

Innovest Strategic Value Advisors, Inc.

Linking Sustainability Performance to Fiduciary Responsibility

Case Study: Climate Change

**European Seminar on “Finance, Environment and Sustainable Development”
La Défense – Paris, France, Friday, 10 January 2003**

*Pierre Trevet
Managing Director France
Tel. 01 48 86 03 69
ptrevet@innovestgroup.com*



www.innovestgroup.com

New York - Toronto - London - Paris

Financial Opinions

“Climate Change is a Major Emerging Risk Management Challenge for Financial Institutions”

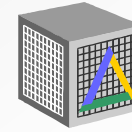
Dresdner Bank

March 2002

Innovest Background

- A leading-edge, specialized international financial information services firm with offices in **New York, Toronto, London and Paris.**
 - Now have 35+ staff with backgrounds in finance, industry and sustainability
 - Over \$1 billion in funds structured around our research in variety of fund products
 - Returns-seeking, forward-looking investment thesis
 - Proprietary **EcoValue**^{'21}TM and **IVA**^{'21}TM performance rating systems focus on competitive risks and opportunities driven by environmental and intangible value trends
 - Leveraging research into private equity, specialized funds, custom advisory work and **CARBON FINANCE**
-

Recent Carbon Works

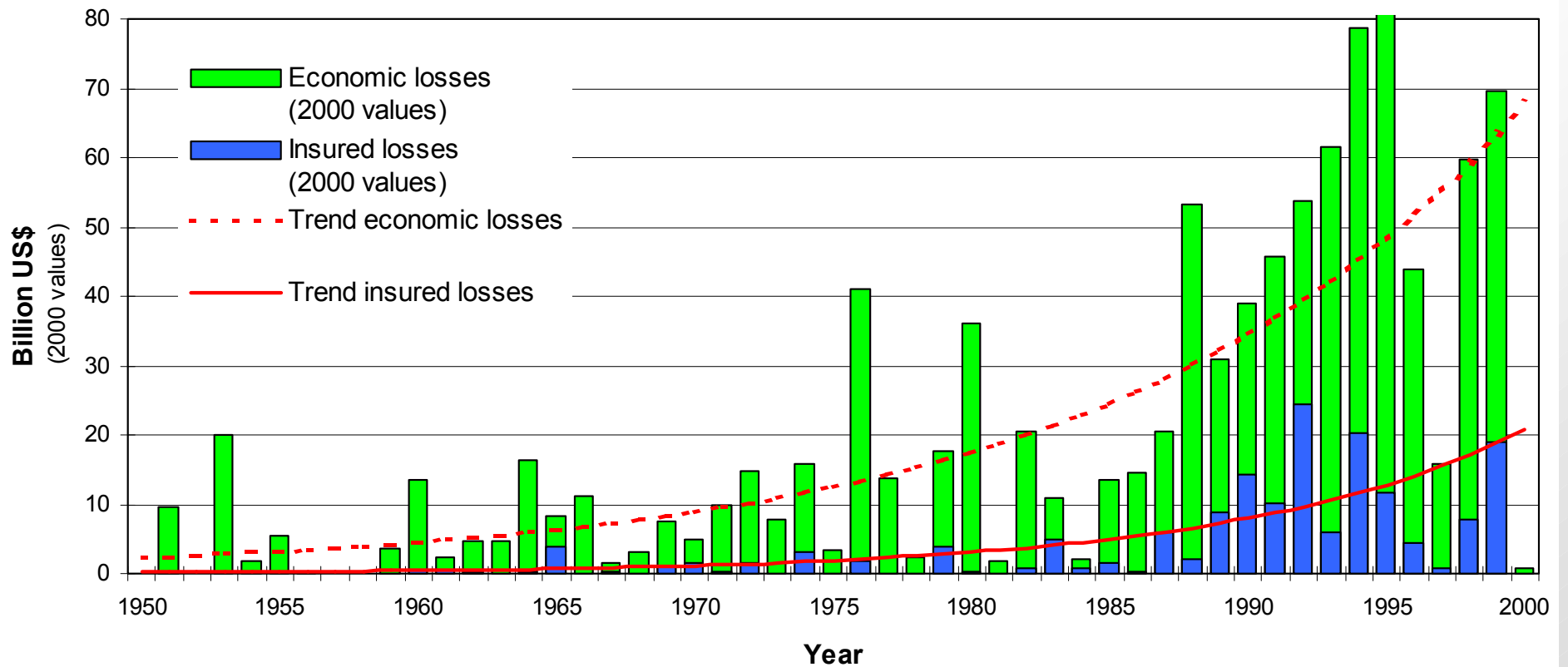


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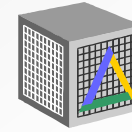
- ***“Value At Risk” [CERES]***
- ***Threats, Opportunities, Barriers throughout the Financial Services Industry [UNEP FI]***
- ***Carbon Risks & Shareholder Value [CDP]***
- ***Corporate advisory and benchmarking***
- ***U.S. Congressional briefings & government advisory work***
- ***Asset management and investment bank advisory***
- ***Shareholder resolutions/activism support***

