FUND BALANCE

UNEP Finance Initiative
Innovative financing for sustainability

Terra
GLOBAL CAPITAL

Integrating Natural Capital and

Ecosystem Services into Value at Risk (VaR)

Audience: Banking, Investment, Risk Management, CSR and Environmental Professionals

Abstract: Banks, investment companies and risk managers use VaR to determine solvency and health. Without an understanding of the underlying health and "solvency" of the ecoystems upon which their balance sheet depends, they are flying blind. VaR already accounts for non-financial risks such as cybersecurity in a plugin model, so the logistical possibility of integrating natural capital is not a question. At the current and projected scale of global resource use, we can no longer assume nature is unlimited and free under current development models. Banks must therefore carefully measure resources quantitatively and qualitatively to ensure that the health of their portfolio is not systemically endangered by overlooking this critical risk.

Proposal: Convene a network of professionals at the top of the fields of finance, risk management, systems analysis, ecology, sustainable development and software development to write a white paper detailing the need and methodology for implementing natural capital into VaR.

Key Personnel:

Pavan Sukhdev, Deutsche Bank. Director TEEBWeb. Pavan is leading this effort generally.
Leo Tilman, former Chief of BlackRock's VaR team, logic and coding
Andrew Haldane, Executive Director of Financial Stability at the Bank of England
Michael Mainelli, Director, Long Finance, Zyen Consulting
Richard Spencer, Institute of Chartered Accountants, England and Wales
David Martin, CEO M-CAM, top financial engineer at the intersection of natural resources, intellectual property, finance and insurance
David Dorr, CEO Dorr Asset Management, top hedge fund professional, insurance risk analyst and environmental markets trader

Matthew Kiernan, CEO Inflection Point Capital
Bennett Freeman, Calvert
Lori Ramos-Marilla, Risk Management professional (Bear Stearns, CIBC et al)
Sandy Wiggins, Chairman E3 Bank
Jamie Brown, Basel Alliance for Sustainable Energy
Paul Clements-Hunt, former Director UNEP FI
Jessie Lydia Henshaw, systems analyst
Geoff Chesshire, applied mathematician, LANL
Ricardo Bayon, EKO Asset Management
Gretchen Daily, Stanford University
Gonzalo Castro de la Mata, Ecosystem Services, LLC
Steve Podmore, Transform Capital Management
et al.

Key Organizations:

Integrated Reporting
Global Reporting Initiative
Accounting for Sustainability
UNEP FI, UNPRI
TEEB Web
Nature Conservancy
Stanford University
Forest Trends

Work Process:

The workflow will begin informally, with annotated one on one calls to the above mentioned people and organizations and others to gauge interest, secure participation and broadly define the discussion, including the pros and cons of efforts to date.

Separating the quantitiative financial modeling discussion from the natural and community property rights discussion as Ecuador and Bolivia have done is an important part of preventing the unwanted aspects of “monetizing nature” from becoming a problem. In order to allow numbers to accurately model these issues, they need to be servant, not master.

Lori Ramos-Marilla, a risk manager formerly with Bear Stearns, has proposed a basic workflow for the project. Her professional experience is in modeling risks, and she has a good idea how to go about doing the scenario analysis. I will rely on her professional experience to help us craft a good working document on which to base a whitepaper and presentation. Lori is close to the risk management industry and works with conference organizers in the space.

Desired Outcome:

Optimal outcomes include:

1. Article for risk management magazines.
2. Logical framework for including natural capital in VaR models at the CEO, CRO level.
3. Actionable code for programmers in charge of VaR calculations.
4. Lobbying guidelines and legislative proposals for ABA/G20/UN

Budget:

Item	
Consulting Stipend for Contributors	
Pavan Sukhdev	$2,000.00
Leo Tilman	$2,000.00
Andrew Haldane	$2,000.00
Michael Mainelli	$2,000.00
David Martin	$1,000.00
Sandy Wiggins	$2,000.00
Dave Dorr	$2,000.00
Matthew Kiernan	$1,000.00
Gretchen Daily	$2,000.00
Lori Ramos-Marilla	$2,000.00
Jamie Brown	$2,000.00
Geoff Chesshire	$2,000.00
Jessie Lydia Henshaw	$2,000.00
Gonzalo Castro de la Mata	$1,000.00
Bennett Freeman	$1,000.00
Paul Clements-Hunt	$2,000.00
Steve Podmore	$2,000.00
Ricardo Bayon	$1,000.00
Others	$10,000.00
Retainer for Fund Balance	$10,000.00
Presentation Production and Marketing	$10,000.00
Contingency	$6,100.00
Total	**$67,100.00**

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