## Maximizing Environmental and Financial Performance

# Presentation to the Forest Trend Conference

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## Agenda:

- I. The Financial World's Traditional View of the Environment
- II. The Link between Environmental and Financial Performance: EcoValue'21
- III. The EcoValue'21 Analysis Process
- IV. The Forest Products Industry

### The Financial World's Traditional Viewpoint



## Financial Analyst's View of the Environment:

- ♦ Environmental expenditures reduce profitability
- \* Therefore, minimize environmental expenditures
- \* Environment is primarily a risk management issue
- \* Fiduciary responsibility to maximize returns precludes consideration of social/ethical issues, such as the environment

# The Link Between Environmental & Financial Performance: EcoValue'21<sup>TM</sup>



## Changing Viewpoint:

- \* Nearly all academic and business studies show a positive correlation between environmental and stock market performance
- \* Correlation exists because environmental performance is an excellent proxy for management quality
- \* Management quality is the leading determinate of stock market performance

# The Link Between Environmental & Financial Performance: EcoValue'21<sup>TM</sup>



## **Changing Viewpoint:**

- \* Environment is one of the most complex challenges facing management
- **♦** High level of uncertainty
- \* Many issues, stakeholders and non-financial measures
- \* Effectiveness in dealing with this level of complexity implies ability to handle other business areas well
- \* Yields superior financial and stock market performance

### Why Investors Need Eco-Efficiency Metrics



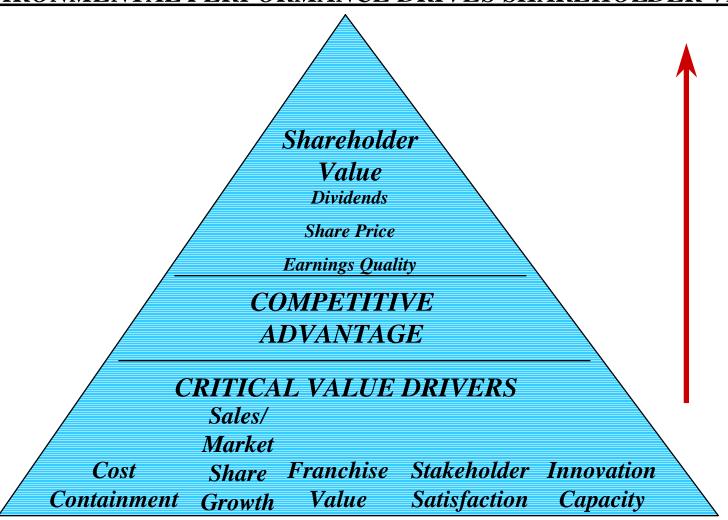
#### Managing Downside Risk:

- **♦Market risk** (corporate reputation and image, reduced customer acceptance, potential loss of "social license to do business.")
- \*Operating risk (emissions and discharge risk, product liability risk, required process changes)
- \*Balance sheet risk (historic liabilities, impairment of real property values, underwriting losses).
- \*Capital cost risk (pollution control expenditures, product redesign costs).
- **♦Transaction risk** (potential cost of time, money, and delayed or canceled acquisitions or divestitures).
- \*Business sustainability risk (potential competitive risk from lack of efficiency/ sustainability in energy, materials, and resource use).

## The Link Between Environmental & Financial Performance: EcoValue'21<sup>TM</sup>



#### ENVIRONMENTAL PERFORMANCE DRIVES SHAREHOLDER VALUE



#### Why Investors Need Eco-Efficiency Metrics



### Factors increasing the "eco-efficiency premium" in future:

Tightening global and domestic regulatory pressures Changing consumer demographics/investment patterns **Increased** Growing financial and competitive "Eco-Efficiency" benefits to industrial companies Premium Increasing institutional investor awareness Global population/resource consumption pressure Growing information transparency

### What does the Investor/Analyst Really Need?



## Problem for Investors:

Environmental information, at this stage, is often:

- Lagged, inaccurate, biased, missing
- Confusing
- Unevenly reported across companies, sectors, countries
- Hard to interpret

Investors need credible, third party, expert analysis to simplify their own job of analyzing companies relative to industry peers.