UNEPFI Report

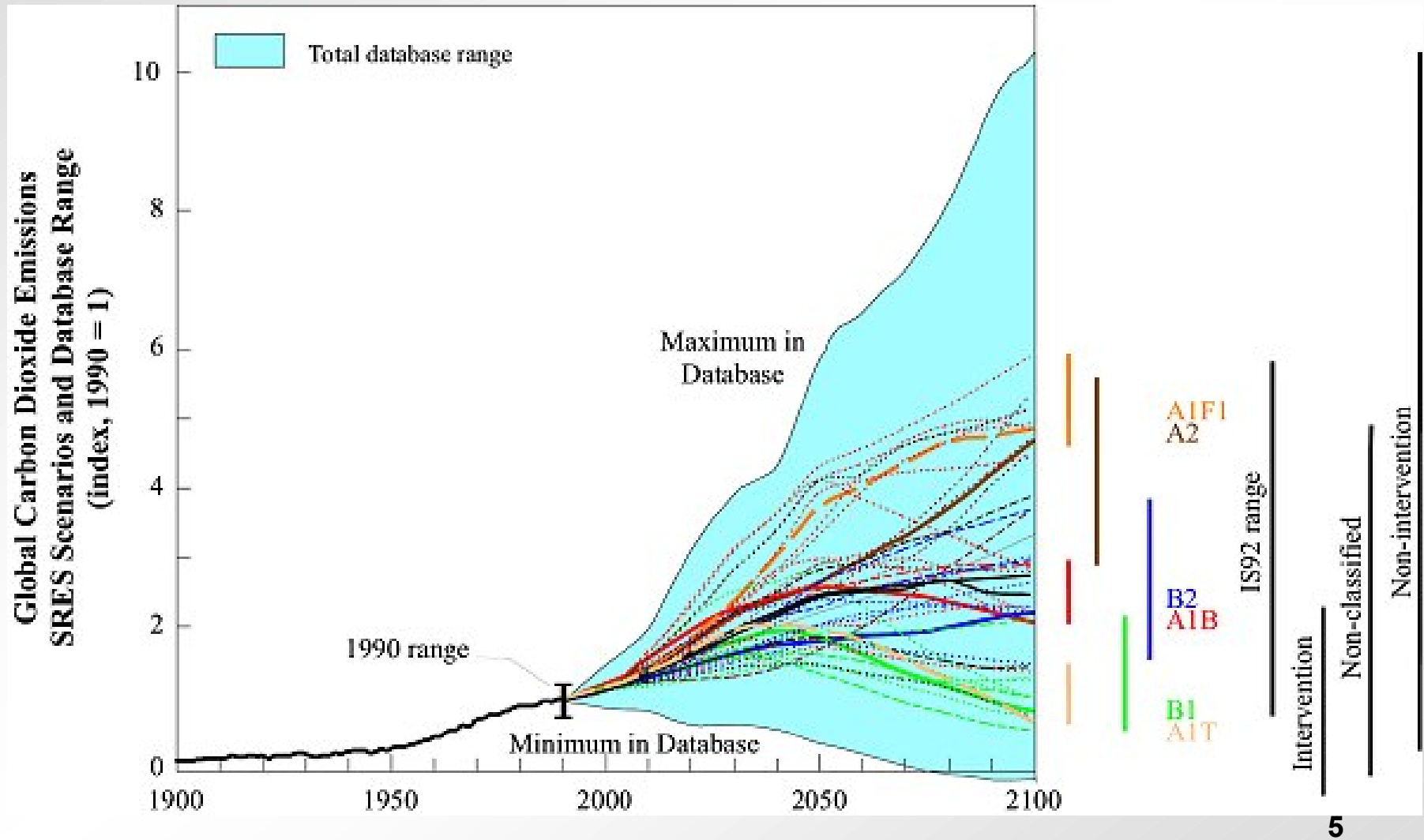
Economic and insured losses with trends



Future Global Emissions Scenarios



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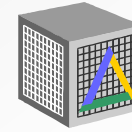


Shareholder Value

Two main sources of risk...

