S&P Global Ratings Green Evaluation:

Time to Turn Over a New Leaf?

S&P Global

Ratings

Green finance is a major opportunity. By ensuring that capital flows finance long-term projects in countries where growth is most carbon intensive, financial stability can be promoted. By allocating capital to green technologies, the prospects for an environmentally sustainable recovery in global growth will increase.

Mark Carney
Governor of the Bank of England
and Chairman of the G20's Financial Stability Board

Going Green—why now?

Green issuance and investment is on a firm upward trajectory, propelled by the 2015 Paris Climate Agreement, and the impetus it created to finance $1 trillion a year in investments for renewable energy and other initiatives to limit global warming.

At the same time, long-term investors are also recognizing the threat from greenhouse gases and have begun to diversify portfolios away from carbon-based investment. The final push is coming from corporations as they start to contend with the consequences of increasingly extreme and violent weather and flooding. Many are starting to see that managing environmental exposure may be more than risk management; it may be good for business.

So how green or resilient are your financing initiatives?

Benefits for Issuers

- Diversify your investor base
- Potential to enjoy long term pricing advantages
- Send a strong, pro-active message to customers and stakeholders
- Appeal to millennials as employees and customers
- Internally benchmark your green performance Y-O-Y

Benefits for Investors

- Meet your clients' needs / requests and satisfy your green mandates
- Reduce time to evaluate a complex and growing investment type
- Balance risk-adjusted financial returns with sustainability benefits

Why S&P Global Ratings?

S&P Global Ratings Green Evaluation is an asset-level environmental credential which aims to provide investors with a more comprehensive picture of the green impact and climate risk attributes of their assets and portfolios.

What sets S&P Global Ratings apart?

- We can provide a **second opinion** confirming that an issuer's green bonds are aligned with the key features of the Green Bond Principles (GBP) 2018 in our Green Evaluation reports
- We are not **limited to issuer self-labeled green bonds**. We can also evaluate unlabeled bonds, equity transactions, bank loans, private placements, project finance debt, hybrids, portfolios, asset-backed securities, and other financial transaction types.
- Our Green Evaluation can be applied at **pre- and post- issuance stage** and on a **confidential or public** basis
- Our environmental performance data and analysis is provided by **Trucost** who have been helping investors calibrate their buy-side reporting for ESG since 2000.
- We have been a **long-standing source of benchmarks** and other insights to assist institutional investors with their decision-making, which makes us a leading choice for issuers and intermediaries.
- We go beyond other External Reviewers to provide a **relative green impact score** which considers variables such as sector, technology, location of the assets, and funding allocation.
- We also consider a variety of **environmental key performance** indicators (eKPIs), such as carbon, water, and waste.
- **Limited administrative burden** on issuer - our analytical process is purposefully 'light touch' (majority of information we can obtain from website and prospectus)
    - GE and credit rating can be done at same time and often by same team
    - Quicker procurement process if company is already rated by us
    - No surveillance required – we provide a point-in-time score
- Our final score is provided on a scale of 0-100 and then mapped to a scale of E1-E4 or R1-R4 based on quartiles. This level of granularity makes it easy for investors to **compare and benchmark** individual investments within their portfolio.
- Through our extensive outreach and well-established relationships with market participants we are in a unique position to provide **research and insights** in this rapidly evolving marketplace.

Our Green Evaluation Approach

Weighted aggregate of three:

Transparency + Governance + Mitigation or Adaptation = Green Evaluation

Common approach used amongst second opinion providers

Transparency
- Use of proceeds reporting
- Reporting comprehensiveness

Governance
- Management of proceeds
- Impact Assessment Structure

Unique to S&P Global Ratings

Mitigation
Buildings, industrial efficiencies, energy infrastructure, transport, and water

Net Benefit Ranking
eKPI's: Carbon, Waste, Water Use

Hierarchy Applied

Environmental Impact

Mitigation Score

Adaptation
Resilience capex such as flood defenses, asset protection etc.

Cost Benefit Ranking
Resilience benefit ratio:
Estimate of reduction in damages if event occurs

Resilience Level

Adaptation Score

Final Green Evaluation (E1- E4 or R1- R4)

eKPI – Environmental Key Performance Indicator

Carbon Hierarchy

The Mitigation or Adaptation categories account for 60% of the final score.
In recognition of the varying levels of contribution to avoiding climate change by different technology, we consider each technology's overall contribution to decarbonization that would not be fully captured by our regional net benefit calculation alone. This gives us the overall score.

Role in Green Transition	Technology
Systematic decarbonization of economies	- Wind and Solar Power, Small and Large Hydro - Energy management and control
Significant decarbonization of key sectors through low-carbon solutions	- Green Transport apart from hybrid/fuel efficient vehicles - Green buildings new built best standards/net zero
Decarbonization by alleviating emissions in intensive industries	- Industrial efficiencies - Green Transport (with fossil fuel combustion) Green buildings refurbishment/new built lower standard - Energy-efficient products
Decarbonization technologies with significant environmental hazards	- Nuclear - Large Hydro in tropical areas
Improvement of fossil fuel based activities' environmental efficiency & impact	- Coal to natural gas, Clean fuel production, and Clean use of coal

Increasing contribution to climate change avoidance

Water Hierarchy

For water projects we consider each technology's overall contribution to sustainable water use that would not be fully captured by our net benefit calculation alone:

Role in Green Transition	Technology
System enhancements	- Recycling wastewater supply - Wastewater treatment
Marginal system enhancements	- Reducing water losses in the water distribution network
Marginal system enhancements with material negative environmental consequences	- Water desalination to supply potable municipal water
Demand-side improvements	- Conservation measures in buildings & equipment - Smart metering

