SIXTH ANNUAL PRACTICE FORUM
SUSTAINABILITY IN PRACTICE: Applying the Financial Case for Sustainability Investment
March 14, 2023

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OPENING REMARKS

Raghu Sundaram

Dean and the Edward I. Altman Professor of Credit and Debt Markets
New York University, Leonard N. Stern School of Business
Virtual Program

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KEYNOTE ADDRESS

APPLYING THE FINANCIAL CASE FOR SUSTAINABILITY INVESTMENT

TENSIE WHELAN

FOUNDING DIRECTOR, NYU STERN CSB
CLINICAL PROFESSOR OF BUSINESS & SOCIETY
Unleash the business value of sustainability & the transformative potential of business to solve societal challenges at speed and scale
## Motivating Leaders to Shape a New Business Paradigm

<table>
<thead>
<tr>
<th>Innovation in Education</th>
<th>Practical Research</th>
<th>Business Breakthroughs</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Top 10 specialization among MBA students with 30+ offered classes</td>
<td>● Return on Sustainability Investment™</td>
<td>● Research partnerships</td>
</tr>
<tr>
<td>● Fellowships/internships</td>
<td>● Sustainable Market Share Index™</td>
<td>● Bespoke executive trainings</td>
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<tr>
<td>● Experiential learning</td>
<td>● Invest NYC SDG</td>
<td>● Practice forum</td>
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<tr>
<td>● Executive education</td>
<td>● Private Equity Responsible Investing</td>
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</table>
The Latest and Greatest: CSB Research in 2022-23

- ESG reporting is not the same as sustainability
- The trouble with jobs metrics
- Helping private equity transform portfolios and do well
- Data tools to support sustainability improvements
- Deep-dive into consumer demand
- The business case for sustainability (ROSI updates)
ESG Reporting is Not the Same as Sustainability

- ESG is a system of measurement, not a strategy
- ESG reporting metrics are process/output based
- Tick-the-box reporting does not drive value
- ESG accounting metrics are not tied to financial metrics
**Outcomes, Outputs, Impact: Diversity and Inclusion**

<table>
<thead>
<tr>
<th>Impact</th>
<th>Positive impact for society, target population and the business</th>
<th>A diverse, inclusive workforce that is more creative and productive</th>
</tr>
</thead>
</table>
| Outcomes | Quantitative/qualitative improvement due to intervention (outputs) | • X% more Black managers  
• 100% equitable pay  
• %positive reporting re: inclusion |
| Outputs | • Policies  
• Training | • Diversity/inclusion policy  
• 50 managers trained |
| Activities | Implementation of initiatives | • Develop D&I policy  
• Training in diverse hiring and career development |
| Inputs | Financial, human, material resources invested | Hire Chief Diversity officer |
SASB Apparel, Accessories and Footwear Reporting Metrics

Management of Chemicals in Processes:
- Discussion of processes to maintain compliance with restricted substances regulations **ACTIVITY**
- Discussion of processes to assess and manage risk and/or hazards associated with chemicals in products **ACTIVITY**

New Metrics:
- Current volume of use of key toxic chemicals (list) and time-based reduction/substitution targets
- Current volume of chemical waste and time-based reduction/substitution targets

Environmental Impacts in Supply Chain Management:
- Percentage of (1) Tier 1 supplier facilities and (2) supplier facilities beyond Tier 1 in compliance with wastewater discharge permits and/or contractual agreement **OUTPUT**
- Percentage of (1) Tier 1 supplier facilities and (2) supplier facilities beyond Tier 1 that have completed the Sustainable Apparel Coalition’s Higg Facility Environmental Module (Higg FEM) assessment or an equivalent environmental data assessment **OUTPUT**
SASB Apparel, Accessories and Footwear Reporting Metrics

Labor Conditions in the Supply Chain:
- % of (1) Tier 1 supplier facilities and (2) supplier facilities beyond Tier 1 that have been audited to a labor code of conduct, (3) % of total audits conducted by a third-party auditor OUTPUT/OUTCOME
- Priority non-conformance rate and associated corrective action rate for suppliers’ labor code of conduct audits OUTPUT
- Description of the greatest (1) labor and (2) environmental, health, and safety risks in the supply chain ACTIVITY

Raw Materials Sourcing:
- (1) List of priority raw materials; for each priority raw material: (2) environmental and/or social factor(s) most likely to threaten sourcing, (3) discussion on business risks and/or opportunities associated with environmental and/or social factors, and (4) management strategy for addressing business risks and opportunities ACTIVITY
- (1) Amount of priority raw materials purchased, by material, and (2) amount of priority raw material certified to a third-party environmental and/or social standard, by standard OUTPUT/OUTCOME
SASB Apparel, Accessories and Footwear Reporting Metrics

What material topics are missing from the SASB metrics?
- Greenhouse gas emissions: e.g. Net Zero, SBTI commitment to reduced GhG emissions and annual tracking
- Animal welfare: e.g. % of supply certified to credible third-party animal welfare standards and annual targets
- Water and waste management
- Product design and lifecycle management