## Innovest Strategic Value Advisors



- A leading-edge international investment advisory firm with offices in New York, Toronto and London.
- Using the EcoValue'21<sup>TM</sup> environmental performance rating system, Innovest has rated over 1,200 large, publicly-held companies in the US, Canada, Europe and Asia.
- We provide company profiles, research reports and custom portfolio analysis to financial institutions, endowments, foundations, pension funds and investment funds.
- Research is based on the evidence that eco-efficiency is a proxy for, and predictor of, superior corporate management, which generates superior financial performance & shareholder value.

## Who We Are: Innovest Strategic Value Advisors



#### Directors and Senior Advisors:

James Martin: Chairman (former Chief Investment Officer, TIAA-CREF)

David Van Pelt: Vice-Chairman (former Executive V.P., Citibank)

Arthur Lipper (co-founder, Lipper Analytical Services)

Alan Silberstein (former CEO, Travelers Property & Casualty Insurance Group subsidiary, Executive V.P., Chemical Bank)

Lord Michael Sandberg (former World Chairman, Hong Kong and Shanghai Bank)

Rt. Hon. Lord Nigel Lawson (former Chancellor of the Exchequer, United Kingdom)

#### Our Model, Briefly



#### EcoVALUE '21 analyzes over 60 key variables using over 20 data sources:

#### Historical Contingent Liabilities:

- Superfund
- State and hazardous waste sites
- RCRA
- Toxic torts

#### Operating Risk Exposure:

- Toxic emissions
- Product risk liabilities
- Hazardous waste disposal
- Waste discharges
- Supply chain management risk

## EcoVALUE '21 RATING

#### Managerial Risk Efficiency Capacity

- Strategic corporate governance capability
- Environmental management systems strength
- Environmental audit/accounting capacity
- Supply chain management
- Training capacity and intensity
- Generic environmental management protocols
- Industry-specific protocols

#### Eco-Efficiency and Sustainability Risk:

- Energy intensity and efficiency
- Raw materials & natural efficiency and intensity
- Product life-cycle durability and recyclability
- Exposure to shifts in consumer values

#### Strategic Profit Opportunities

 ability to profit from environmentally-driven industry and market trends

#### EcoValue'21<sup>TM</sup>



Company Name:	Louisiana- Pacific Corp	Svenska Cellulosa AB		
Industry:				
RISK FACTORS				
1) Historic Liabilities	34	N/A		
2) Operating Risk	156	174		
Leading Sustainability / Risk Indicators	77	303		
4) Industry Specific Risk	17	160		
Total Score of Risk Factors	284	637		
ENVIRONMENTAL MANAGEMENT CAPACITY				
1) Environmental Strategy	108	247		
2) Corporate Governance	60	43		
3) Environmental Management Systems	45	101		
4) Audit	40	70		
5) Environmental Accounting/ Reporting	49	72		
6) Env. Training & Development	38	43		
7) Certification	27	63		
8) Products/Materials	72	108		
Total Score of Environmental Management Capacity	438	747		
PERFORMANCE IMPROVEMENT FACTORS				
Performance Improvement Vector	100	13		
OPPORTUNITY FACTORS				
1) Strategic Competence	24	40		
2) Environmental Opportunity	16	34		
3) Performance	76	96		
Total Score of Opportunity Factors	116	170		
Actual Score	938	1568		
Maximum Possible Score	2000	2000		
Percent of Maximum	47%	78%		
EV-1 121 D-4	l n			

EcoValue '21 Rating

Key variables are summarized in a Scoring Matrix.

Raw scores are weighted using Innovest's proprietary algorithms, and a final score is generated).

This score is based on the company's environmental performance <u>relative to its competitive set</u>.

