



ESG Reporting in Food & Health Sector

Standards & Metrics for Small and
Medium Private Equity Firms

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Contents

2	Acknowledgements
3	Abbreviations
4	Executive Summary
6	Importance of ESG and the Food & Health Sector
10	ESG Reporting: The Good, The Bad, and the Opportunities
13	Comparison of External Reporting Standards
15	Comparison of Internal Reporting Metrics across PE Firms
17	Reporting recommendations for SMPE
19	Appendix
25	Sources

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List of Abbreviations

AI: Artificial Intelligence
BEE: Black Economic Empowerment
BIA: Business Impact Analysis
BOD: Board of Directors
CAGR: Compound Annual Growth Rate
CDSB: Climate Disclosure Standards Board
CSR: Corporate Social Responsibility
ESG: Environmental, Social and Governance
EU: European Union
GFSI: Global Food Safety Initiative
GHG: Greenhouse Gas
GMO: Genetically Modified Organism
GRI: Global Reporting Initiative
IA50: Impact Assets 50
IIRC: International Integrated Reporting Council
IMP: Impact Management Project
INEM: International Network for Environmental Management
IR: Integrated Reporting
LP: Limited Partners
MSCI: Morgan Stanley Capital International
NASDAQ: National Association of Securities Dealers Automated Quotations
NMFR: Near Miss Frequency Rate
PR: Public Relations
PRI: Principles for Reporting Standards
RSP: Responsible Sourcing Principles
SASB: Sustainability Accounting Standard Board
SDGs: Sustainable Development Goals
SMPE: Small and Medium Private Equity Firms
SROI: Social return on Investments
TCFD: Task Force on Climate-Related Financial Disclosure.
TRIR: Total Recordable Incident Rate
UNCED: United Nation Conference on Environment and Development
UNGC: United Nations Global Compact
USDA: United States Department of Agriculture
WBCSD: World Business Council for Sustainable Development
YoY: Year over Year

Executive Summary

E, S, and G together have become three of the most popular letters before ‘Investing’ over the last decade and there are only signs of its acceleration. ESG Investing is a framework that takes into consideration a company’s Environmental impact, Social Impact and Governance structure as well as its financial performance to strategically determine their investment decisions. What was once a niche market has made its way to the mainstream. A 2018 Deloitte Research predicts that ESG-mandated assets could make up ½ of all managed assets in the U.S. by 2025 (Appendix, Figure 1)¹ and the 2018 U.S. Trust Wealth and Worth Survey estimates that new investments in ESG funds would add ~\$20T in the next two decades.² COVID-19 and the rise of racial inequality awareness has only resulted in heightened scrutiny of any given company's environmental and social impact across their supply chain. With research demonstrating the once believed large trade off between financial return and sustainable impact is virtually non-existent, the expectation is that companies do both.

In parallel with the rise in ESG at large, we have seen a food and health revolution. Between 2020 and 2024, the health and wellness food market is expected to grow at a CAGR of 6% with a key driver being the increasing adoption by consumers of healthy eating habits³. Millions of dollars from investors are flowing into this space; all of whom are expecting a strong ROI and

significant impact within the ESG framework. However, like for all ESG companies, the devil is in the details.

Major criticisms with ESG investments are that:

1. Some use it only for marketing purposes without real effort to drive impact.⁴
2. There is reporting fatigue due to the variety of metrics and standards out in the market.⁵
3. For smaller firms there is a difficulty in funding the metrics, and thus a difficulty for stakeholders to compare across investments.⁶

Our study focuses on this tension experienced by small to midsize private equity firms (SMPE), as defined by assets under management between \$50M- \$250M in the food and health sector when it comes to reporting. We focus primarily on U.S. and European firms who have been leaders in these investments. LPs rely on PE firms for reporting and PE firms rely on portfolio companies to provide the data. The aim of the study is to develop recommendations for SMPEs and their portfolio companies who have limited resources to best demonstrate their strategy and full impact of their investments. The study also provides a comparison of external reporting goals/standards such as U.N. Sustainable Development Goals (SDG), Sustainability Accounting Standard Board (SASB), GRI

(Global Reporting Initiative), Task Force on Climate-Related Financial Disclosure (TCFD), Principles of Responsible Investments (PRI), and Impact Management Project (IMP) as applicable to SMPEs.

