



CARBON DELTA
the environmental fintech



Climate Risks for Asset Managers (CRAMs)

20th November 2018





**We identify and analyze
the climate change impacts of
publicly traded companies.**

**Protect your assets, optimize performance
and reach sustainability goals.**

The Innovation



Compliance Reporting

(e.g. French Law & TCFD Recs)



Downside risk reduction



**Stock picking/
fund creation**


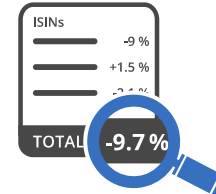
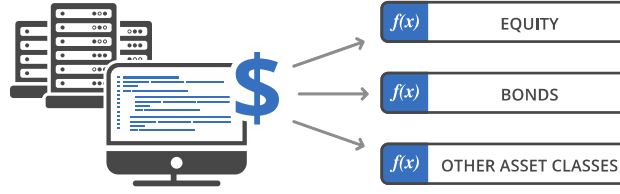
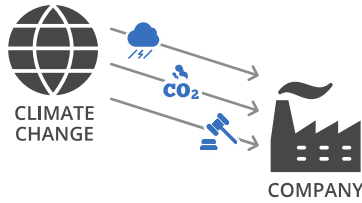


Shareholder engagement




CSR and client reporting


The Carbon Delta Modeling Process



Full Transparency



Conservative Assumptions



Flexible Inputs



3rd Party Data



Introduction to the CRAMS project



Climate Risk Modelling

- Focus on four fossil fuel commodities
 - prices for downscaled REMIND regions
 - technology mixes
- Gridded, high-resolution storm & extreme precipitation data; fluvial flooding