1. Economic & Competitive Risks from Climate Change Itself (*e.g., Nth American drought; European floods*)
2. Exposure to the regulatory and competitive implications of attempts to mitigate GHG emissions (*e.g., Xstrata; Clean Energy Markets*)

Shareholder Value

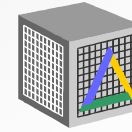


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.....Affecting Corporate Financial Performance in Various Ways.....

- **VIA DIRECT CASH FLOW AND EARNINGS**
- **VIA BRAND OR REPUTATION**
- **VIA COST OF CAPITAL**

Shareholder Value

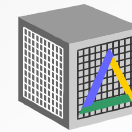


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.....At Different Investment Levels.

- **AT PROJECT LEVEL**
- **AT COMPANY LEVEL**
- **AT SECTOR LEVEL**

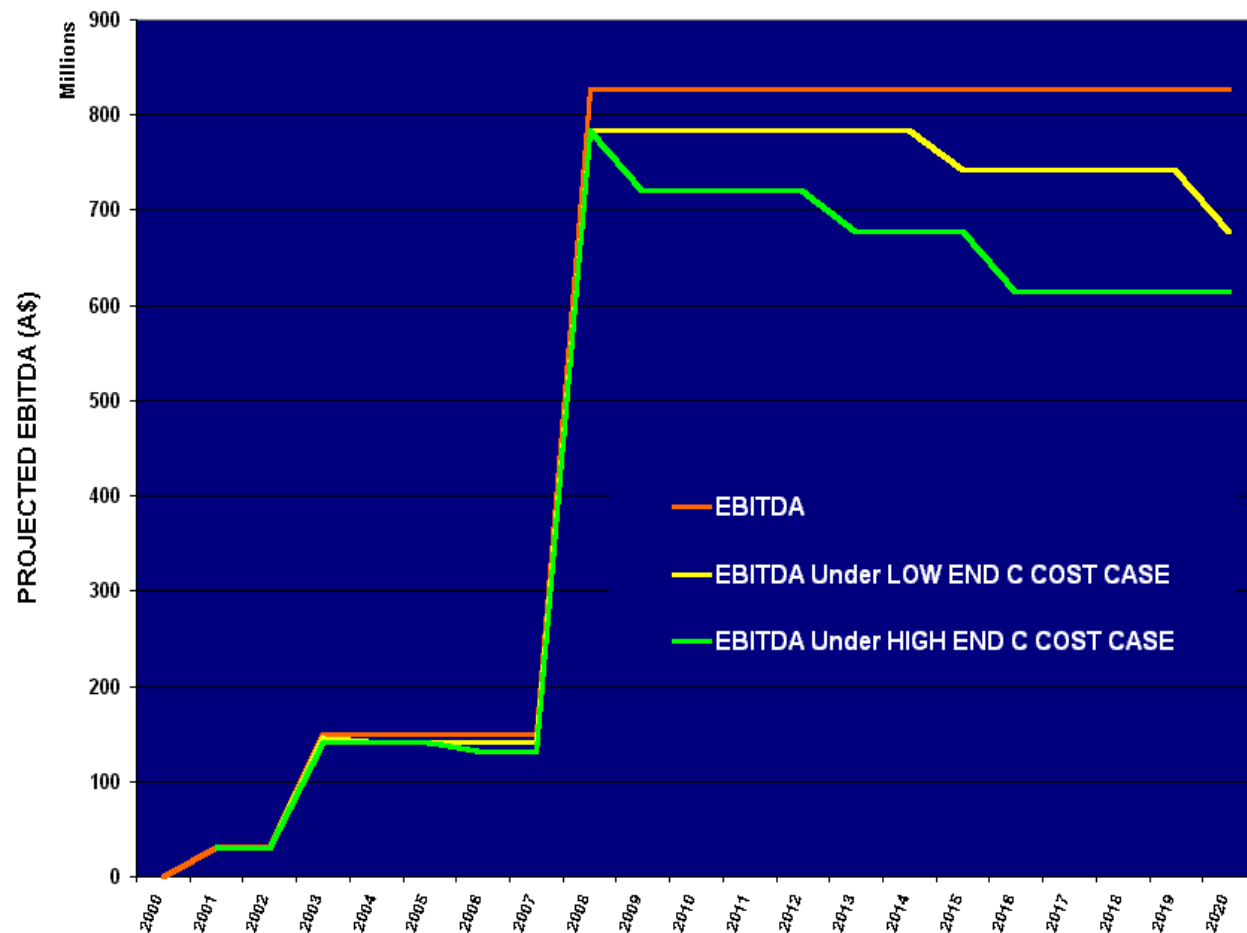
At Project Level



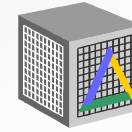
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Potential impacts of carbon mitigation on Suncor's projected earnings