Through first-person interviews with relevant industry stakeholders and extensive secondary research, we identified best practices on approaches and key metrics across the food value chain that SMPEs can implement in their own reports, which are:

1. Stakeholder Management to identify issues that are most pertinent to strategy.
2. Leverage frameworks like Impact Management Project to integrate metrics at a small scale that can then be built as a stepping stone to different standards like SASB and GRI for reporting as firms grow.
3. Create the first lowest common denominator nutritional health metrics around nutrient ratios vs FDA nutritional guidelines.
4. Utilize third party ESG reporting software to help with cost concerns.

The goal for so many ESG investments at the core is to drive lasting, sustainable impact that will pay off in dividends, not only financially, but also for the environment and society. We also know what is measured matters, and what matters is measured. Reporting is a key in

achieving that goal. Through choosing effective metrics in both external and internal reports, firms will better articulate and integrate ESG into their strategic vision to solve the complex problems our world is increasingly facing across the food supply chain.

Importance of ESG + Food & Health

ESG Investing is Growing and Why

At the origination of ESG, back in 2004-05, there were only 50 CEOs at top firms that had signed on to a ‘pie in the sky’ initiative to report on their responsible investments each year, with the goal of helping build a bridge between sole financial focus and environmental and social focus. In 2018, assets under management under socially responsible investing strategies in the U.S was \$12T⁷. It is expected to grow at 16% CAGR, become 1/3 of all managed assets by 2025⁸, and add \$15-20T over the next two decades⁹.

When digging into this exponential growth, it is evident that the motivations are three fold:

1. Changing Demographics and Preferences

The first motivation is driven by the clients. In a 2020 Accenture survey, 73% of financial advisors said their clients are asking about ESG on a daily basis¹⁰. Those clients are now looking different than in years past. Women, Millennials/Gen Zennials, High Networth Individuals, and the intersection of these three identities have already begun and will continue to become the new face of investors.

Women comprise 57% of the U.S. labor force¹¹, control 2/3 of the annual spending¹², and over 1/2 of these women are the primary

breadwinners in their household¹³. In prior generations, many women left the investment decisions to their husbands. That mentality is being upended quickly. Holding 60% of all personal wealth and 51% of all stocks in the U.S¹⁴., more women are looking to drive their investments and specifically into ESG (Figure 2)¹⁵.

Millennials and Gen Zennials are young and the investors of the future. Millennials are the largest portion of the U.S. population, roughly 72.1M people¹⁶. As baby boomers retire, there is an expected \$30T of wealth to be transferred to Millennials¹⁷. They are in the prime earning years of their life and investing differently than the generations before them. A 2019 Morgan Stanley Institute for Sustainable Investing report stated that 95% of millennials were interested in sustainable investments and 57% would have stopped investing or declined to invest in a company based on the company’s impact on people’s health and well being¹⁸. The next generation, Gen Zennials, makeup 67.17M in the United States¹⁹ and are on track to be the most diverse generation and dubbed the “We Generation,” as they see the problems facing the world as collective problems with collective solutions²⁰. They have a keen interest in climate change and social issues and are key drivers in ‘cancel’ culture. Both generations are incredibly focused on physical and mental wellbeing. Mintel research illustrates that over 60% of millennials feel that their generation is

more focused on health than any generation before them, focusing not on just specific diets, but ingredients as a whole and its effects on mental and physical wellbeing²¹. 80% of Gen Zennials plan to go meatless 1-2x per week due to their increased focus on health and environment²². They are also willing to pay a premium for healthier products²³. These mindsets will also be how they view future investments.

High Networth Individuals in the U.S. total roughly 5.91M people²⁴, 610,00 of whom are millennial²⁵ all who have financial investable assets of at least \$1m. 27% of High Networth Individuals said in a 2020 Capgemini World Wealth report that they were interested in sustainable products and plan to allocate 41% and 46% of their portfolio to businesses pursuing ESG by 2020 and 2021, respectively²⁶.

2. Covid 19 accelerating focus on E and S

In Q1 2020, \$45.6B flowed into the global sustainable universe, +90% YOY²⁷. The U.S. had \$10.4B of the inflows. While the market has been extremely volatile due to Covid 19 with total investments down roughly 18%²⁸, ESG funds were only down 12%. Interest in sustainable investing jumped from 71% to 85% between 2015 and 2019²⁹. ESG investors are naturally looking for long term impact and thus long term investments. Any weak performance will just be bad turbulence on a very long flight. But make no mistake, 2020 is definitely an anomaly not only with Covid, but also the social unrest around racial

inequity. People are noticing how interrelated the environmental, health, and social issues are and focusing their energies and money in driving impact there. Jennifer Tonda of Cap Markets said that there has been a shift in the weighted placement of investment between E & S. “Last year green bond issuance was 80% and social bond issuance was 20%... There has been a switch to 60% green and 40% social³⁰.”