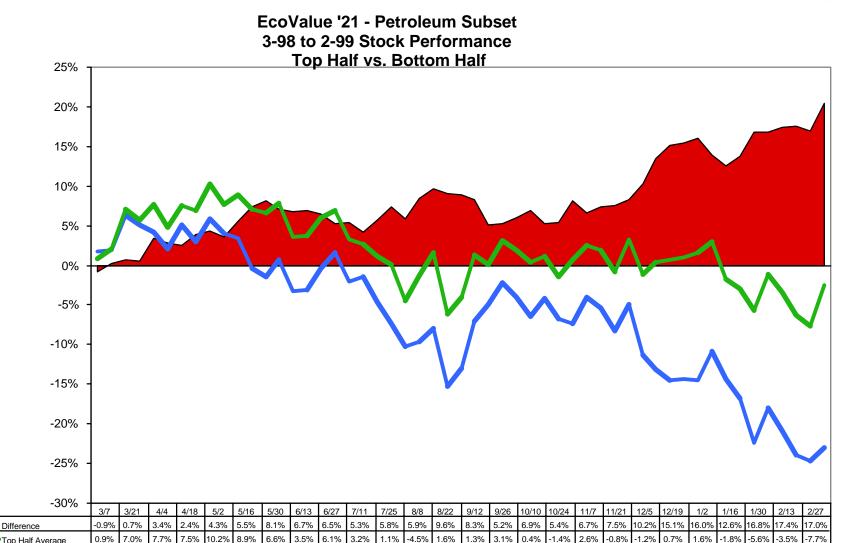
In this case, SCA received the highest score in the Forest Products sector.

The scores are converted to alphabetical ratings similar to the familiar ratings on corporate bonds (from AAA - best to CCC - worst).

### EcoVALUE'21<sup>TM</sup> Sample Results: Petroleum Sector

Bottom Half Average

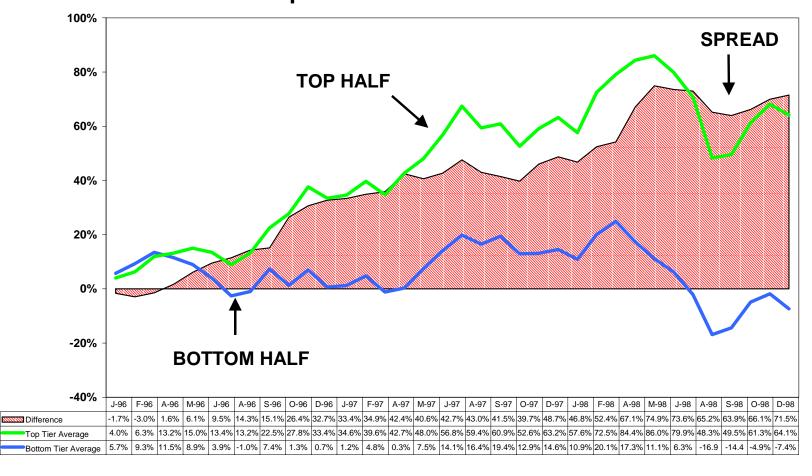




#### EcoVALUE'21<sup>TM</sup> Sample Results: Chemical Sector



#### EcoValue '21 - Chemical Subset 1-96 to 12-98 Stock Performance Top Half vs. Bottom Half

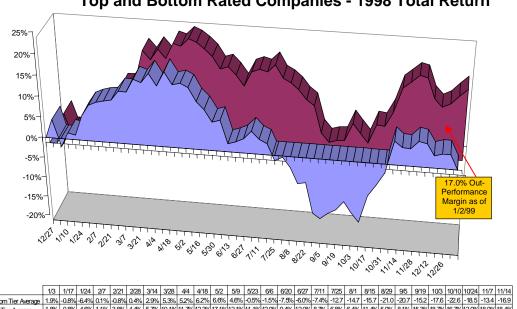


#### EcoVALUE '21: Uncovering Hidden Value Across 10 Sectors



# The "eco-efficiency premium" applies even across broadly diversified portfolios:

EcoValue '21
Top and Bottom Rated Companies - 1998 Total Return



Industry Category	Best/ Worst	Symbol	Company Name	EcoValue '21 Score		S&P Common
Aerospace/ Defense	Best	ВА	Boeing Co	1407	AAA	B+
	Worst	GD	General Dynamics Corp	912	CCC	В
Chemical - Specialty	Best	ECL	Ecolab Inc	1585	AAA	В
	Worst	IFF	Intl Flavors & Fragrances	802	CCC	A+
Chemicals	Best	DOW	Dow Chemical	1510	AAA	В
	Worst	FMC	FMC Corp	1015	CCC	В
Communication Equipment	Best	NT	Northern Telecom Ltd	1794	AAA	В
	Worst	HRS	Harris Corp	1073	CCC	B+
Electric Companies	Best	PCG	Pacific Gas & Electric	1685	AAA	
•	Worst	FE	First Energy	645	CCC	В
Electronics Semicond	Best	INTC	Intel Corp	1529	AAA	B+
	Worst	MU	Micron Technology Inc	1033	CCC	В
Health Care	Best	JNJ	Johnson & Johnson	1546	AAA	A+
	Worst	MKG	Mallinckrodt Group Inc	681	CCC	В
Iron & Steel	Best	IAD	Inland Steel Industries In	nc 1365	AAA	B-
	Worst	BS	Bethlehem Steel Corp	1015	CCC	B-
Paper, Forest Prods & Contain	ers Best	GP	Georgia-Pacific Corp	1616	AAA	В
	Worst	PCH	Potlatch Corp	925	CCC	B+
Petroleum	Best	тх	Texaco Inc	1601	AAA	В
	Worst	PZL	Pennzoil Co	1057	CCC	B-