What is missing from the SASB metrics overall?
- Context and benchmarking
- Targets and performance over time
But None of Those Metrics Capture the Upside

Nike Flyknit process weaves knit strands of recycled polyester to form one seamless upper:

- Decreases waste 80%
- 19% lighter
- $1 billion plus business
- Category disrupter
The Trouble with Jobs Metrics

Ulrich Atz
Tensie Whelan
More than 51% of the Russell 1000 are not paying their employees a living wage – *Just Capital 2022*

More than half of U.S. consumers were living paycheck to paycheck in May 2022, a 4% increase from May 2021 – *LendingClub 2022*

32% of American adults could not cover an emergency expenditure of $400 – *Federal Reserve System Economic Well-Being of Households in 2021*

Less than 1 in 4 Americans think they will be able to save the $1.1 M they think they need in retirement – *2022 Schroders Retirement Survey*
U.S. Accounting Practices Drive Unsustainable HR Practices (HBR, Peter Cappelli 2023)

- Employee salaries, benefits, training, etc are treated as current fixed costs, NOT investments.
- Employees are treated as externalities, NOT assets
- Benefits, vacations, and sick days are treated as liabilities on the balance sheet
- GAAP rules require reporting # of employees, but not workers who have been outsourced
- Managers incentivized to use vendors for leased workers (below the line). Evidence points to less efficiency and lower productivity
- Unlike physical assets, which depreciate over time, employees (with proper investment) become more valuable over time.
- International Financial Reporting Standards (IFRS) outside the United States allow companies to report more of the asset value of human capital.
<table>
<thead>
<tr>
<th>Business Basics</th>
<th>Financial Security</th>
<th>Job Excellence</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Share of full-time employees (vs alternative employments)</td>
<td>- Starting hourly wage (by full-time; alternative employments)</td>
<td>- Additional benefits (pension; paid time off; family leave, etc.)</td>
</tr>
<tr>
<td>- Turnover (voluntary; involuntary)</td>
<td>- Average hourly wage (by full-time, alternative employments)</td>
<td>- Internal promotion rate</td>
</tr>
<tr>
<td>- Accidents, injury, and lost time injury rates (where material)</td>
<td>- Share of employees earning minimum wage (incl. alternative employments)</td>
<td>- Diversity statistics</td>
</tr>
<tr>
<td>- Labor and safety controversies</td>
<td>- Health care benefits (starting costs of medical plan; quality of plan if feasible)</td>
<td>- Pay equity (adjusted; unadjusted; by gender and race)</td>
</tr>
<tr>
<td>- Fines and legal fees for labor and safety violations</td>
<td></td>
<td>- Subjective job quality ratings (e.g. crowdsourced)</td>
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</tbody>
</table>
Review Jobs-Related Metrics for Six Rating Agencies

- Most “S” metrics are binary (e.g. yes/no answers such as do you have a workplace safety policy) for 40-80% of data. They tend to contain little useful information.

- When the raw metrics are continuous, e.g. percentage of diverse individuals in leadership, companies are unlikely to report on them (not available for 70-90%).

- Turnover is available for 12-50% of firms but varies widely (e.g. may not distinguish between voluntary and involuntary). Pay levels are sometimes disclosed (e.g. lowest pay threshold) but are not available from the ESG raters we analyzed.

- Finally, ESG raters offer no metrics for the value of pensions or health benefits (e.g. starting cost of medical plan) even though some companies disclose such data.
Why This Matters: Amazon Turnover

- Regretted attrition: 69.5%-81.73% across Tier 1 to 10 employees
- NYT investigation: 150% amongst hourly employees (others found 100%)
- Only 1 of 3 new hires in 2021 stayed with Amazon for more than 90 days
- Regretted and unregretted turnover costs $8B
- Total profits: $33.36B (2021)
- Could have improved profits by 25%
Recommended Material Jobs Metrics

Voluntary and Involuntary Turnover

• Turnover is relatively easy to track, half of the S&P 500 already report it, and it is one of the most robust financially relevant metrics.

Share of employees making a liveable wage

• Wages are the single most important issue for employees, part of SASB, and research demonstrates that high wages can work as a competitive strategy.

Business basics

• Depending on the industry, this may be the ratio of full-time to alternative employments, the injury rate, or investments in employees.
• Accounting for personnel expenses not only as costs but also as investments will relax some of the pressure to minimize labor costs in capital markets.
CSB Responsible Investing Framework for Private Equity

**Context**

After **Phase I**, CSB identified practical tools needed to help private equity embed sustainability and conducted interviews with 30+ GPs, LPs, and other stakeholders to get feedback on these ideas:

Ideas 1) ESG valuation model based on ROSI, 2) LP DDQ addendum, 3) guide to embedded sustainability, 4) ESG scorecard, and 5) set of LP/GP guidelines

**GPS:**
- Currently, not identifying sustainability value drivers at beginning of investments
- Unclear which ESG KPIs to track and how to tie with business case