Particularly for the food and agriculture sector, Covid has been a massive accelerator of disruption, affecting not only food security and nutrition but also the livelihoods and safety of labor all across the supply chain³¹. Investments will have to adjust to the changing consumer needs for healthier and safer foods, and to help create a more resilient supply chain.

3. New Age Technologies

ESG being only two decades old, the most difficult issue funds had to deal with was around data. In recent years, AI and alternative data is providing more and better quality information for investment managers to understand ESG investments. Companies like Enhelix Signal AI and TruValue using data mining and AI translate big data into curated and actionable and at times real time ESG reporting^{32,33,34}.

Parallel in Food & Health Trends

The global population is expected to increase to 9.8 billion by 2050, which will drive food demand to increase by >50% and animal based foods by 70%³⁵. Because the food and agribusiness industry accounts for a significant portion of the increased greenhouse gas emissions (~25%)³⁶ and water scarcity (~70% of water withdrawal)³⁷, there is a focus on addressing the environmental and social impacts and gaps through investments across the food supply chain. Two of the main conventional gaps being addressed are the *food gap*, the difference between the annual amount of food required in 2050 (measured in crop calories) and the annual amount of food produced in 2010, and the *GHG mitigation gap*, the difference between agriculture- related GHG emissions projected for 2050 and the 2050 globally agreed target³⁸. To close the food gap by 56% and the GHG mitigation gap by 11Gt³⁹, various companies have looked across the supply chain between farm and fork for technological innovations. Some include crop additives to reduce methane emissions, improved fertilizers and crops to reduce nitrogen runoff, and plant-based substitutes for conventional animal proteins⁴⁰ to curb GHG emissions, water and land use. The focus of these tend to drive the reduction of environmental impacts.

Some are concerned that the directives to meet the food demand and reduce some environmental impacts like GHG emissions will not account for other externalities

such as biodiversity and nutritional value of crop production⁴¹ to properly feed the growing population. A research team out of the University of Guelph argues that there is a nutritional gap in the current agricultural system⁴² (See table below).

Servings/ Person	Current Production	Recommended by nutritionists	GAP*
Grain	12	8	+4
Fruits & Vegetables	5	15	-10
Oil & Fat	3	1	+2
Protein	3	5	-2
Sugar	4	0	+4

* + is Overproduction, - is underproduction

To course correct would actually be both beneficial from a health perspective as directed by nutritionists as well as an environmental one, requiring 50M fewer hectares of land⁴³. The supply side could become a reality with the evolving consumer preferences and regulatory standards for more affordability, diversity, quality and nutrition⁴⁴. Consumers are becoming increasingly more aware of the impact their eating habits have on their health and the environment⁴⁵. There is a rise in flexitarian diets, whereby one eats mostly plant-based foods, while allowing for meat and other animal products in moderation. 1 in 5 Americans have identified as a flexitarian, citing health as the primary driver, animal safety as the secondary driver, and environmental concerns as tertiary driver⁴⁶. There is also a rise in vegetarians, vegans, macro and

micro nutrients, etc. While some of these are trends that don't necessarily result in healthier humans due to the complex and individual nature of biology as it relates to diet, movement, and genetics, it is clear that there is renewed focus on high nutrition food consumption. Consumers want healthier options and products that are produced in a sustainable manner; and they are willing to pay more for it⁴⁷. Thus, value creation in the food and agribusiness sector is inextricably linked to health. With the expectations that such investment trends will continue, investors are finding more reasons to back opportunities in growth areas such as environmental and socially friendly food production, and health focused food production.

- In 2019 Beyond Meat, an example of an environmentally sustainable company, IPO has ignited the plant-based food industry⁴⁸.
- In August 2020, Vital Farms had a 60% jump after IPO, demonstrating the support of health focused, socially and environmentally sustainable companies⁴⁹.
- Oatly and Califa Farms are dairy alternative companies that have raised \$200M⁵⁰ through celebrity investors and \$225M⁵¹ in Series D funding, respectively.
- Danone, a large conglomerate has been driving 6-7 acquisitions every year

since 2016 that all in healthy or sustainable or alternative proteins, expecting these to be strong growth areas⁵²

ESG Reporting: The Good, The Bad, & The Opportunity

ESG reporting goes by many names in corporate spheres. It is sometimes known as corporate social responsibility (CSR) reporting, Sustainability reporting, or even Citizenship reporting. Regardless, they all highlight their interactions with the environment, employees and communities they serve. They communicate information about the long term vision, economic value, contributions to a sustainable global economy, taking into consideration the main pillars of impact within the Environment, Social, and Governance framework. There are key performance indicators (Appendix, Figure 3)⁵³ within each pillar that helps map sustainability measurements as well as risks. Like all things, there are benefits and areas of improvement, which lead to opportunities.