At the project level, cash flow and earnings from GHG-intensive ventures may be reduced due to heightened operating costs and the cost of offsets



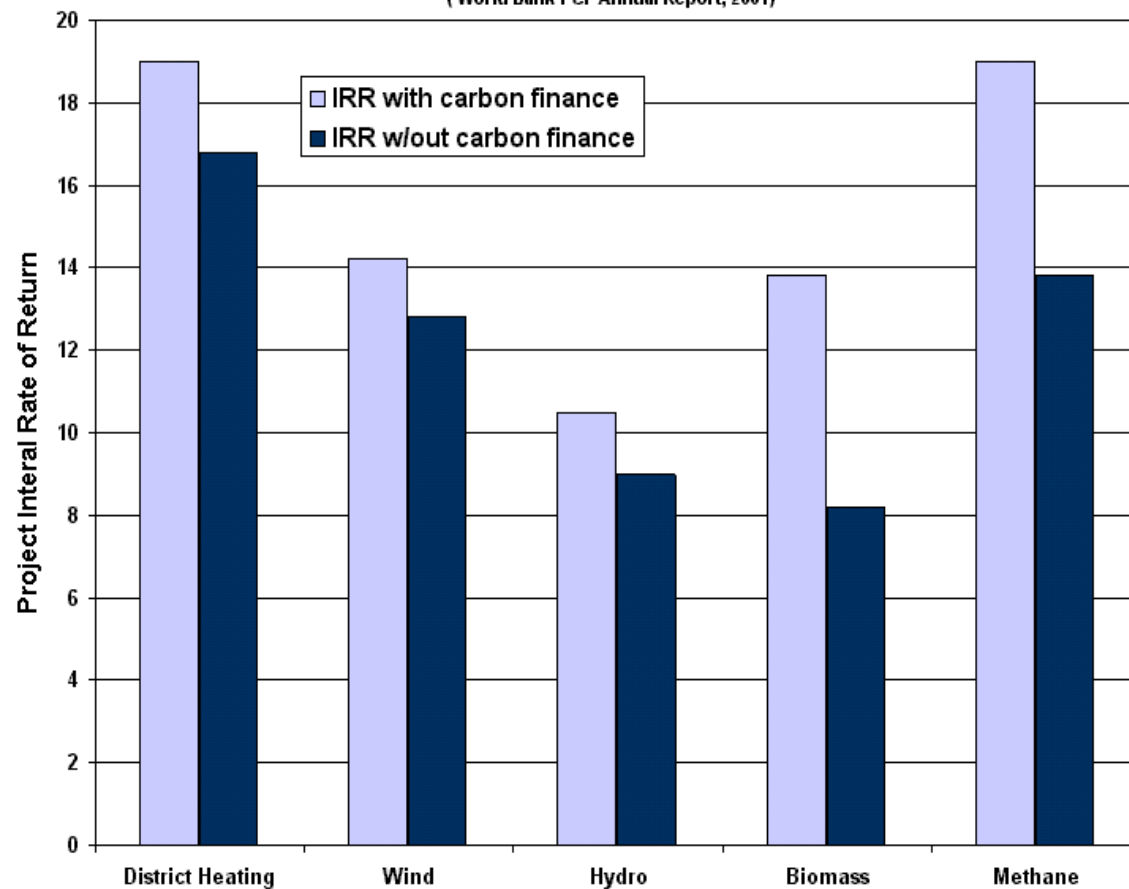
Project Impacts



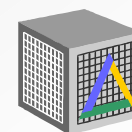
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Yet the use of GHG credits has also been shown by the World Bank PCF to augment project IRRs....