**LPS:**
- Not using GP ESG data

**Phase I**

Academic literature review of the state of private equity

Development of a PE Responsible Investment Framework

**Categories of impact:** management & human capital, financial engineering, fund management, strategy & innovation, reporting transparency, societal impact

**Phase II**

The second phase of research will support the implementation of a responsible investing approach across the ownership lifecycle
CSB defined GP practices across the lifecycle to understand where specifically tools are needed

<table>
<thead>
<tr>
<th>Deal Sourcing / Pre DD</th>
<th>Due Diligence</th>
<th>Early Investment</th>
<th>Ownership</th>
<th>Exit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Practice</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Check company against exclusion list*</td>
<td>• Reviewing material issues, some ESG KPIs*</td>
<td>• Outline what KPIs to be tracked*</td>
<td>• Track some KPIs (potentially EDCI, LP-required, or regulatory)</td>
<td>• Add a sustainability story to sell at exit (often hacked together instead of planned for)</td>
</tr>
<tr>
<td>• ESG data request*</td>
<td>• Deal teams conduct valuation analyses (advanced may add ESG sensitivities)</td>
<td>• Focus on cost cutting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• If impact focus, sourcing only on specific criteria (e.g., Quality Jobs)</td>
<td>• ESG scorecard</td>
<td>• Management team dialogues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Gating methodology</td>
<td></td>
<td>• Outline ESG accountability structures*</td>
<td></td>
<td></td>
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<tr>
<td><strong>Limitation / Issues</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Difficult to understand how deep to go with ESG</td>
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<td></td>
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<tr>
<td><strong>Areas of Interest &amp; Rationale (Where to Prioritize)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• N/A</td>
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</table>

*indicates best practice

- Quick valuation assessment DD tool denoting material issues (separate from holding period tool)

- Denoting most impactful sustainability levers is adjacent to ROSI and allows business to know what to focus on immediately

- Accurately capture specific value creation

- Helping frame material sustainability levers at early investment allows GP to know what to track over lifetime

- Track KPIs and link to valuation throughout

- Track ROSI/ESG metrics to substantiate sustainable value growth at exit

- Lack KPIs to point to for sustainability story

- Never capture ROSI and “avoided costs”
During the DD phase, GPs need a quick assessment tool to identify material risks/opportunities; this changes once they are holding the company.

**Rationale for Two-Part Valuation Tool**

<table>
<thead>
<tr>
<th>Effectively Identifies and Measures Sustainable Value Creation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second aspect of framework (after DD assessment tool) will identify the most important sustainable value levers and define KPIs to track over the course of the investment</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Different Needs at Each Point of Investment Lifecycle</th>
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</thead>
<tbody>
<tr>
<td>DD Phase: quick, high-level tool due to time constraint – identify the material issues, practices, and value drivers before ownership</td>
</tr>
<tr>
<td>Holding Period: define the highest impact ESG areas, define associated KPIs, and measure over time, pointing at real data at exit and developing a sustainable growth story</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Applicable to Wider Audience</th>
</tr>
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<tbody>
<tr>
<td>Framework can be applied by various stakeholders – GPs, portfolio companies, other practitioners</td>
</tr>
</tbody>
</table>

**Proposed Workflow**

**1st Part of Framework Tool – Quick Assessment**

1. Once a company has been identified during the DD process, map the industry value chain
2. List the most important material issues, practices, and value drivers for the target (both risks & opportunities)
3. For the specific company, identify highest impact areas and indicate current performance – the analysis for the first tool is complete, providing a quick and directional assessment

**2nd Part – Deep Dive**

1. Define ESG and ROSI KPIs and key strategies needed at the early investment stage
2. Measure KPIs over time and build the sustainable growth story; at exit, GP / portfolio company can point to track record of improvement and sustainable value creation and receive an ESG premium valuation
In the first stage of the tool, users input the sector of the target portfolio company and rate it across key criteria:

1. **Identify Target & Sector**
   - Identify sector of target company

2. **Auto-Populated Buckets**
   - After selection of sector, the tool identifies the most relevant material issues for the sector, then indicates mitigating or value-adding strategies, and underlying practices and value drivers.

<table>
<thead>
<tr>
<th>Material Issues (Defined by SASB)</th>
<th>Strategies</th>
<th>Practices</th>
<th>Value Drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Management</td>
<td>Improving Energy Efficiency &amp; Use of Renewables</td>
<td>Adopt products, services, and processes that use less energy Convert energy purchase (or generation) to renewables where possible</td>
<td>Lower energy costs Reduced exposure to energy cost volatility or grid break-downs Reduced regulatory fines and risks.</td>
</tr>
</tbody>
</table>

3. **Assessment of Target Company**
   - Next, identify how the target company is responding to the material issues and related strategies, stated commitments, and progress towards commitments.