The Good

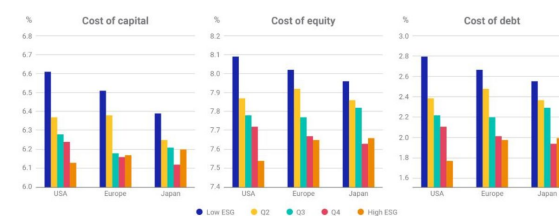
The primary benefit for reporting on ESG is the increased awareness of risk and opportunities which lead to better performance and as a byproduct lower cost of capital⁵⁴.

For many years, it was assumed that there was an inherent trade off between driving environmental/social impact and financial return. A meta analysis study by Clark, Feiner and Viehs analyzed over 200 studies and found that of the studies⁵⁵:

- 88% demonstrated that solid ESG practices result in better operational performance
- 80% demonstrated that stock price performance has a positive relationship with good sustainability practices
- 90% of the cost of capital studies demonstrated that sound ESG practices lower cost of capital.

MSCI, an ESG ratings financial company, ranked the top ESG companies, and those companies recorded better performance than the average S&P 500⁵⁶. These firms through ESG identify potential “blunders” that may result in PR or regulatory crises, while also finding new revenue opportunities. This added information enables investors to more accurately value the firm's future performance. Due to the better risk mitigation, cost of capital across regions decreases⁵⁷.

Relation between ESG scores and cost of capital differed within developed regions



Monthly averages were reported over the period from Dec. 31, 2015, to Nov. 29, 2019. The average numbers of companies in the U.S., Europe and Japan over the analysis period were 538, 452 and 319, respectively.

Because of the clear link between business performance and ESG metrics, ESG reporting will become the future of finance. This is no longer a niche market, and has become the mainstream.

BlackRock CEO Larry Fink penned a

letter⁵⁸ to all CEOs earlier this year urging everyone to take climate change as an impending risk to long term growth that needs to be accounted for within financial valuation. His call to action was across all major institutions to take a stakeholder approach to address issues such as “the diversity of its workforce, the sustainability of its supply chain, or how well it protects its customers’ data.” Reporting provides transparency and tracked progress towards their sustainability goals to help build the strong relationship with all stakeholders. That relationship will provide insights to better operate business and deliver financial results, and thus becomes a cycle of long term growth. With the added support, we expect improved accountability and transparency by a number of companies toward sustainability goals.

The Bad & The Opportunity

When discussing all the positive outcomes from ESG companies, the operative words are “*solid* ESG practices”, “*good* sustainability practices”, “*sound* sustainability practices. The difficulty with ESG reporting many times is ensuring that the reporting of companies actually reflect the “solid, good and sound” practices of said companies.

Problem: There has been concern about some bad actors who have used ESG as solely a marketing term, a performative tactic to illustrate their intentions or basic disclosure but with little or no follow through on progress. This leads to a lot of

greenwashing. They also potentially will cherry pick the metrics that paint their company in a good light, while failing to disclose the negatives that have material impact.

There is a *key opportunity* to institute a process that engages stakeholders at the front end to ensure all companies begin with the issues faced in the sector, identifying what is material, and tracking accordingly. This will help differentiate those who are talking ‘the talk’, and those who are walking ‘the walk’.

Problem: Many firms have identified non-uniform or commonly accepted reporting standards as an issue and have been voicing their concern to move everyone to a more consistent framework. In that venture, standards like UN SDG, SASB, GRI, TCFD, PRI, etc. have emerged. They each help companies to report their social and environmental impact in addition to their financial metrics. Due to the lack of education of how to best use each reporting standard, many feel reporting fatigue with disclosure for disclosure sake rather than for purpose.

The *key opportunity* is to better educate companies on the key metrics in each standard that will drive impact. Investors can play a role by providing feedback on the quality and substance of the reports.

Problem: For both large and small enterprises, inconsistent availability and quality of data is always a concern. But for SMPEs and their portfolio companies,

there is a substantial cost in both time and money for usually very lean teams to deliver sustainability reports with massive numbers of metrics. Some have to reach out to costly consultants to help with data collection, report preparation, publication, assurance, and ultimately the ongoing tracking of the metrics, which could require new IT systems.