Despite their virtually identical ratings from Wall Street, these pairs of companies from 10 major industry sectors have radically different EcoValue '21 ratings - and investment performance.

#### Innovest Research and EcoValue'21<sup>TM</sup> Ratings





Mobil Corp

Rating Implication:

EcoValue '21 Rating: (AAA-CCC)

November-99

**OUT-PERFORM** 

As a strong proxy for management quality, environmental performance (eco-efficiency) consistently correlates well with stock price performance. Innovest's EcoValue 21™ environmental ratings (ranging from AAA to CCC) identify environmental risks, management quality and profit oppotunity differentials typically not identified by traditional equity analysis. As a result, EcoValue 21™ ratings uncover hidden value potential for investors.

#### Financial Performance (measured by Total Return):



MOB received a rating of AA, ranking 4 out of 10 Petroleum companies in this sector. As result, we project that the company will out-perform the sector going forward. MOB has below average risk, above average environmental management capacity, and below average engagemen in environmentally-favorable businesses

geographically diverse, with majoroperations in Gulf of Mexico, Nigeria, Qatar and Indonesia Production is divided 55/45 in favor of oil. Mobil operates 21 refineries in 13 nations, has retail outlets worldwide, and is the 7th largest U.S. chemical producer with 29 facilities in 11 countries. Mobil is escalating upstream production and cutting downstream costs. Key strategic alliances are with BP Amoco in the European downstream. Shell in the California upstream. Duke Power in natural gas marketing, and Petroleos de Venezuela, Mobil has high-leve commitmentto a new compliance-driven EMS and a leading position in the global natural gas market. It remains opposed to proscribed greenhouse gas emissions targets and has ceased

Environmental Strategy & Management

EMS: New worldwide EMS incorporates sustainability performance indicators. certification attained by 7 facilities to date. Audits: Corporate audit team conducts business level audits across all units. Corporate Governance: Executive Committee review of environmental compliance completed annually. Established Best Practices network and Environmental Management Services team. Environmental performance is a factor in pay. Local communityadvisory councils established at U.S. refineries. Reporting: Issues annual Corpora Environmental Report and regular policy statements on key issues.

Upstream Restrictions: Globally diverse operations heighten exposure to increasing environmental pressures and restrictions in sensitive international settings. Facility Decommissioning: Average exposure. \$851 million had been accrued for facility closure and abandonment at year-end 1998 for off- and onshore production facilities. Site Liabilities Above average exposure. Mobil has potential responsibility at 276 Superfund and other hazardous waste sites. \$372 million accrued for future environmental site remediation. Refinery Upgrades: Average risk exposure. Geographically diverse refining base reduces exposure to U.S. and European product specifications, though heavy end, high sulfur U.S. crude heightens Eco-Efficiency Initiatives:

tonnes per year since 1990. Water: Achieved zero worldwide marine cargo spills in 1997. Land: Has dedicated global site remediation team. Worked with American Forests to plant 500,000 trees in U.S. during 1998. Funded Peruvian social/biological impact study and rainforest carbon sequestration project. Resource Use: Reduced energy consumption at refineries by 10% since 1990. Developed 24,000 ga/day oil recycling plant in Australia. Participant in the EPA Energy Star, Green Lights and WasteWi\$e programs. Product Stewardship: Product health and safety evaluated by company specialists.

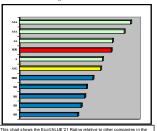
#### Strategic Profit Opportunities:

Alternative Fuels: Teamed with Ford Motor Company to develop low-emissions fuel/vehicle combinations. Natural Gas: Strong global natural gas presence and leading LNG operator. Well placed in growing natural gas and power generation markets of U.S., Europe and Asia. Efficiency Improvements: Extensive knowledge sharing and resource management programs viewed as having substantial positive effect on cost structure.