4. **Rating**
   - Finally, add scores of 1-5 across five criteria:
     - Current Progress
     - Clear Targets
     - Innovation & Growth
     - Risk Mitigation
     - Credible Reporting Standards
The DD assessment tool guides towards the most material issues and indicates value-add responses

### Assessment of Target Company Performance

<table>
<thead>
<tr>
<th>Material Issues</th>
<th>Strategy</th>
<th>Total (Weighted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecological Impacts</td>
<td>Ensuring Protection of Biodiversity and Ecosystem Conservation</td>
<td>5.0</td>
</tr>
<tr>
<td>GHG Emissions</td>
<td>Mitigating Climate Change Impacts</td>
<td>4.5</td>
</tr>
<tr>
<td>Labor Practices</td>
<td>Investing in Worker Wellbeing</td>
<td>2.8</td>
</tr>
<tr>
<td>Materials Sourcing &amp; Efficiency</td>
<td>Implementing Sustainable Sourcing</td>
<td>1.9</td>
</tr>
</tbody>
</table>

- After rating the target company across the five criteria, better understanding of how the company is responding to material issues relevant to the sector and any gaps in current commitments
- For every material issue, the tool provides strategies with linked practices and value drivers

### Recommended Strategies and Practices, and Associated Value Drivers

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Practices</th>
<th>Value Drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitigating Climate Change Impacts</td>
<td>Reduce emissions across all three scopes, focusing on direct emissions first, but also focusing on where the biggest emissions are</td>
<td>Operational efficiencies in terms of costs, Reduced exposure to regulatory fines and fees, Reduced reputational and market risk, Lower cost of capital, Improved employee recruitment and retention</td>
</tr>
<tr>
<td>Investing in Worker Wellbeing</td>
<td>Salary and benefits, Engagement on sustainability, Close pay equity gap, Increase wages, Promote flexibility</td>
<td>Improved retention, Higher productivity, Lower recruitment costs, Fewer work stoppages/strikes/lawsuits</td>
</tr>
<tr>
<td>Implementing Sustainable Sourcing</td>
<td>Funding projects/partnerships that protect natural resources/local communities, Sustainability certification or code compliance of suppliers, Preferred supplier status, long-term contracts and incentives for sustainable sourcing</td>
<td>Increased market share and premium, Improved supplier and customer loyalty, Reputational brand benefits, Reduced regulatory, operational and market risk, Increased customer loyalty</td>
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</table>
Invest NYC SDG: Private/Public Partnerships for a Sustainable, Equitable NYC

Marianna Koval
Wythe Marschall
Divya Subramanian
Kendra Gibbs
## Invest NYC SDG

Developing Concrete Projects Across Six Ecosystems

<table>
<thead>
<tr>
<th>Ecosystem</th>
<th>Projects</th>
<th>SDGs</th>
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<tbody>
<tr>
<td><strong>Food &amp; Health</strong></td>
<td>M.A.P. NYC</td>
<td>9, 11, 13, 17, 10, 11, 13, 17</td>
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<tr>
<td>Sustainable Mobility</td>
<td>Healthy Corner Stores, The Equitable Commute Project</td>
<td>9, 11, 13, 17, 10, 11, 13, 17</td>
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<tr>
<td>Built Environment</td>
<td>Rikers Island Indoor Commercial Farm, Electric barges and EV infrastructure</td>
<td>9, 11, 13, 17, 10, 11, 13, 17</td>
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<td>Waste</td>
<td>FoodMap NY</td>
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<td>Renewable Energy</td>
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<td>Climate Resilience</td>
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<td><strong>Carbon Compass: LL97-PACE Data Tool</strong></td>
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<td><strong>Anaerobic digesters</strong></td>
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<td><strong>Community solar on city-owned property</strong></td>
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<td><strong>Early warning and predictive AI systems</strong></td>
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<td><strong>Green workforce development and placement</strong></td>
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<td><strong>Offshore wind</strong></td>
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<td><strong>Organic waste collection and processing</strong></td>
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<td><strong>Geothermal</strong></td>
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<td><strong>Glass waste to low carbon concrete with Pozzotive®</strong></td>
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Urban agriculture improves community access to fresh local food while offering educational opportunities and green jobs.

Invest NYC SDG/ NYU Tandon wiki-style database to map commercial + community agricultural production in NYC, as well as neighborhood demographics, gentrification, and food security status.

Can help NYC set production goals, support policy innovation, assist growers in connecting with resources, build thriving businesses, and help create green jobs.

Visit the site >
Goal: Accelerate PACE lending for energy efficiency retrofits and support NYC’s Climate Mobilization Act.

NYU Stern CSB has developed an innovative data tool with MOCEJ and NYCEEC that maps banks’ scope 3 emissions from NYC real estate holdings and can help banks generate profit from green lending, beginning with their own portfolios.

Searchable by mortgage lien holder, it details the carbon emissions in mortgage lender portfolios.

Check out the tool
Consumer Purchasing of Sustainability-Marketed Products Annual Review

Randi Kronthal-Sacco
IRI
Sustainable Market Share Index: U.S. Consumer Purchasing
Sustainability-marketed products continue to grow share every year

36 categories examined
Sustainable Market Share Index: New Products

The percentage of new products that incorporate and communicate sustainability benefits have increased every year since 2017.

