FirstRand

Climate risk – practical lessons learned

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Key catalysts

Green and sustainable assets can attract investments, differential pricing

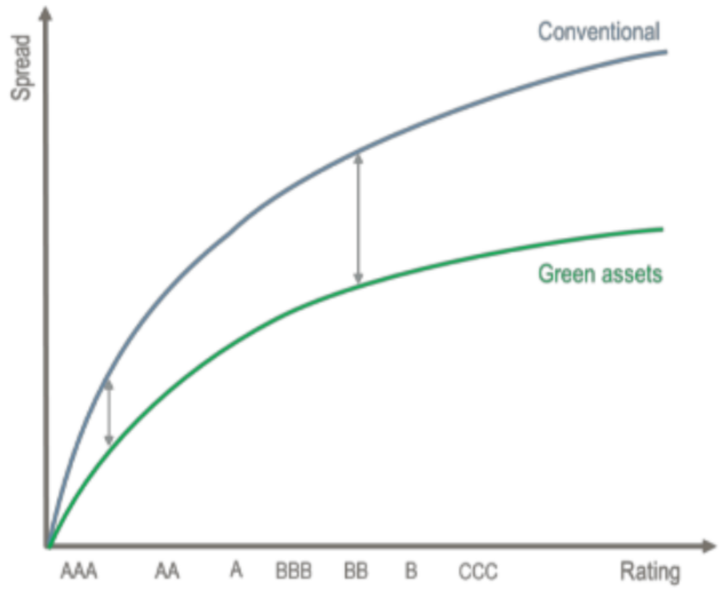
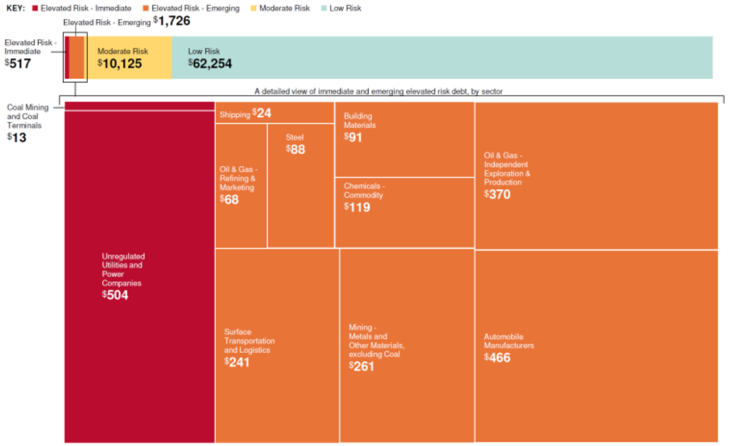


Exhibit 1

For 11 sectors, with $2.2 trillion in rated debt, environmental risks are already ratings-relevant or will be in the coming few years

Breakdown of "Elevated Risk" (Immediate/Emerging) sectors in environmental risks heat map (in US$ billion)



Note: Boxes are sized relative to the value of rated debt (in US$ billion) and color indicated for overall credit exposure.
Source: Moody's Investors Service

	Coverage Universe	Rating Scale
MSCI	Over 13,000 equity and fixed income issuers	AAA-CCC
SUSTAINALYTICS	Approximately 11,000 companies	0-100
ROBECOSAM	3,400 large publicly traded companies	0-100
RepRisk	Over 100,000 listed and non-listed companies	0-100 & AAA – D
ISS	5,600 companies	1-10
THOMSON REUTERS	Over 7,000 companies	0-1 & D- to A+
Bloomberg	Over 11,000 companies	0-100
vigeo eiris	5,000 issuers	0-100