MOB		1994	1995	1996	199	7 1998
Sales		\$58,995	\$64,767	\$71,129	\$58,31	99 \$46,287
Net Incom	Э	\$1,079	\$2,376	\$2,964	\$3,27	2 \$1,704
Working Cap	ital	(\$2,237)	(\$998)	(\$2,353)	(\$2,6	99) (\$4,215
Long Term D	ebt	\$4,714	\$4,629	\$4,450	\$3,67	0 \$3,719
Net Worth		\$16,873	\$17,640	\$18,751	\$19,13	25 \$18,370
R.O.E		10.4%	13.5%	15.8%	17.1	% 9.3%
Recent Pri	се	High- 52 WkLow		EPS 199	38	P/E MRQ
\$87.13		\$91.25	\$62.44	\$2.10		41.5
Dividend	Div Yi	eld Bo	ok Val/ Share	Mkt Value	(\$m)	Price/ Book
\$2.28	2.69	6	\$23.57	\$68,004		3.70



#### EcoVALUE'21 Rating



sector. The rating represents Innovest's assessment of the company's overall Innovest New York: (212) 421-2000

Toronto: (905) 707-0876

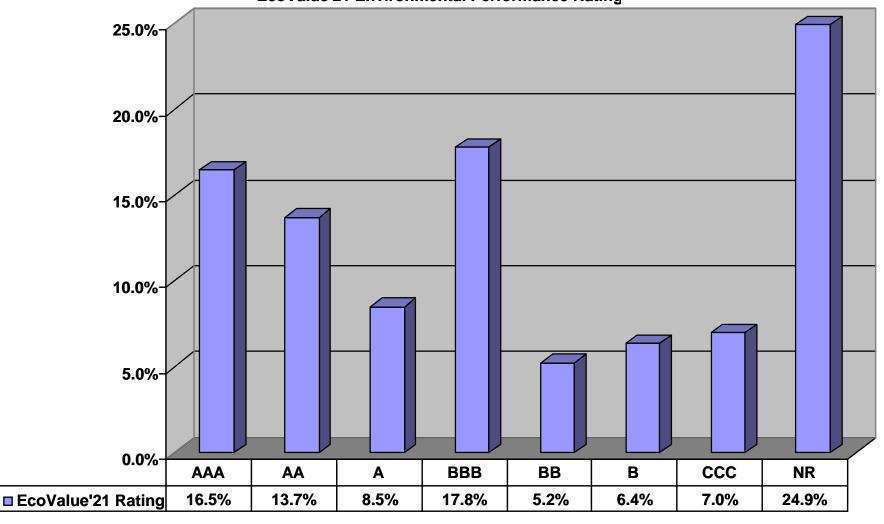
www.innovestgroup.com

The EcoValue '21 Company Profile provides a condensed analysis of environmentallyrelated risks, opportunities and management strategies.

Even more condensed is the EcoValue '21 Company Rating (AAA, AA...CCC). This rating can be used as a shortcut to determine the eco-efficiency and potential outperformance of an investment.



## Example of GMO Growth Fund Portfolio Distribution based on EcoValue'21 Environmental Performance Rating



### Investment Strategies: Enhanced S&P 500 Index Approach





#### Mellon Capital/Dreyfus Investment Advisors

- •Provide proprietary industry and company research which assesses
  - *⇒Industry sustainability dynamics*
  - ⇒Resource use efficiency
  - ⇒Strategic corporate governance
- → Implementation of Innovest research
  Portfolio construction and trading
  Risk and portfolio management
- ◆The Portfolio is comprised of approximately 150 200 issues with overall characteristics similar to the S&P 500 Index