The *key opportunity* is to help SMPE firms first identify the right metrics that will drive their strategy and then provide them with inexpensive tools and technologies, like AI or International Network for Environmental Management (INEM) Tool Kit⁴⁰ to help support reporting and to make it less cumbersome of a task. The focus for SMPEs should be centered on integrating the mindset into the strategy from the onset, and then deliver on the pertinent metrics.

Problem: With the renewed focus on physical and mental wellbeing amongst the younger generations, and its interrelated nature with the macro topics of ESG, there is an argument for a 4th macro topic: Human Health. Many firms believe that there is a lot of growth in this macro topic, and a lot of nuance in driving positive impact that is separate from the E and S components. However, there are currently no metrics to help guide the investments.

Different standards like SASB and GRI do not create metrics in this space due to the complexity of health metrics that are quite individual. They would provide an unbiased view standards that are not based on the trends of the day (i.e. vegan, etc.)⁵⁹




The *key opportunity* is to begin the process of developing metrics that will aid companies and investors to drive more nutritional products and services across the food supply chain. The expectation would be that it will evolve with more refined science, just as the metrics of sustainability have evolved over the years.

To best understand the validity of these *opportunities*, we will dive into the External reporting standards (to best understand which is used for particular purposes or intentions), and the Metrics used by SMPEs (to learn best practices and finally provide recommendations on reporting).

Comparison of External Reporting Standards

External reporting standards have emerged throughout the past decade to help firms strategize their impact goals and demonstrate their delivery. With 6 major frameworks of goals and standards like UN Sustainable Development Goals, SASB, TCFD, PRI, GRI, and IMP, firms have the ability to choose amongst and multiple of them based on their impact strategy. To best identify which of the many existing reporting standards/ goals would be best for any given company, we've created the following comparative guide.

The Many ESG Standard Frameworks

	Why?	How?	Pros:	Cons:
 <p>Audience: All Stakeholders⁶⁰</p>	<ul style="list-style-type: none"> To align to a diverse set of global issues that help dictate strategy 	<ul style="list-style-type: none"> Identify relevant goals, and choose metrics to track Adhere strategies to SDG (Ex. Impact finance) 	<ul style="list-style-type: none"> 13000 corporate participants over 170 countries Specific targets towards food and health 	<ul style="list-style-type: none"> Flexibility allows for cherry picking metrics or greenwashing goals Will still use 1 other standard
 <p>Audience: Investors^{61,62}</p>	<ul style="list-style-type: none"> To marry sustainability goals to value creation for investors Designed to align with SEC Six topics and thirteen metrics per industry across 77 industries 	<ul style="list-style-type: none"> Use Materiality table to understand which of the 13 metrics to report 	<ul style="list-style-type: none"> Most streamlined and closely aligned to financial metrics. Tailored to U.S. investors with metrics across 77 industries 	<ul style="list-style-type: none"> Audience is very specific, and lacks nuance Short history with companies reporting in various ways Companies adhere to SASB tend to be large corporations
 <p>Audience: Investors⁶³</p>	<ul style="list-style-type: none"> To focus in on how financial sectors take on climate specific issues including governance, strategy, risk management, metrics and targets 	<ul style="list-style-type: none"> Answer qualitative questions to identify risks added to other standards' metrics. SASB issued implementation guidelines on TCFD 	<ul style="list-style-type: none"> Very specific on climate-related issues and tied with financial metrics Can be included in 10-k or non-financial reports 	<ul style="list-style-type: none"> Just recommendations, No metrics provided. Only focuses on E and G, when there is a trend towards measuring S as well.



Audience: All Stakeholders⁶⁴

Why?

- Developed by investors to state ambition to incorporate ESG
- Largest voluntary corporate sustainability initiative

How?

- Become a signatory for quasi-mandated yearly reporting on progress

Pros:

- Industry specific goals, in the company of big names

Cons:

- Flexibility allows for cherry picking metrics, will still use 1 other standard



Audience: All Stakeholders^{66,67}

- To demonstrate impact across multiple stakeholders
- Core reporter: Basic issues
- Comprehensive: all the metrics within the required topics

- Use stakeholder management to identify material metrics as a core or comprehensive reporter (Figure 6)⁶⁵

- People/issue focused and metrics to understand total impact
- Global scale and broad range of stakeholders

- Can be overwhelming with the amount of metrics and complexity
- Metrics are less industry specific
- Only 20 SMEs in the North America reported to GRI



Audience: All Stakeholders⁶⁸

- To assess impact vs doing nothing to compare improvement as primary goal
- Identify impacts and understand the context around the impact driven

- Identify impact as +/-, and whether intended or not
- Impacts are measured over 5 dimensions in what, who, how much, contribution, risk
- Create a narrative around the metric
- The nuanced view of impact and contribution of investments