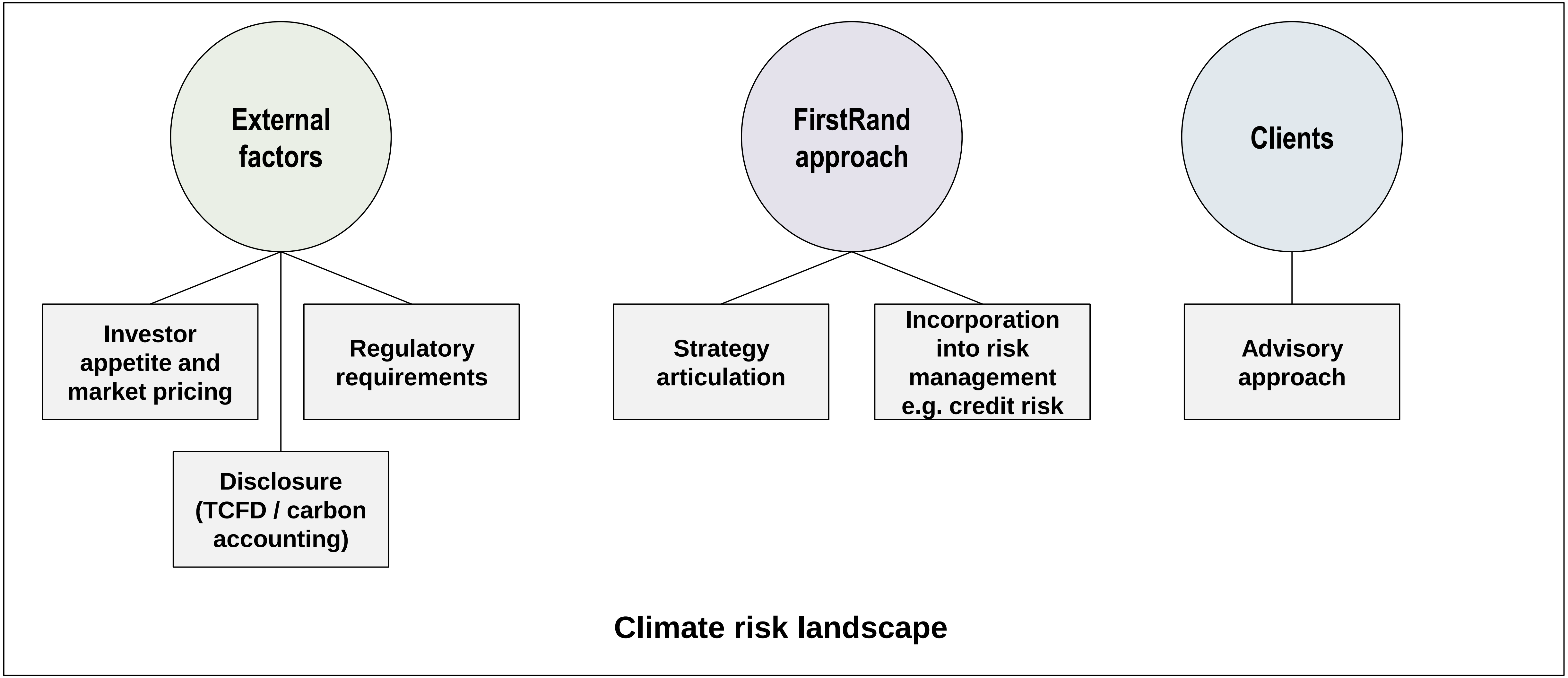
Financial markets are already pricing climate risk

Clients are already impacted

- Credit ratings are changed
- Need to navigate a complex world of stakeholders

Rise of ESG ratings agencies, TCFD disclosures, regulation

The group's approach to climate risk spans three key pillars



Incorporation of climate risk ratings into credit assessment – going beyond qualitative due diligence examples

Transitional risk

(impacts cash flows and collateral values)