Impact of Carbon Finance on Project Internal Rates of Return for various Renewable Energy Projects
(World Bank PCF Annual Report, 2001)

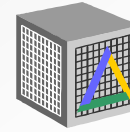


At Sector Level



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SECTOR	THREATS	OPPORTUNITIES
TRANSPORTATION	Fuel Costs Emissions Mitigation	Clean Fuels 'Sustainable' Infrastructure
BASIC INDUSTRIES	Energy Costs Emissions Mitigation	Product 'Sustainability' Efficiency Gains
AGRICULTURE/FOOD	Productivity Disruptions Crop Damage	ERC Generation/Sale Resource Efficiency Benefits
ENERGY/PIPELINE	Weather Impacts on Demand Side Commodity Price Impacts Emissions Mitigation	Clean Energy Technology Efficiency Gains ERC Generation/Sale
WATER/WASTE	Disruption to Hydrological Cycle Increased Floods/Droughts	Biomass/Landfill Gas Energy Efficiency Gains
INSURANCE/FINANCE	Increasing Financial Exposure Investor Confidence Loss Reduced RoI	New Underwriting Areas Enhanced Equity and Debt Perf. Expanded I-Bank/Brokerage Services



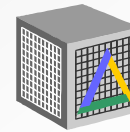
■ CLIMATE-RELATED IMPACTS

- Insurance (esp. property and business interruption)*
- Natural Gas, Refining*
- Food, Agriculture (e.g., Canadian Wheat Board)*
- Water and Related Infrastructure*

■ KYOTO-RELATED IMPACTS

- Electric Utilities*
- Heavy Industry*
- Petroleum and Coal*
- Transportation*

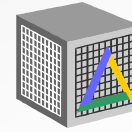
CC/Kyoto Negative impacts



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- ❑ **CN** - *Laid off staff, revised forecasts due to weakened grain market*
- ❑ **NEXEN/BP** - *Business interruption in GoM due to storm intensity*
- ❑ **POTASH** - *Summer drought resulted in recent earnings revision*
- ❑ **XSTRATA** - *7% drop in shares on news of Japan C tax*
- ❑ **INTRAWEST** - *Poor snow accumulation could affect future market conditions*

CC/Kyoto Positive impacts



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- ❑ **BP** - *Exceeded Kyoto targets: \$350m 'payback' due to improved energy efficiency*
- ❑ **ALCAN** - *Increased use of Al in auto manufacturing*
- ❑ **INCO** - *Energy Breakthrough program produced savings of C\$13.5m during '01; increased prospects for nickel use in hybrid vehicles*
- ❑ **DUPONT** - *Saved \$30m in energy conservation '92-'01*
- ❑ **NEC** - *C\$11m benefit in GHG emissions efforts in '01*
- ❑ **STMICROELECTRONICS** - *Reducing energy costs by US\$900m ('94 - '10) via GHG reduction efforts; report +ve returns on EE within 2 yrs*

Leading

Financial Initiatives

■ Dresdner Bank

- *Emissions Trading*

■ Rabobank

- *WB PCF Partner*

■ Swiss Re

- *D&O Liability*

■ USS

- *Thought Leadership*

■ Friends, Ivory & Sime

- *Carbon Screening*

■ Barclays Bank

- *Emissions Offsets*

■ Deutsche Bank

- *WB PCF Partner*

■ Element Re

- *Climate Change Sector 'Checklist'*

■ Fannie Mae

- *Energy Efficient Mortgage*

■ Marsh

- *Risk Mapping*

Key Recommendations

■ LEAD BY EXAMPLE

- *GHG Criteria in Project Selection*
- *Liase with Leading FIs*
- *CDM/JI*
- *Value Through Sustainability*
- *Internal Policy*

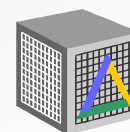
■ DEVELOP ANALYTICAL TOOLS

- *Credit Risk Management*
- *Project Benchmarking*

■ OPTIMIZE 'GREEN' CASH FLOW

- *GHG Credits*
- *Green Trading*

CarbonValue Rating Model



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CarbonValue^{'21} RATING

Core Positioning Liabilities:

- Issues faced by industry as whole
- Geographic location issues

Operating Risk Exposure:

- Direct GHG emissions
- Indirect carbon risks
- Other regulatory issues
- Supply chain management risk

Future Sustainability Risk:

- Energy efficiency practices
- Carbon intensity per ton of product/\$ sales
- Product life-cycle durability and recyclability
- Exposure to shifts in consumer values
- Competitive risks related to core business

Financial Risk Management Capacity:

- Balance sheet strength
- Insurance cover adequacy

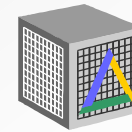
Strategic Management Capacity:

- Climate change policy
- Mitigation strategy
- Core part of env. management systems strength
- 3rd party audit/accounting
- Emissions trading work
- Baseline measurement
- Supply chain issues
- Voluntary charters, working groups