Note: Based on 32 categories examined
Sustainable Market Share Index: 2021 Carbon Labeling
Sales of carbon-labeled products doubled from 2020

+$3.4B
The Return on Sustainability Investment (ROSI) in the Food and Beverage Sector

Researchers:
Chisara Ehiemere
Elyse Douglas
Divya Chandra
Maggie Paruta

Funders: ArcaContinental,
HSBC Bank USA,
Investindustrial Foundation
Overview of Food & Agriculture Framework

NYU Stern CSB has developed a ROSI™ framework for food & agriculture with publicly available monetization tools to help the industry understand where and how sustainability can unlock financial value.

Based on research, experience, and engagement with industry leaders, we have identified the following sustainability strategies* used by the industry to include in the framework:

- Improving water security
- Improving soil health
- Mitigating and adapting to climate change
- Reducing the use of harmful chemicals
- Ensuring protection of biodiversity and ecosystem conservation
- Raising and treating animals with respect and care
- Incorporating circularity into food waste management
- Implementing sustainable sourcing
- Improving nutritional profile of food products
- Adopting sustainable packaging solutions
- Investing in employee and supplier well-being
- Investing in sustainable brand marketing and communications
ROSITM Applied to Multiple Products and Strategies

- **Improving regen. soil health practices**: Better nutrient management practices by barley growers improves regenerative soil health practices on-farm, improves operating efficiency, reduces carbon emissions, and captures brand value.

- **Regenerative ag. practices in beef**: Launching an innovative sustainable beef category using verification and consumer-facing labeling to increase consumer awareness, creates upside.

- **Protection of Biodiversity**: Promoting sustainable bee friendly farming practices improves fruit pollination and yields, reduces input costs for growers and leads to carbon sequestration benefits for achieving Scope 3 targets.

- **Sustainable sourcing**: Responsible sourcing of cocoa improves supply chain transparency and creates market opportunities.

- **Reducing Food Waste**: The adoption of biological controls to combat aflatoxins in corn increases yields for growers and lowers risk and improves operational efficiency for the company.
Nutrient Management Practices Drive Carbon Emissions Reductions, Operational Efficiencies, and Brand Value

ROSI™ methodology was used to assess the benefits of working with barley growers to accelerate adoption of nutrient management practices.

ROSI™ results show benefits amounting to ~$40 million in 10-year NPV terms and an average annual operating income improvement of ~$7.5 million.

- Sustainable Product Offering 65%
- Avoided Sales Loss 15.1%
- Malting Operating Efficiency 2.2%
- Brewing Operating Efficiency 8.3%
- Carbon Efficiency 9.3%

Drives higher operating performance for the company.
Reduces carbon emissions to help achieve the company’s net zero 2040 goal.
Captures brand value by offering a more sustainably-produced product.
The Value of Regenerative Beef Production and Consumer-Facing Labeling for Applegate

DO GOOD DOG™ is the first, nationally available hot dog made with beef sourced from verified regenerative U.S. grasslands.

ROSITM monetization for Applegate and rancher benefits:

- Focus was on a verified regenerative agriculture beef product with a consumer-facing label
- Includes investment in building consumer awareness for a growing category
- Incorporates media coverage and sales & marketing benefits

Benefits & Associated Costs Explored

Sales and Marketing of The DO GOOD DOG™

Increase in Earned Media

63% of 10-Yr NPV*

37% of 10-Yr NPV*
The Business Case for Sustainable Farming to Improve Biodiversity

➔ Financial Opportunities
Adopting sustainable bee friendly farming practices improves fruit pollination and yields as well as reduces inputs costs

➔ Environmental Benefits
Adopting bee-friendly farming practices within the company's supply chain helps achieve Scope 3 targets through carbon sequestration

➔ Competitive Advantage
Being the first to introduce a sustainably sourced natural spread addressing biodiversity protects against a competitor gaining first mover advantage

A 10-year NPV of €3.6 million (before costs) was estimated with an average annual operating income impact of €650K. ROSI™ was estimated to be 33%
Sustainable Sourcing in Cocoa Drives Better Performance

For Natra*, a private label chocolate manufacturer, its investment in fully traceable cocoa yields a net positive bottomline benefit.

Social and environmental challenges plague cocoa sourcing...

ROSI™ Benefit Analysis

- Customer Loyalty
- Sales and Marketing
- Shifting product mix
- Higher growth segments

...while chocolate consuming markets are experiencing

- Changing regulation
- Responsible sourcing
- Shifting customer attitudes
- Traceability in supply chains

Results

PV^1 € 2.4Mn

As % of EBITDA (2020) 5.4%

*a former Investindustrial company; 1-4 year PV

5.4%
Agricultural Interventions Drive Positive Societal Impact

Aflatoxins are naturally occurring toxins in agricultural crops, and pose a severe health risk to plants, humans and animals if consumed. Contaminated crops pose an economic risk of food waste loss. CSB partnered with Ingredion USA’s affiliate, Rafhan Maize, to assess benefits from promoting the use of AflaPak™, an aflatoxin biocontrol product, in its upstream corn supply chain.