- Structured and measurable framework and GRI
- Connected to UNSDG and GRI
- Great tool for smaller companies and investors

- Relatively new and untested

Companies can report the metrics shown in the tables on a voluntary basis. The frameworks we have illustrated are only a portion of the existing ones in the market. The number of sustainability reporting instruments globally has more than doubled since 2013 (Appendix, Figure 4)⁶⁹. Government regulations have been the driving force for the increase. Financial market regulators are also active in issuing sustainability reporting instruments (Figure 5)⁶⁹. For example, NASDAQ has launched its new global ESG reporting guide, which helps companies with their ESG data disclosure.




Among all the governments and entities, the EU is taking the lead on ESG regulations and tends to be trendsetter in this space, and thus will be informative for what's to come in the U.S. The EU is now looking at the non-financial directives and for firms to adopt new rules that will require investments to disclose environmental and social risks in their investments from 2021⁷⁰. Firms which claim to pursue a green or social investment strategy will have to detail the impact of their investments. Furthermore, sustainable investments have to be scrutinized under strict criteria and supported by scientific evidence. The EU currently lays out six objectives including climate change mitigation, pollution prevention⁷⁰. As long as the investment contributes to one of the six objectives without seriously harming any of the others, it can be labeled as environmentally sustainable.

While the EU has mandates, ESG reporting and disclosure remain voluntary in the US. Even though there are no unified standards to determine sustainability, there is an increasing demand and pressure for companies to disclose ESG risks and data from stakeholders⁷¹.





Comparison of Reporting Metrics by Food & Health Sector PE Firms

Once a SMPE understands why and how they would use the ESG reporting standards, they can illustrate them in a variety of ways to their investors. We found that while some do publish sustainability reports, many are still at an ask and provide model or rely on certifications or company missions to land their messaging. Those who do publish use a combination of reporting standards and unique features like proprietary metrics, partnerships, or specific calculations. Through looking at a number of SMPEs, we aimed to parse out how to illustrate their impact and the nuanced value of their investments.

PEs publishing sustainability reports

	About	Reporting Standards	Unique Features
 California, New York ⁷²	<ul style="list-style-type: none"> Focus on sustainable food chain investing Invest in control positions to impact financial and operational results Over \$5 billion AUM 	<ul style="list-style-type: none"> A signatory of the PRI and uses SASB Adheres to UN SDG goals and specifically focuses on “zero hunger” Peer Benchmarking and third-party judgement to identify material ESG topics 	<ul style="list-style-type: none"> Helps its portfolio companies quantify specific environmental metrics while helping them understand social performance Illustrate their investments across supply chain framework
 New York, New York ⁷³	<ul style="list-style-type: none"> Sustainable investments across the food value chain in India and South East Asia ~\$140-300M AUM 	<ul style="list-style-type: none"> Adheres to UN SDG goals 	<ul style="list-style-type: none"> The firm has 6 impact reporting principles and focuses on 8 primary areas of social impact The firm also calculates SROI (Social Return of Investment) and shows their calculations in report.
 Geneva, Switzerland ⁷⁴	<ul style="list-style-type: none"> Invest in the food and agriculture sector Define value with 4 dimensions: Risk, Impact, Time, and Return Focus on Intentionality and progress ~\$25-50M AUM 	<ul style="list-style-type: none"> Aligns goals and strategies to UN SDG goals Utilizes Impact Management Project 	<ul style="list-style-type: none"> Certified B-Corp Proprietary “Kharmax Score” rating system to codify if their investments are A- benefitting stakeholders, B&C- avoiding harm and D- no impact on stakeholders.

PEs publishing sustainability reports

	About	Reporting Standards	Unique Features
 Mumbai, Delhi ⁷⁵	<ul style="list-style-type: none"> Pioneered <u>agritech</u> investing in India. “Financial first” impact investor Seeks to deliver market-rate venture capital returns, while impacting the lives of Indian smallholder farmers and rural communities. ~130M AUM 	<ul style="list-style-type: none"> UN SDGs (SDG 1, SDG 2, SDG 6, SDG 7, SDG 8, SDG 9, SDG 12; and SDG 13) 	
 Portland, Oregon ⁷⁶	<ul style="list-style-type: none"> Focused on bringing scale to regenerative food production Sustainability-driven agriculture and food investment firm that currently manages two investment funds. ~midsize firm 	<ul style="list-style-type: none"> PRI UN SDG 	<ul style="list-style-type: none"> Awarded USDA Conservation Innovation Grant Detailed internal progress metrics Multiple Partnerships: <ul style="list-style-type: none"> California Water Action Collaborative Project Drawdown GIIN Stewardship Index for Specialty Crops
 Johannesburg, South Africa ⁷⁷	<ul style="list-style-type: none"> Zeder invests in the “agribusiness” industry. The firm is increasingly more involved in its core investments. ~11,851M Rand AUM 	<ul style="list-style-type: none"> Doesn't report to <u>an</u> particular standards, rather strong operating financials with qualitative narratives of investments. 	<ul style="list-style-type: none"> Zeder also subscribes to the philosophy of black economic empowerment (“BEE”) and encourages its investee companies to undertake BEE initiatives.