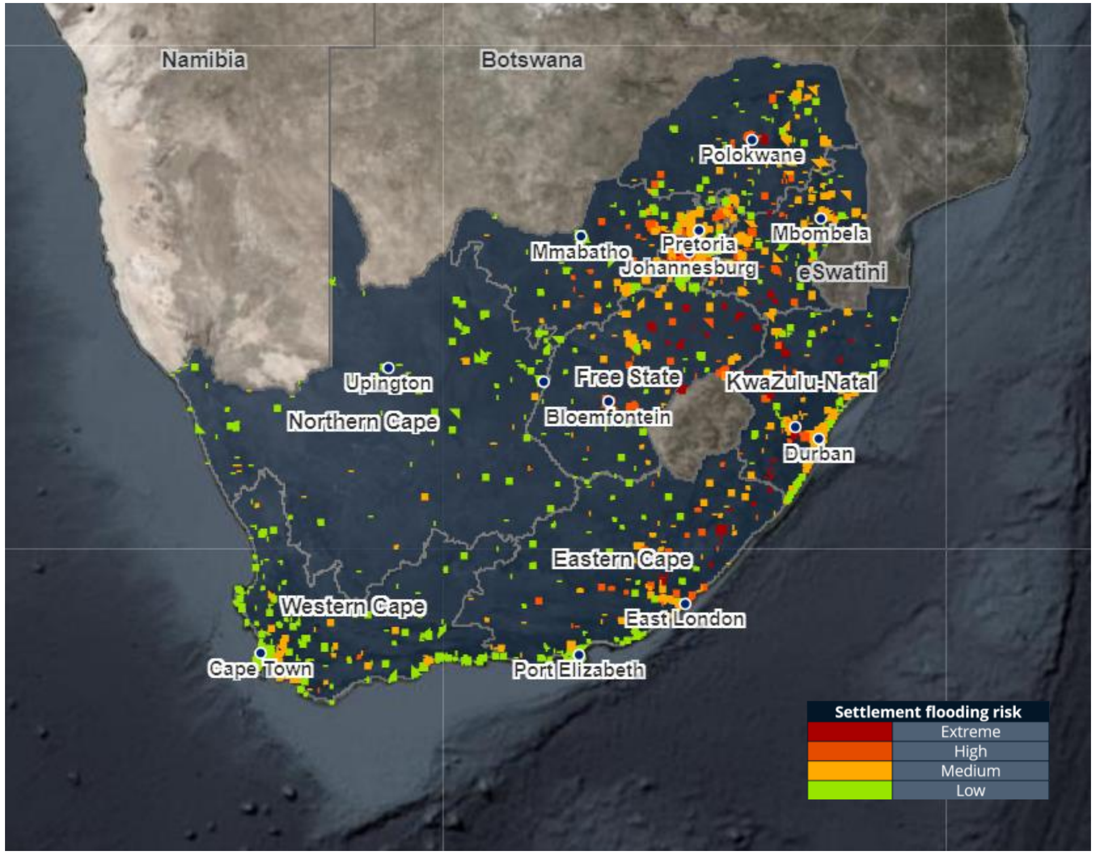
BROWN TO GREEN

Activity category	Examples relating to power generation	Examples relating to transport	Other examples
Near zero	• Solar energy generation • Wind energy generation • Generation of bioenergy from agricultural or forestry waste products	• Manufacture or operation of electric modes of transport	• Production of green hydrogen • Landscape restoration
Pathway to zero	• Hydropower generation [i]	• Shipping [ii]	• Manufacture of steel, [iii] cement [iv] • Manufacture of packaging [v] • Crop production [vi] • Property management [vii]
Interim	• Waste to energy from municipal solid waste [viii] • Production of energy from bioenergy (non-waste products) [ix] • Gas power generation with CCS [x]	• Production of biofuels for shipping [xi] • Gas production for heavy industry [xii]	• Production of blue hydrogen [xiii] • Fossil-fuel plastics recycling [xiv] • Production of mineral water [xv]
No pathway to zero	• Electricity generation from solid fossil fuels	• Long-haul passenger aviation [xvi] • Manufacture or operation of fossil fuel powered passenger vehicles [xvii]	• Production of hydrogen using steam generated from fossil fuels
Stranded	• CCS for power generation [xviii]	• Manufacture of electric fuel cells or batteries	• Single use fossil fuel plastics
Enabling	• Manufacture of renewables components	• Metals recycling [xix]	• CCS for industry [xx] • Energy storage

Source: Climate Bonds Initiative

Physical risk

(impacts collateral values)



Source: GreenBook

There is a correlation between physical and transitional risks. Both need to be considered when assessing the credit impact of climate change

Scenario	**Rapid transition**	**Two-degree**	**Business-as-intended**	**Business-as-usual**
Corrective transition response	Very strong	Strong	Substantial	Limited
Temperature change vs. pre-industrial era	1.5°C	2°C	3°C	4°C

More transitional risk

More physical risk

- **Aggressive change**
- **Short term impact but reduced long term impact**

- **Impacts continue to increase over time**
- **Economic damage increases**

Learnings

- Need to consider E and S together
- African continent has specific needs which differ from country to country
  - Tension between development and climate
  - The role of transition assets
- Need to move beyond compliance – business focus is needed
  - Governance v risk strategy v business strategy
  - Internal education and engagement
- Business sponsorship at top of the house (chair of the board and most senior management committee is needed)
- Metrics and measurement complexities
- Communication
  - TCFD is a very powerful vehicle (but lots to learn in terms of application)
  - Need to go beyond this – PCAF and other initiatives
- Stakeholder management and education
  - Shareholders, debtholders, DFI’s, key clients, activist bodies, media