Sustainable Water Use

What We Assess

Our independent and data-driven approach analyzes and estimates a project or initiative's environmental impact and/or resilience level, including:

Green Buildings
e.g new LEED building, refurbishment

Green Energy
e.g. wind/solar power, hydro

Water
e.g. efficiency, treatment

Green Transport
e.g. electric vehicles, green trains

Energy Efficiency
e.g. industrial efficiencies

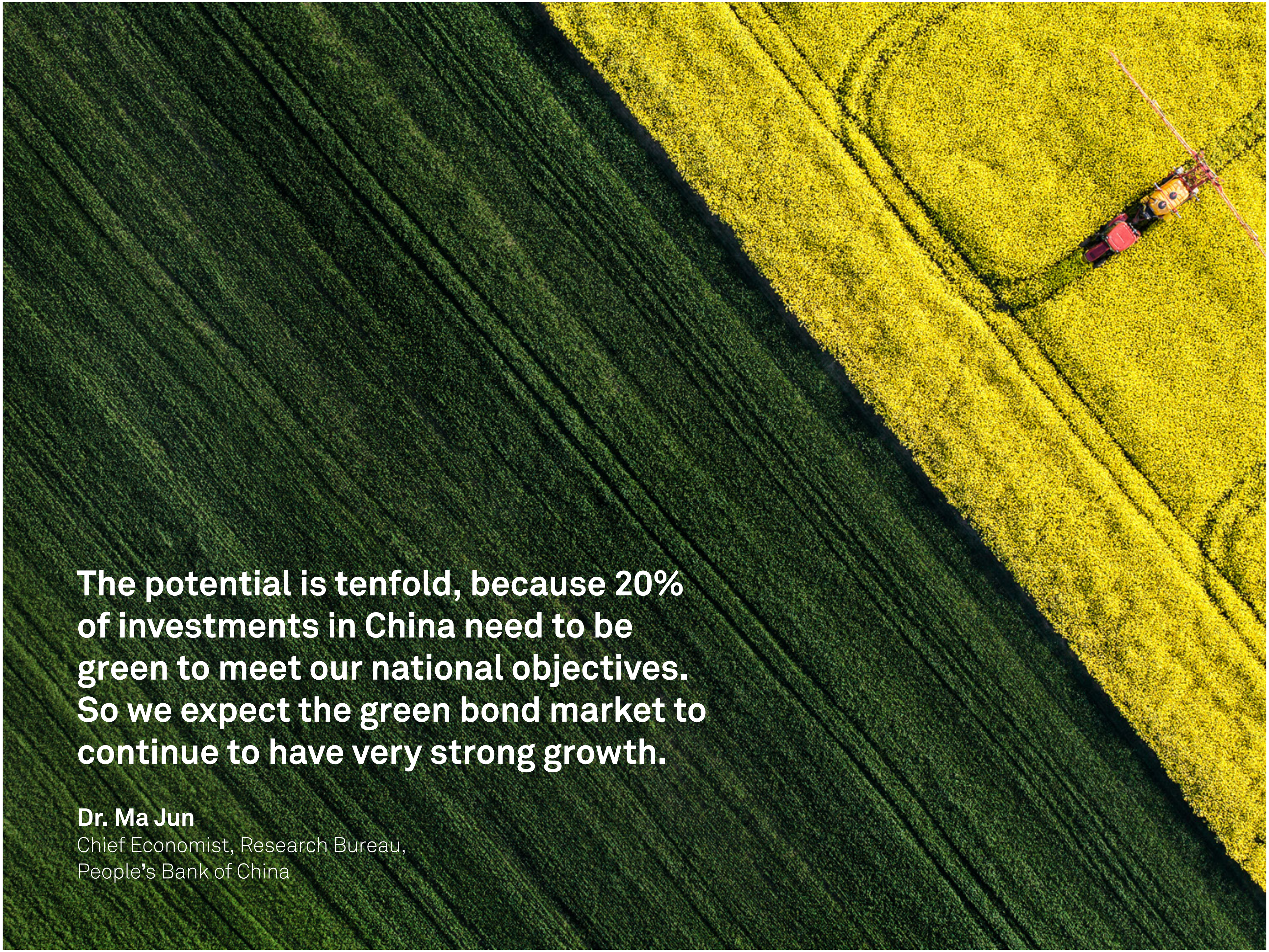
Nuclear
e.g. nuclear power plant

Fossil Fuel Power Plants
(decreased carbon intensity of conventional energy production)

e.g. coal to natural gas, clean coal

Financial markets can help solve the climate challenge by meeting the growing demand for low-carbon projects around the world, from urban transit infrastructure to renewable energy facilities. New financial tools like green bonds are helping drive more capital to these projects… clear standards and better market data will accelerate the use of green bonds by making them an even more attractive way to invest.

Michael R. Bloomberg
United Nations Secretary-General's
Special Envoy for Cities and Climate Change



The potential is tenfold, because 20% of investments in China need to be green to meet our national objectives. So we expect the green bond market to continue to have very strong growth.

Dr. Ma Jun
Chief Economist, Research Bureau,
People's Bank of China

For more information please visit **spratings.com/greenevaluation**
or contact your local Product Manager:

Americas
David Mestnik
+1-212-438-5050
david.mestnik@spglobal.com

EMEA
Cameron Andrews
+44-20-7176-7027
cameron.andrews@spglobal.com

APAC
Alan Kwan
+852-2532-8016
alan.kwan@spglobal.com