Sustainable Profit Opportunities:

- CDM/JI/IIT project involvement
- New products, services based on low carbon profile
- Energy efficiency and broader related issues

Company Carbon Profile



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USI

Carbon Profile

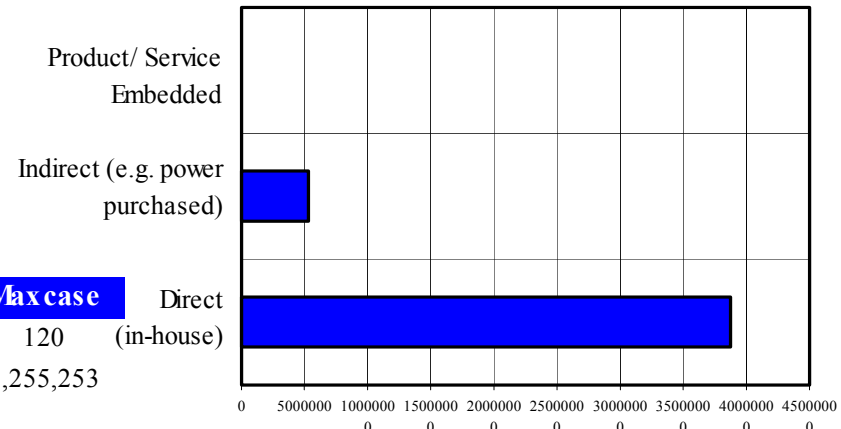
Industrial Sector: Steel Carbon Sustainability Rating: **49** out of 100 17-Nov-2000

1999 Sales (\$ millions): 13,745 Main region: EU 1999 Production: 22,200,000 tons steel

Financial Carbon Related Risk Exposure

Base Year: 1990
Target Year: 2012
Market capitalization (\$M): 2,714
Discount rate: 6%
WACC*: 8%
Expected yearly industry growth %: 2%

Equivalent tons CO₂ Generated in 1000s



Exp. case **Min case** **Max case**

Carbon Cost (\$/ ton CO₂): **85** 40 120
NPVcosts to meet Kyoto target year (\$1000): 522,995 34,868 1,255,253

Exposure (% of current market value): **19.3%** **10.7%** **26.0%** Total Direct CO₂ Emissions (tons): **38,742,366**

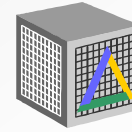
Normalized CO₂ equivalents (tons/ \$ Msales): 2,819
Regional benchmark (CO₂ tons/ \$ MGDP): 780
Ratio: company-to-benchmark: 3.6 High exposure to CO₂ related market risks.

Normalized CO₂ equivalents (kg/ ton steel): 1,745
Sector benchmark (kg/ ton steel): 2,300
Ratio: company-to-benchmark: 0.8 Above average carbon efficiency performance.

Carbon improvement vector: 2% reduction since 1990.
Kyoto Commitment of main operational region: 8% reduction by 2008-2012 compared to 1990.