Potential for a 9.3x return on investment
(10-year NPV ~$15.5Mn)

<table>
<thead>
<tr>
<th>Societal Benefits</th>
<th>Grower Benefits</th>
<th>Company Benefits</th>
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<tbody>
<tr>
<td>Human Health</td>
<td>Sales &amp; Marketing</td>
<td>Risk Management</td>
</tr>
<tr>
<td>Food Security</td>
<td>Operating Efficiency</td>
<td>Operating Efficiency</td>
</tr>
<tr>
<td>Animal Health</td>
<td>Potential to increase average returns</td>
<td>Stakeholder Relations</td>
</tr>
<tr>
<td></td>
<td>by 13%</td>
<td></td>
</tr>
</tbody>
</table>

ROSITM Findings

ROSITM Mediating Factors
Additional ROSI Projects
Green H2 Project In UK Supports Net Zero Goals and a Good ROI: Kimberly-Clark with ALO Advisors

- Implementation of this project would eliminate up to 25.7K MT of GHG annually, representing 35% reduction in K-C’s UK total Scope 1 emissions vs. 2021 actual emissions

- ROSI™ analysis revealed significant upside for the project, including forecasted sales growth, less GHG taxes and the ability to secure government grants

- Represents leadership opportunity for K-C as many business in the UK are using electricity from renewables, but few have decarbonized their thermal energy sources

An 8-year NPV of $20.9 million (net benefits) was estimated, having an IRR of 144% and a payback period over 3.4 years
The Business Case for Decarbonization in Healthcare

- Healthcare accounts for 4.5% of greenhouse gas (GHG) emissions globally, and 8.5% of US emissions.* Could reach six gigatons per year by 2050. **

- CSB is developing a strategy map and monetization framework to support decarbonization in healthcare delivery systems by providing the business case for actions that the healthcare delivery systems can take.

- Analysis of how the industry can expand the methods it uses to account for and value investments in decarbonization practices and provide tools and insights that companies can use for calculations
  
  - Tools and insights will be open source for use by delivery systems of all sizes

- Project completion August 2023

* Health Care’s Climate Footprint, Health Care Without Harm and Arup, 2019
**The Global Roadmap for Healthcare Decarbonization, Health Care Without Harm
Initial Findings on Decarbonization Strategies

Adoption of decarbonization interventions by hospitals can be complex, including regulatory, clinical, supply chain, and OR approvals. There are opportunities nonetheless:

- **Energy**
  - Reductions through lighting changes and other building retrofits
  - Change energy sources (location dependent) and/or VRECs

- **Buildings**
  - Design and build focused on energy efficiency and resilience
  - Lower emissions materials

- **Supply Chain**
  - Reprocessed medical devices
  - Procurement contract requirements to cover “influenceable scope 3”

- **Clinical**
  - Switching anaesthetic gases
  - Care delivery changes for reach and equity

- **Waste Reduction**
  - Tray optimization; only open what will be used
  - Medical waste

- **Awareness and Training**
## Decarbonization Strategy Example (illustrative)

<table>
<thead>
<tr>
<th>Practice</th>
<th>Example of Sub-Practice</th>
<th>ROSI™ Benefits (for a hospital purchasing the reprocessed device)</th>
<th>Types of Information/Potential metrics to monetize</th>
</tr>
</thead>
</table>
| Implement Reprocessing/Circular Healthcare | • Hospital switches to reprocessed medical devices, as available, from devices typically designated as “single-use” (In compliance with FDA requirement s) | • Carbon Reductions for Scope 3  
• Cost Reduction for medical devices  
• Avoiding potential future fines  
• Reductions in cost of capital if adopted broadly within the hospital | • Total annual purchased cost for the devices before changing and after changing (Operating Efficiency)  
• Scope 3 emissions pre- and post-changing and the related cost of carbon (suggested by research, or used by the entity) (Operating Efficiency)  
• Regulatory changes (Risk Management) Where regulatory changes are afoot, costs of implementing now vs. waiting for when supply might be tighter  
• Cost of Capital (Operating Efficiency)  
• Innovation - Overall staff and administration being more open to switching based on success of one program  
• Avoidance/saving of waste disposal costs |
**ROSI™ Digital Tool Development**

Digital tools to increase ROSI accessibility

**ROSI™ Employee Wellbeing**

- Monetize companies' investments in employee wellbeing strategies across industries
- Companies input data on employees (headcount, hours worked, wages, turnover, % of high performers, etc.)
- Tool provides a directional estimate of cost savings due to reduced turnover and increased productivity

**Decarbonization Risk & Opportunity**

Tool that allows investors and companies to estimate the financial value of strategies to reduce GHG

- The values will be expressed in terms of:
  - P/E impact for Investor purposes
  - Revenue impacts for corporates
Recent Publications

- Practitioners’ Guide to Embedding Sustainability
- Finding the Return on Sustainability Investments
- The Road to Responsible Private Equity
- Measuring the Financial Return on Sustainability Investment in the Chocolate Industry
- Coming soon... Global Change Begins at Home
Questions?
Get Involved with CSB

Learn more and stay up-to-date about CSB educational programs, ROSI Methodology and other original research, career resources and events. www.stern.nyu.edu/sustainability

Support CSB to ensure the continuation of our education, career development, research and outreach initiatives. CSB is grateful to raise all of our own operating and research funds from alumni and other supporters.