PEs not publishing sustainability Reports

About



Chicago, Illinois⁷⁸

- It typically invests between \$5-15 million in each portfolio company over the lifetime of the investment.
- Often seeks diverse representation on the BOD of its portfolio companies.
- Prefers to lead new investments and often syndicate with other institutional investors.
- Does keep record internally of the ESG metrics for its portfolio companies, at year end. One of the firm's LP is an impact investor, who requires such disclosure.



Toronto, Canada⁷⁹

- Main focus is investing in expansion-stage companies in North America that promote health and sustainability in the food and agricultural sector.
- Portfolio companies typically have between \$1 – 30M in revenues at the time of its initial investment, and the firm aims to hold its positions for about seven years.
- Certified B corp in 2013
- Selected for ImpactAssets 50 in 2017 and 2018
- InvestEco Sustainable Food Fund is among 28 Best for the World Funds, which include investment funds that have completed the rigorous GIIRS Impact Rating.



Minneapolis, Minnesota⁸⁰

- Investment strategies are influenced by the senior leadership team's longstanding tenure with Cargill.
- Utilizes an "own & operate model", whereby it seeks out and validate capable and reputable operators who share its vision of the need for larger-scale farming to meet the world's food needs.



Westport, California⁸¹

- It was established as an impact investment manager and advisor focused on solving large-scale environmental problems through the deployment of high impact capital.



Radnor, Pennsylvania⁸²

- It is an early-stage venture capital platform investing in exceptional entrepreneurs leading revolutionary ventures in agriculture technology and food system innovation in the United States and Canada.



Davis, California⁸³

- It invests in the USA and globally in OECD and investment grade countries in food and agriculture companies on behalf of insurance companies and institutional investors.
- Investment size of \$25-75 million.
- The firm targets mature companies that are cash flow positive or have a high probability of becoming cash flow positive in the near term.



Dallas, Texas⁸⁴

- It is focused on partnering with experienced management teams across the agribusiness and food value chain through direct equity investments.
- It is active within each of the sector's primary verticals including farm inputs, handling and storage, commodity processing, and value-added food, feed, and ingredient manufacturing.



New York, New York⁸⁵

- NCH's 1st fully dedicated agribusiness fund raised \$1.2bn.
- NCH's agribusiness operations in Ukraine and Russia result in ~4 million metric tons of crops annually.



Beijing, China⁸⁶

- strong focus on the "Food Space", investing along the food value chain and consumer well-being.
- It invests in both domestic and foreign companies with China exposure through consolidation and growth strategies.
- The firm currently manages three funds.

Recommendations for SMPEs in Food & Health Sector

1. Stakeholder Management

The best way to improve ESG reporting and to minimize the associated risks and cost is to engage stakeholders at the early stages of the investment process. Most often people think that for a private equity fund, the key stakeholders are investors, employees, portfolio companies, retail customers, suppliers and regulatory organisations. And while these are all important stakeholders, it's important to keep in mind all stakeholders across the supply chain.

Paine Shwartz is a good example. It prepares an annual ESG summary report to illustrate the companies they have invested in across the agricultural value chain (Figure 8)⁸⁷. We recommend that Food & Health firms create a similar view to illustrate their impact across the value chain, whereby instead of categories on the left hand side, metrics can be detailed. This would enable firms to quantify portfolio-wide performance across the value chain that impacts various stakeholders. Furthermore, they create official ESG policy ranging from ESG integration to employee's roles and responsibilities to ensure that all the stakeholders understand that ESG issues play an important role in the investment decision process.

Investors now are more complicated as they now include institutions, wealthy individuals and impact investors. Before investing in a company, the fund needs to understand expectations from the key stakeholders and deliver the value proposition of the investment. Some may put more emphasis on the financial return, others may focus on the social impact; finding the balance among various interested parties is the key to success. Engaging stakeholders early can allow time to adjust strategies and pick the best fit ESG reporting standard. Furthermore, it can help stakeholders better understand the investment philosophy, other partners' interests, and the importance of ESG reporting.