Overall sector risk for climate issues: None Low Moderate **High** Extreme

Carbon Risk Assessment



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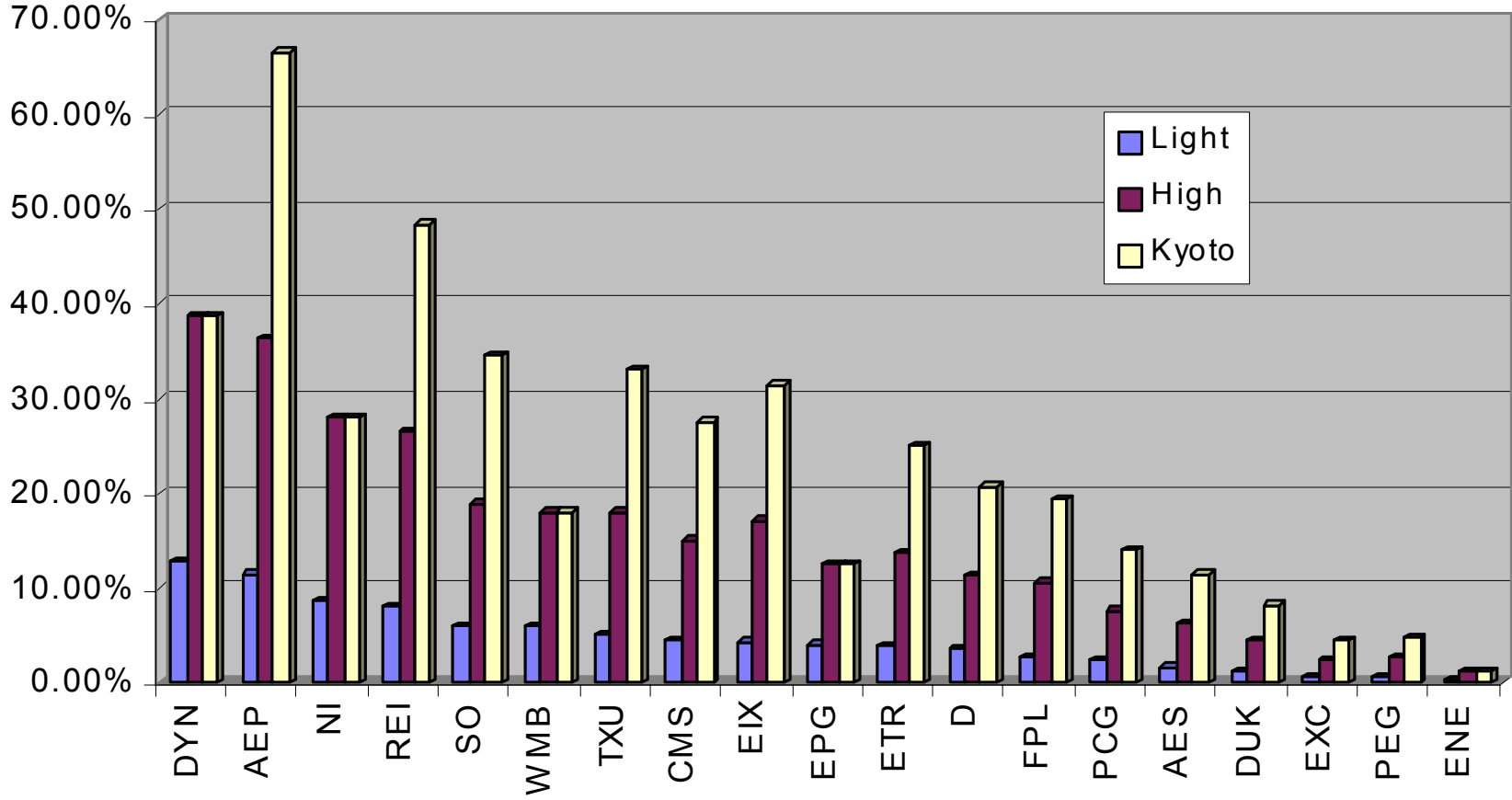
- Establish current emissions 'baseline' (using proxies and reported data) and compare to external benchmarks
- Determine potential future reduction requirements, accounting for geographic distⁿ, industry growth, company strategic growth prospects, national sector req'mnts, etc.
- Estimate NPV costs of reaching these targets, in view current performance and management approach, until 2010, using various cost data for all companies (level playing field)
- Adjust for company-specific MAC characteristics and other 'tuning' variables (e.g., early action vs. wait and see)
- Represent costs as proportion of current market cap. or earnings and rank companies accordingly