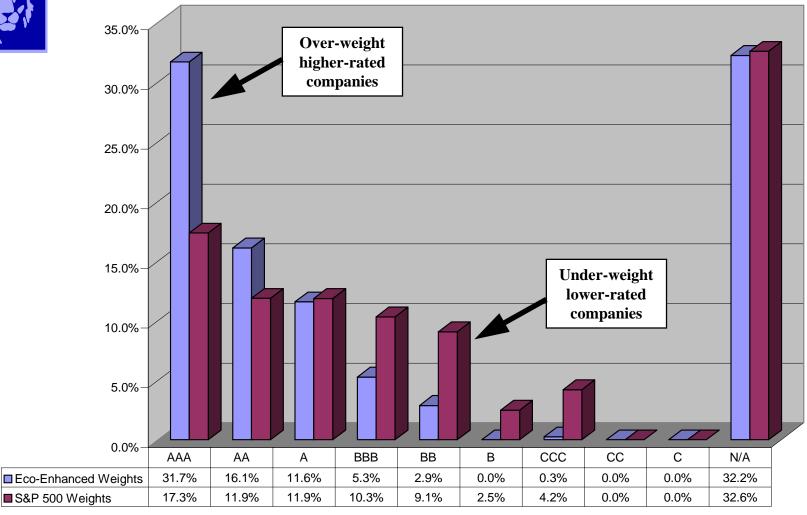


## Investment Strategies: Enhanced S&P 500 Index Approach





#### Eco-Enhanced Portfolio Weights vs. S&P Weights



#### Investment Strategies using EcoVALUE '21 Ratings



#### Customized Products

#### U.S. Equities:

- Enhanced S&P 500 Index Approach
- Active, stock-picking fund strategy (40-60 stocks)
- Best-in-class sector fund strategies
- "Long-short" portfolios

#### International Equities:

- Enhanced Eurotop 300 Index Strategy
- Enhanced FT 100 Index Strategy



#### Resource Intensive Industries

- \* Large environmental impact
- \* Drives increasing environmental pressures (regulations, market demands, public concerns, etc.)
- \* Creates opportunities for environmentally-favorable products, services and technologies
- \* Varying environmental management strategies (proactive vs. reactive)
- \* Implies differentials in stock market performance (uncovering hidden value)



## **Industry Trends:**

- **♦ FPI = poor financial performer in the last 10 years** (companies have barely covered cost of capital and generated little free cash flow
- \* Forestry business has shown very profitable
- \* Pulp & Paper is very capital intensive
- \* Industry is fragmented; trading of undifferentiated commodity
- => little pricing power
- \* Increased env. regulations => pressure on margins
- \* Response: industry seeking economies of scale (bigger plants, mergers and acquisitions)



## Environmental drivers: Supply side

- \* Tightening fiber supplies
- \* Shifts in production to plantations and the southern hemisphere
- \* Changing trade flows and globalization of the industry
- \* Increased resource efficiency and product standardization
- \* Increased government regulation
- \* Pressure from environmental groups
- **♦** Certification and voluntary sustainability initiatives
- \* Peer-pressure from forest products companies pursuing SFM



#### Environmental drivers: Demand side

- \* Population growth and rising living standards in developing countries
- \* Growing concern for the environment among retail consumers
- \* Formation of sustainable products buyers groups
- \* Industrial customers demanding environmentally-friendly supplies
- \* Government contracts stipulating sustainable materials
- \* New product development



## Air Quality Regulations

- \* Cluster Rule Air Quality Provisions
- **♦** Long-Range Transport of Smog Precursors
- ♦ Ozone and PM 2.5 standard
- \* Regional Haze Rule
- \* Compliance Assurance Monitoring
- **♦** Credible Evidence Rule



## Water Quality Regulations

- \* Compliance options under Cluster Rule
- \* Total Maximum Daily Loads
- **♦** Sediment Remediation
- **♦** Endangered Species Act
- **♦** Great Lakes Initiative
- \* Cooling water intake
- **♦** Sector Facility Index



#### Climate Protection:

- \* Limits on industrial carbon dioxide emissions: Could impose caps on carbon dioxide emissions from industrial "point" sources.
- **♦ Carbon sequestration:** Incentives to sequester carbon for climate purposes would encourage increases in the standing timber stock.