Reach out to CSB if you are interested in learning more about educational programs, partnership opportunities, working with current students, or just to introduce yourself! sustainablebusiness@stern.nyu.edu

Follow us, tag us and join the conversation on LinkedIn at NYU Stern Center for Sustainable Business
Today's Agenda

9:55 - 10:40 am
ESG in Black and White: Media’s Role in Sustainability Culture Wars

10:40 - 11:00 am
Fireside Chat w/ Investindustrial

11:00 - 11:50 am
ROSI Roundtable: Monetizing Sustainability Initiatives Across Industries

11:50 am - 12:50 pm
Lunch

12:55 - 1:10 pm
Trends in Technology

1:10 - 1:45 pm
2022 Sustainable Market Share Index

2:15 - 2:25 pm
NYC’s Climate Transition

2:25 - 3:00 pm
Capital for Climate Commitments

3:00 - 3:20 pm
Practitioners’ Guide to Embedding Sustainability

3:20 - 4:00 pm
Coffee Break

4:00 - 5:00 pm
Breakouts:
- Embedding Sustainability Strategy
- ROSI & Circularity
- ROSI & Sustainable Sourcing
- Stakeholder Mapping & Materiality
- Marketing & Communications

5:00 - 6:00 pm
Happy Hour
ESG IN BLACK AND WHITE
THE MEDIA’S ROLE IN SUSTAINABILITY CULTURE WARS

Heather Clancy
VP & Editorial Director
GreenBiz

Amy Cortese
Editorial Director
ImpactAlpha

David Gelles
Climate Reporter
The New York Times

Mindy Lubber (Moderator)
CEO and President,
Ceres

Gillian Tett
Chair, Editorial Board &
Editor-at-Large, US, Financial Times
ROSI™ ROUNDTABLE
MONETIZING THE RETURN ON SUSTAINABILITY INVESTMENT

Gary Cohen
President
Healthcare Without Harm and Practice Greenhealth

Virginia Covo
Head of Sustainability, North America
AB InBev

John Platko (Moderator)
Managing Partner
ALO Advisors

Michael Tears
Senior Director, Energy & Environment
Kimberly-Clark
LUNCH BREAK

Programming will continue at 12:50pm EDT
TRENDS IN TECHNOLOGY

Nana Baffour
Chairman, CEO, and Chief Cultural Officer
Qintess
Maximizing Sustainability through Data and Technology Innovation

PRESENTED BY:
NANA BAFFOUR, CFA
Global CEO and Chief Cultural Officer, Qintess
The world demands an action - the moment is now for a more sustainable ecosystem driven by technology innovation and data.
THINK GLOBAL

How do we respond to challenges in our businesses and everyday lives?

Our ability to create sustainable solutions is critical for market transformation and improving people's lives.
CREATE SUSTAINABLE SOLUTIONS

Data Analytics + Innovative Technologies = Sustainability

Key impact areas:

- ESG Reporting
- Supply Chain Management
- Manufacturing Efficiency
- Impact Assessment
- DEI Initiatives execution
ESG REPORTING AND IMPACT ASSESSMENT

ESG Data Monitoring Dashboards:
- Integrated ESG data platforms

Energy Management Systems:
- AI driven platforms to track energy consumption
SUPPLY CHAIN MANAGEMENT

End to End Blockchain:
- Promote more ethical sustainable sourcing

Robotics and Automation:
- AI powered tracking and transparency
MANUFACTURING EFFICIENCIES

Waste Management:
- Executing a circular economy strategy
- Advanced Recycling using AI and Machine Vision

Production Efficiency:
- Industrial Automation (smart censors, cloud computing,
- Industrial IOT (Additive manufacturing/ 3D printing)
DEI INITIATIVES

1. Employment
   - Recruiting
   - Employee Management

2. Healthcare
   - Data Integration Technologies
   - Robotics and Automation

3. Smart Cities
   - Water Conservation Technologies
   - Smart Traffic System Mgt
Our dependence on Technology Innovation and Data for sustainable solutions should be free from bias, projecting Social Inclusion for all.

Technology companies need to ensure that there is a strong focus not only on building sustainable solutions for clients, but also on projecting DEI initiatives internally at their workplace.
At Qintess, we have our Talents Academy, a framework that combines hard and soft skills, agility, design, and innovation.
CREATING A DIGITAL TRANSFORMATION DEI HUB

We aim for 50% of our trainees to be women, dedicating as well, additional quotas for minority professionals (Black, LGBTQI, disabled)
More than 40% of our leadership positions are held by women.
A CLEAR PATH TOWARDS MAXIMIZING SUSTAINABILITY

An Optimistic Vision:

The moment is now to transform our challenges into opportunities....

