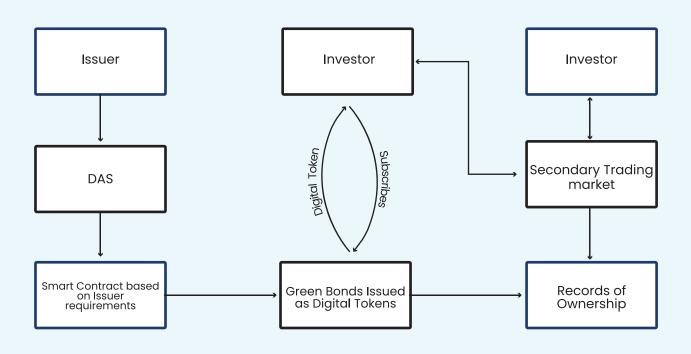
Green Bond issuance has been growing rapidly with a forecast to double in size to USD500Bn in 2021 (100% increase) and hit USD1 Trillion in issuance by 2023.



Annual trillion in green bonds possible by 2023

Source for Data: Climate Bond Initiative, 2021

## Flow Chart with Secondary Trading



### **OUR TEAM**

#### **Imtiaz Adam**

Imtiaz Adam, Founder & CEO, Founder Morgan Stanley Carbon Trading & Climate Finance business, MSc in Computer Science with research in Artificial Intelligence for Financial Portfolio Management (Distinction), MBA (Distinction), London Business School Sloan Fellow in Strategy with Columbia EMBA Exchange in Financial Analysis & Valuation, MSc Finance & Investment (Distinction) Bayes Business School, LLM Master of Corporate Law, King's College Law School, LLB Law. Pioneer in Green Bonds, Carbon Trading, Renewable Energy Project Financing, Principal Private Equity Investment into Renewable Energy. Worked on the issuance side and also managed investment portfolios.





#### **Dr Paul Bilokon**

Dr Paul Bilokon, Lecturer in Machine Learning Imperial College, served as head of Deutsche Bank Electronic Credit Trading, Citigroup Algorithmic trading. CEO Thalesians AI & Quantiative Finance Educational services. PhD Imperial College, MSc Oxford University. Maths & Computing.



# **Smriti Mishra**

Smriti Mishra, AI & ESG Researcher. Google Women in Techmakers. Experienced in Carbon and ESG reporting & monitoring for financial institutions.



### **Preet Modi**

Preet Modi, Data Scientist & developer.



### Sally Eaves

Professor Sally Eaves, ESG Expert & Advisor, Lecturer Said Business School, Oxford University, Blockchain and AI expert.

#### **IMTIAZ ADAM**

Imtiaz joined Morgan Stanley as an Associate and was then promoted to Vice President and Executive Director in less than two and a half years as he built the Carbon Trading and Climate Finance business. Imtiaz has worked with big data sets and advanced analytics in the energy sector over an extensive period.

#### RANKED AS LEADING AI INFLUENCER BY:

- Marktechpost.com 2021;
- •Ipfconline.com placed 7th most influential in Digital and AI 2021;
- •Onalytica Who's Who in AI 2021;
- •Industry Wired AI influencers to follow 2021;
- •Engati AI Influencers to follow 2021;
- •Analytics India Magazine 2020;
- •Inclusive Boards, Financial Times, BAME 100 most influential in UK Tech 2019/2020.

# SENIOR MANAGEMENT, BOARD & ADVISORY POSITIONS PAST & PRESENT:

- Founder Deep Learn Strategies Limited, DAS;
- •Co-Founder TEESG Technology Economy Environment Social & Governance Association;
- •Founder, Global Head Morgan Stanley Carbon Trading & Climate Finance;
- •Co-founder BHP Billion Carbon Trading & Renewable Energy Projects business;
- Marktechpost.com Chief advisory board & Al advisor;
- •Advisor to UK Government via Capital Markets for Climate Initiative (CMCI);
- Advisory Board Newcastle University Law School:
- Board of Directors International Emission Trading Association (IETA);
- ·IETA Chair EU Emissions Trading Group;
- •IETA Chair Green Bonds and Climate Finance Working Group;
- Climate Bonds Initiative Advisory Panel;
- •Co-Founder and Vice President European Carbon Investors and Services (ECIS); International Carbon Investors & Services (INCIS) merged with CMIA;
- •Board of Directors MGM International LLC via Principal Private Equity investment;

National Grid Group including working on US\$3.2 Bn acquisition financing deal, sub-sea power cable project financing, convertible bonds, derivatives.

#### SPEAKER AT MAJOR EVENTS INCLUDING:

- •During WEF in Davos 2019 on a panel on AI;
- •OECD Catalysing Investment in Low-carbon, Climate-Resilient Growth;
- •International Energy Agency (IEA) on Climate Finance and Carbon Trading;
- •Inter-American Development Bank (IADB), IFC & World Bank Green Bonds & Climate Finance;
- •CAMDEA Canadian Artificial Intelligence, Machine Learning & Data Science Association, on AI, IoT, ESG & Fintech 2021:
- •World Show Al Dubai. MENA 2021:
- ·Al for Finance, Paris, France, (2019, 2020);
- •International Emissions Trading Association (IETA) Lisbon 2019 European Climate Summit;
- •Fintech Summit Bordeaux, France (2019);
- ·AI World Congress, London (2019);
- •Six United Nations Conference of the Party (COP) summits at Business NGO sessions;
- •Capitol Hill Washington DC, USA to 39 cross party Senators on Climate Change;
- •UK Parliament, House of Commons Energy & Climate Change Select Committee expert witness testimony on Carbon Trading & Climate Change;
- •BM&FBOVESPA (B3 S.A.), Sao Paolo, Brazilian Stock Exchange on Climate Change, Solar Power & Wind Power investment:
- •Shanghai, China, Wind Power & Future of Energy Conference;
- •Development Bank of South Africa (DBSA), Johannesburg on Green Finance;
- •Finextra, Finexpo London Green City Speaker.

#### **FEATURED IN:**

- •CNN. Al Jazeera. Channel News Asia television:
- •WSJ, Fortune Magazine, New York Times.