## Environmental Influences on Fiber Supply:

- \* Regulations on Private Lands
- **♦** Harvests on Public Lands
- \* Actions under the Endangered Species Act (ESA)
- \* Environmental conflict over intensive sylviculture
- \* Plantations, "fiber farms" and bioengineering.
- \* Forestry Certification and product eco-labeling





## Environmentally-Driven Business Opportunities

- \* Certified Sustainable Forest Management (SFI, FSC, ISO14001 and CSA)
- \* Elemental Chlorine Free (ECF), and Total Chlorine Free (TCF) bleached papers
- **♦** Innovative eco-efficient wood products
- \* Carbon sequestration opportunities



## Sustainable Forest Management Certification

Evaluation criteria:	FSC	ISO	CSA	SFI
Sets minimum forest management	X			X
practices standards?				
Requires independent third-party	X	X	X	Voluntary
auditing?				
Undertakes forest-based assessment?	X		X	Voluntary
Evaluates internal Environmental	X	X	X	
Management System?				
Provides product label or market-based	X			
claim?				

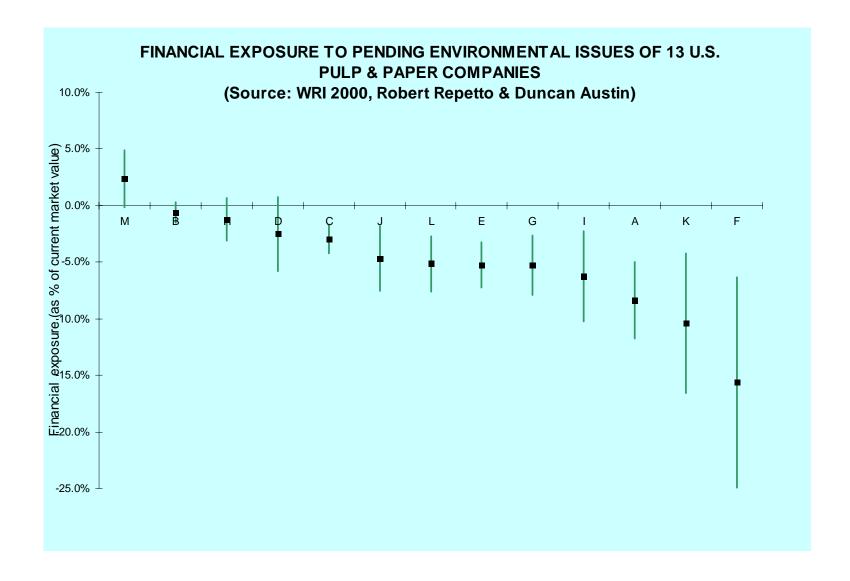
Source: Adapted from WWF, 1998



## Environmental Management Strategy

- ♦ Environmental Proactiveness
- ♦ Environmental Risk Management Systems
- **♦** Stakeholder Communications
- **♦** Eco-efficiency Programs
- **♦** Technological Innovation