.... An opportunity to leverage high-level technology and data to design and build sustainable solutions

.... Accelerating human creativity and maximizing social impact
THANK YOU!
FIRESIDE CHAT

Paul Knopp
Chair and CEO
KPMG

Gillian Tett
Chair, Editorial Board & Editor-at-Large, US
Financial Times
NYC'S CLIMATE TRANSITION

Rohit Aggarwala

Commissioner, New York Department of Environmental Protection
Chief Climate Officer of New York City
PRACTITIONERS' GUIDE TO EMBEDDING SUSTAINABILITY

Chisara Ehiemere

Senior Research Lead, ROSI
NYU Stern Center for Sustainable Business
Why Produce an Embedded Sustainability Guide?

**The challenge:** companies are working to understand and address sustainability risks and opportunities with inadequate background and tools.

**The opportunity:** a guide that provides:
- Step-by-step practical guidance on how to build a sustainability strategy, culture, governance and reporting/communications
- Case examples from companies
- An analysis of common barriers and how to address them
- An embedded sustainability maturity model for self-assessment

Generous support provided by
What is Embedded Sustainability?

Sustainability is embedded when the proactive management of material sustainability issues and a balanced approach to the needs of stakeholders (including shareholders) are completely and effectively integrated into the company’s business strategy with the goal of creating positive societal value as well as better financial returns.
Why Embed Sustainability Core to Business Strategy?

Provides a total quality management approach through a sustainability lens:

- Identify and mitigate environmental, social and governance risks
- Identify growth and innovation opportunities
- Identify operational efficiencies
- Unlock opportunities to increase sales and customer loyalty
- Increase ability to attract and retain talent
- Improve stakeholder relations (including suppliers)
- Increase positive media coverage and reputation
Examples highlighted
Process Steps

Section 1. Design Your Corporate Strategy
Section 2. Create a Culture of Sustainability
Section 3. Governance and Organizational Structure
Section 4. Communications and Reporting
Section 1. Design Your Corporate Strategy, Steps 1 to 4

**Step 1:** Determine Material ESG Factors for the Company
*Strong performance on material issues leads to better results*

**Step 2:** Map and Engage Stakeholders
*Identify opportunities for learning and collaboration*

**Step 3:** Create a Materiality Matrix
*Internal analysis and stakeholder views to prioritize efforts*

**Step 4:** Develop Your Sustainable Business Strategy
*Plan for prioritized issues and create baseline*
Section 1. Design Your Corporate Strategy, Steps 5 to 8

Step 5: Develop Organization-Wide KPIs
   Develop outcome and impact-based KPIs

Step 6: Develop and Implement Action Plans for Goals
   Timing, resources and activities

Step 7: Identify and Recruit Partners and Collaborators
   Includes NGOs, precompetitive partnerships

Step 8: Understand and Track ROSI™
   Identify value drivers and monetize results
Section 2: Create a Culture of Sustainability

Includes the company’s beliefs, attitudes, and values at the core of their business operations and how they affect employee engagement:

- Ensure vision, mission, purpose, and values align with sustainability; act ethically
- Address Employee Relations and Diversity, Equity & Inclusion
- Assess and Manage Culture Change
- Employee Training

Our Purpose is "To Stand Together for the Future of Flavor."
Our Vision is "A World United by Flavor—where healthy, sustainable and delicious go hand in hand."

– McCormick*
Section 3: Governance and Organizational Structure

Evaluates the structural processes in place to promote and monitor sustainability integration across business functions

- Board Governance
  - Sustainability committees, ESG credentials
- Leadership, Management and Accountability
  - Capital Allocation
  - Organization-wide KPIs and work plans
  - Executive compensation tied to results
- Structuring an effective sustainability function
Section 3: Governance and Organizational Structure

Example: Structuring an impactful sustainability function – not a one-size fits all, and considerations include

- CEO prioritization and visibility
- Sustainability function aligns with the way the rest of the organization works
- Sustainability function has the authority to have cross-departmental and cross-functional reach
- Buy-In from the finance function
Section 4: Communications and Reporting

Discusses how the company communicates its sustainability values and commitments to internal and external stakeholders

- Employee Communications
- Communicating with Investors
- Communication with Suppliers
- Communication with Customers and Consumers
Navigating Barriers

Some barriers that are addressed are:

• Our employees know that sustainability is important, but they don’t have the knowledge they need to take action

• We have conflicting KPIs across departments

• I am having some difficulty making the consumer argument and can only find anecdotal proof that consumers want these products and will pay more for them

• We are concerned about setting aggressive public (or even internal) goals for fear of missing them

• I feel stuck in bureaucratic inertia
How Embedded is Sustainability Within My Organization?

- Corporate Strategy – Evaluates the degree to which sustainability is integrated into core business operations. It has a higher weighting as it is the backbone of embedding sustainability – 40%

- Governance – Evaluates the structural processes in place to promote and monitor sustainability integration across business functions - 30%

- Culture – Evaluates the company’s beliefs, attitudes, and values at the core of their business operations and how they affect employee engagement - 15%

- Communications – Evaluates how effectively the company communicates its sustainability values and commitments to internal and external stakeholders- 15%