Carbon Risk Exposure



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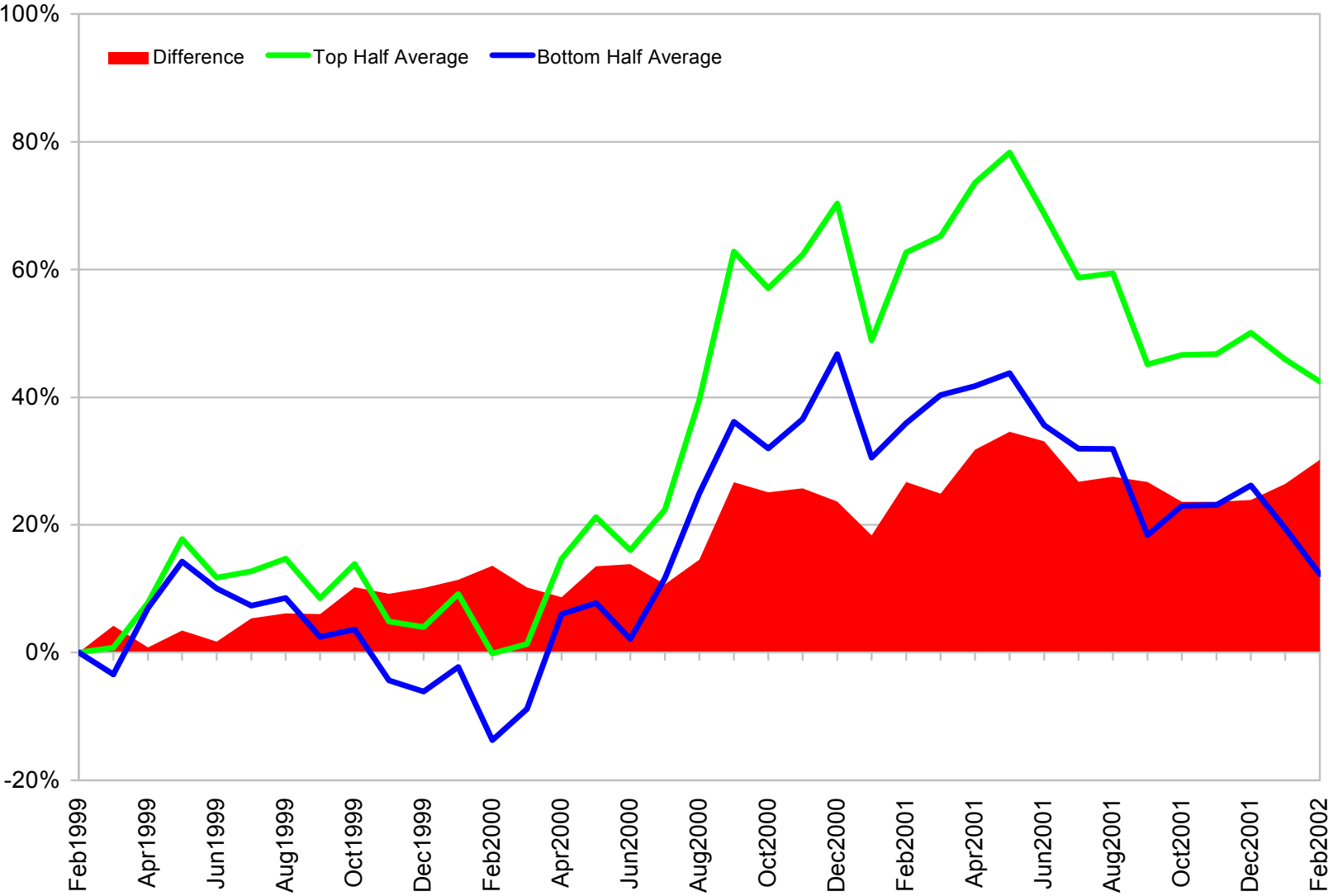
Expected Carbon Exposure as a % of Market Cap.



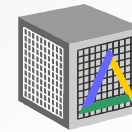
Innovest REIT Study for U.S. Government



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Innovest Funds Performance



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STRATEGY	PARTNER	INCEPTION	FUND SIZE	ALPHA
Global Active	ABN AMRO	5/2000	\$75 M	150 bps
US Enhanced Index	Mellon Capital	2/2000	\$30 M	60 bps
Global Active	T Rowe Price	5/2001	\$ 180 M	200 bps
US Active	ABP	8/2001	\$ 100 M	200 bps
Pan-European Enhanced Index	ABP	8/2001	\$ 100 M	100 bps
Global Enhanced Index	ABF Capital	3/2002	\$ 50 M	140 bps
US Enhanced Index	Aeltus / ING	3/2000	\$150 M	120 bps

Shareholder value and portfolio performance will be impacted by climate change and other sustainability issues...

■ via **DIRECT CASH FLOW/EARNINGS**

- *Market Share*
- *Higher Value Applications*
- *Operating Costs*
- *Taxes, Penalties and Other Incentives*
- *Project IRR*

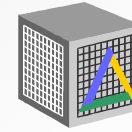
■ via **BRAND / MARKET PERCEPTIONS**

- *Market's Perception of Stock Value*
- *Relationships with Regulators/Communities*

■ via **COST OF CAPITAL**

- *Debt financing*
- *Discount Rates*
- *Insurance Conditions*
- *Credit Risk Ratings*

For further Information



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Strategic Value Advisors

Pierre Trevet
Managing Director France
Innovest Strategic Value Advisors

1 Rue des Reservoirs, B604
94340 Joinville le Pont
Tel: 01 48 86 03 69
ptrevet@innovestgroup.com

Martin Whittaker, PhD
Managing Director Carbon Practice
Innovest Strategic Value Advisors

Toronto, Canada
905-707-0876 ext 218
mwhittaker@innovestgroup.com

www.innovestgroup.com