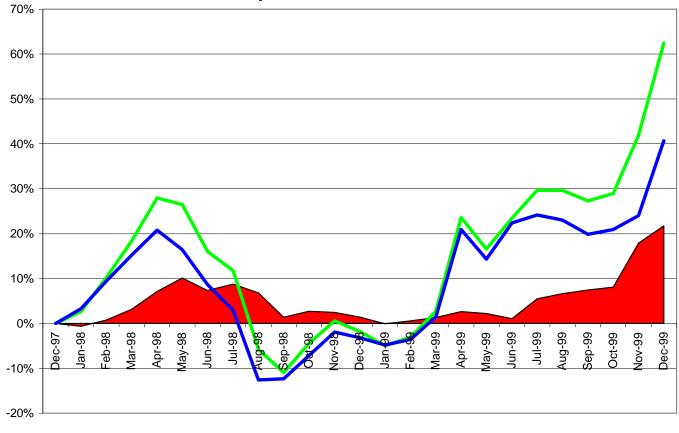




#### EcoVALUE'21<sup>TM</sup> Results: Forest Products Industry



#### EcoVALUE'21: Forest Product Industry Subset 12/97 to 12/99 Performance Top Half vs. Bottom Half

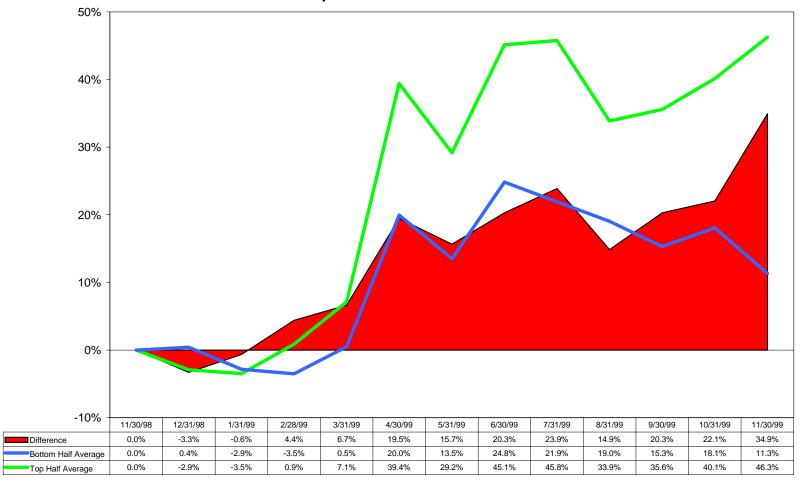


	Dec- 97	Jan- 98	Mar- 98	Apr- 98	Jun- 98	Jul-98	Sep- 98	Oct- 98	Dec- 98	Jan- 99	Mar- 99	Apr-	Jun- 99	Jul-99	Sep- 99	Oct- 99	Dec- 99
	٠.	- 00		- 00				- 00		- 00			- 00			- 00	
Difference	0.0%	-0.7%	3.2%	7.1%	7.3%	8.8%	1.4%	2.7%	1.4%	-0.1%	1.3%	2.7%	1.1%	5.5%	7.5%	8.1%	21.8%
Top Half Average	0.0%	2.6%	18.3%	27.9%	16.0%	11.8%	-10.9	-4.4%	-1.8%	-4.9%	2.7%	23.6%	23.4%	29.7%	27.3%	29.0%	62.5%
Bottom Half Average	0.0%	3.3%	15.1%	20.8%	8.7%	3.0%	-12.3	-7.2%	-3.2%	-4.8%	1.4%	20.9%	22.4%	24.2%	19.8%	20.9%	40.7%

### EcoVALUE'21<sup>TM</sup> Results: Forest Products Industry



#### EcoValue '21 - North American Paper Sector 11-98 to 11-99 Stock Price Performance Top Half vs. Bottom Half



#### **Conclusions:**



- Out-performance differential will increase going forward as environmental regulations and concerns increase.
- Environmental screening positions investors favorably for <u>future</u> competitive trends, risks, and opportunities.
- The EcoValue'21 rating methodology identifies risks and opportunities overlooked by traditional investment analysis.
- Positive financial community response: Innovest customers include Dreyfus, Scudder Kemper, Morgan Stanley, Bear Stearns, Chase Manhattan, Mellon Capital, ABN AMRO, CalPERS, Schroders, etc.
- Screening for environmental performance will become a fiduciary responsibility of investment managers and advisors seeking to maximize returns for investors



#### EcoVALUE '21:

#### **APPENDIX**

### Investment Results: Third-Party Research



## Environmental Leaders Out-Perform Financially

A large number of studies from industry, government and academia support the validity of the concept that a portfolio of environmentally superior companies can out-perform an environmentally inferior portfolio.

#### **Previous Third-Party Research (partial listing):**

DATE	RESEARCHER	RESULT
June 1997	Duke University	400 bps; 5 yrs.
	(470 companies)	
May 1997	U.S. EPA	270 bps; 5 yrs.
	(330 companies)	
Nov. 1996	ICF Kaiser	500 bps.
	(330 companies)	(hypothesized)
Sept. 1996	Scudder/Storebrand	500 bps; 5 yrs.
	(100 companies)	
1994	Winslow/Eaton Vance	230 bps; 10 yrs.
	(500 companies)	500 bps; 5 yrs.

See Research Library at www.innovestgroup.com for additional studies

## Investment Strategies using EcoVALUE '21 Ratings



#### Innovest Asset Management

Robert Boaz -- Co-Managing Director of Asset Management. Former EVP and MD of Research for HSBC James Capel. Developed proprietary trading models that consistently outperformed industry benchmarks.

William Coughlin, CFA -- Co-Managing Director of Asset Management.

Former MD at Scudder Kemper Investments and Investment Director of NYNEX's \$12 billion pension fund. Managed \$650 million in-house portfolio.

#### Herbert Blank -- Senior Investment Advisor.

Former Director at Deutsche Morgan Grenfell; CIO for NYSE-traded family of international equity funds; and Director of quantitative research and asset management at Value Line.