Risks assessments of firms

- Risk assessment of 15 firms by macroeconomic indicators

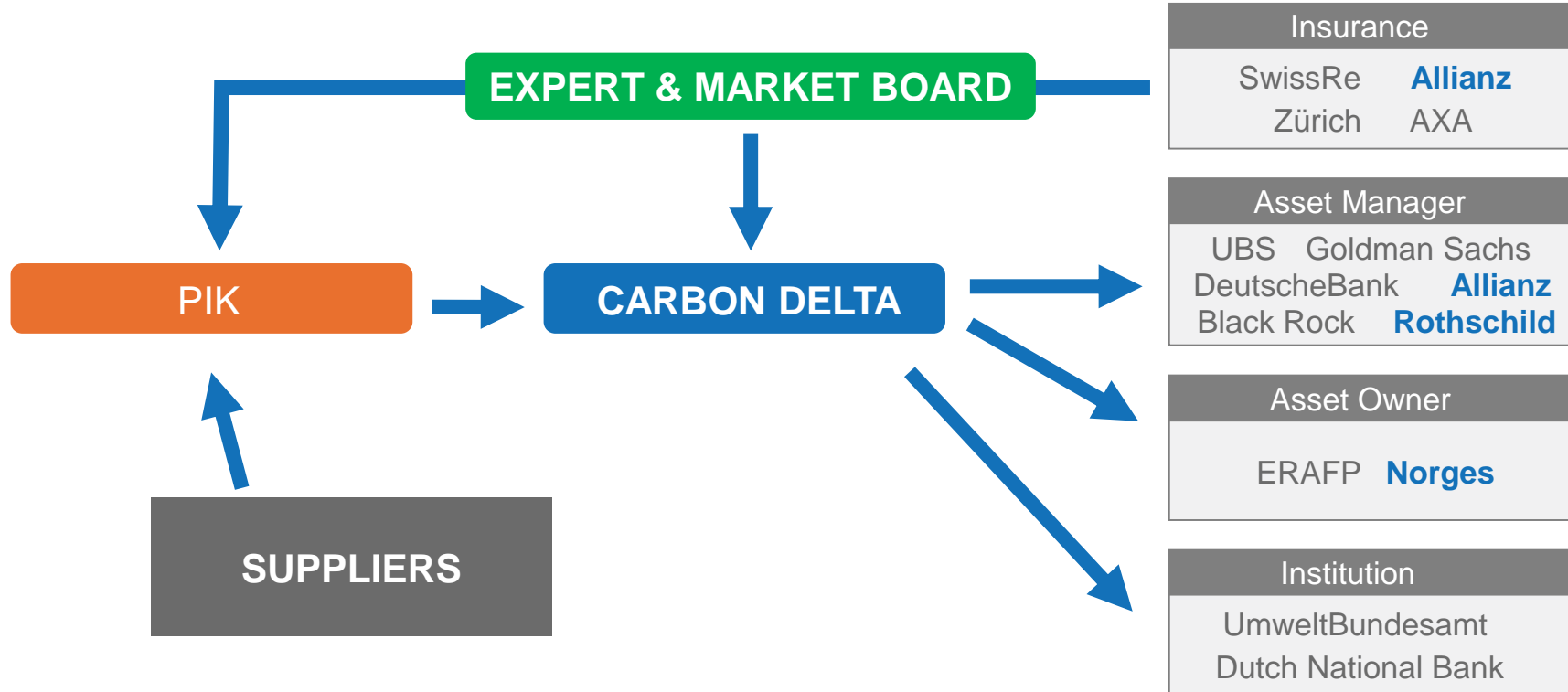
Cost modelling

- Temperature based loss / growth indicator for production sites damage function models for production sites
- Heating & cooling energy costs for production sites

Value at Risk Calculations and Integration

- In-depth, production site based reports of the 50 enterprises

Workflow – The CRAMs Demonstrator





Sample Analytical Results

Use Cases for Climate VaR in Investment Management



Warming Potential for Fund Creation



Sectoral & regional over- and underweights



Green Technology Opportunities for Alpha Creation



Downside Risk Reduction



CSR and TCFD reporting
(e.g. law 173 in France)



Shareholder engagement

Use Case: Engagement – company costs for 2°C regulatory compliance



2°C Reduction Cost			
ISIN	Company Name	Time period	Avg. mUSD / year
INE245A01021	Tata Power Co Ltd	2018-2032	-3331.46
CH0012214059	LafargeHolcim Ltd	2018-2032	-2820.66
JE00B4T3BW64	Glencore plc	2018-2032	-1223.48
HK0002007356	CLP Holdings Ltd	2018-2032	-1137.18
US26441C2044	Duke Energy Corp	2018-2032	-1075.31
US0255371017	American Electric Power Inc	2018-2032	-808.64
DE0006047004	HeidelbergCement AG	2018-2032	-762.97
GB00B03MM408	Royal Dutch Shell PLC	2018-2032	-698.08
US30231G1022	Exxon Mobil Corp	2018-2032	-651.54
INE081A01012	Tata Steel Ltd	2018-2032	-531.63
GB0000566504	BHP Billiton PLC	2018-2032	-505.75
GB0007188757	Rio Tinto PLC	2018-2032	-350.21
US2605431038	Dow Chemical Co	2018-2032	-187.63
GB00B1XZS820	Anglo American PLC	2018-2032	-128.02
EST01PA00013	CEMEX Latam Holdings SA	2018-2032	-90.69
CH0011037469	Syngenta AG	2018-2032	-31.5

- Many companies need to spend billions USD to reach a 2°C compliance level
- What are firms in your portfolio doing to prepare for the costs associated with the target?
- How much are they spending or saving for this compliance? And where?



- Analysis of AXA Group's portfolio of equities and corporate bonds
- Assets analyzed: ~200 bn€
- # of securities: 13'000+ (coverage 90%)
- Focused on Transition Risks & Opportunities – Climate VaR & 2°C Alignment

Climate Value-at-Risk Portfolio Analysis for Equities

AXA Group – Equities Portfolio (total €16Bn)		
Scenario	Climate VaR	Monetary Risk
Transition Risks potential costs and revenues (gross before tax and PB)		
2°C Scenario <i>Resulting in potential costs</i>	-3.7%	-\$904M
Green Technology Opportunities <i>Resulting in potential revenues</i>	+3.5%	+\$841M
Weighted Risk Scenario		
Aggregated Climate VaR	-0.3%	-63M

The above analysis focused on Regulatory Risk (-904m) and Technology Opportunities (+841m), with an Aggregated Climate VaR of -0.3% relating to Transition Risks and Opportunities

Find the full report at: https://www-axa-com.cdn.axa-contento-118412.eu/www-axa-com%2Fcf61ff6c-ee1d-4dcb-92ba-ed243ae7f2fb_2018+tcfd+full+report+-+final+-+b.pdf



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Thank you.
Any Questions?

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