2. Leverage simple frame work that builds to a more robust standard for reporting

We recommend using Impact Management Project as the first framework for companies. Due to its structure and connections to various other standards including UN SDG, GRI and others, it enables firms to build ESG into the strategy at the onset, which enforces positive and negative impact reporting. It also provides firms the ability to demonstrate the nuanced contributions and avoidances their investments have. Firms should use the most pertinent metrics that are available and create a step ladder that can result in either a SASB or GRI full metric report as the firm/ company grows. Impact Finance was able to use IMP to create a narrative around their metrics that aligned to certain SDGs. (Figure 9)⁸⁸.

It can be costly for smaller companies to create their own frameworks and conduct scientific research from scratch. We recommend that companies can choose standards as their guidelines and reference from various organizations that fit best with their different businesses. We recommend that one uses the materiality worksheet to identify aspirational metrics, feasible metrics, and available metrics.

When it comes to food & health, #3 principle of UNSDG was most cited, which most have employed as food safety. One example around Food & Safety was Mandala Capital, which uniquely gave the equation to their impact quantification (Figure 10)⁸⁹. We were surprised to hear that all the standards do not have specific nutritional metrics but given the trends and value created from this space, we expect it to grow.

Even though the U.S. based companies can report ESG on a voluntary basis, it may be a good idea to incorporate European standards into strategy. It is easier and better for companies to embed sustainability thinking and measurement in the early stages of a company to prepare for the potential regulatory changes and the COVID-19 can be a catalyst for ESG investing.

3. Beginning of the Health Metrics evolution

We expect Health, both physical and mental, will eventually become it's on macro topic as more science and data allows for useful and applicable metrics. Within the food and health sector, the current diet is complex and often very individualized, but we recommend building a set of metrics that enable companies to identify and drive investments that support at this point the lowest common denominator within nutritional values. For example, the first iteration can be concentrated on nutrient ratios of products, particularly focused on sugars, trans fats, sodium, omega6: omega 3, and key essential vitamins^{90,91}. Using these markers vs FDA aligned nutritional guidelines, firms can assess if the products they are investing in what would fit within a healthy diet. We expect that as modern nutritional space progresses, we will be able to build and adjust the metrics out further, but feel that the first step should start now.

4. Third Party Software

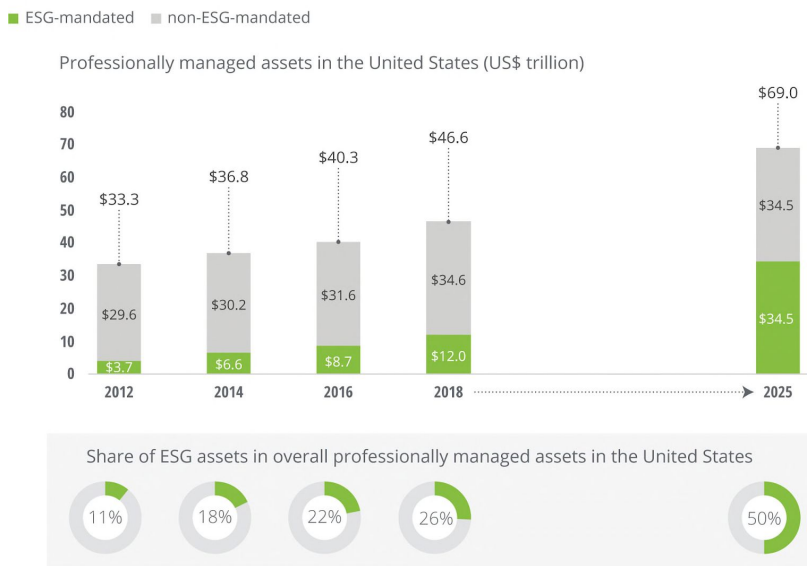
Instead of building up a professional team internally for ESG reporting, special softwares and artificial intelligence tools can help enable companies to report ESG across the organization. Softwares such as Greenstone, EnHelix and Accuvio provide solutions and services to help collect, manage, analyse and report the data required to fulfil companies' ESG compliance reporting requirements⁹². This can be a cost-effective option for most companies. For example, Accuvio starts only from \$5,000 a year and it includes major metrics such as SASB and GRI⁹³. An disadvantage for this option is that certain software may not have everything a company is looking for.

Appendix

Figure 1:

FIGURE 1

ESG-mandated assets could make up half of all managed assets in the United States by 2025



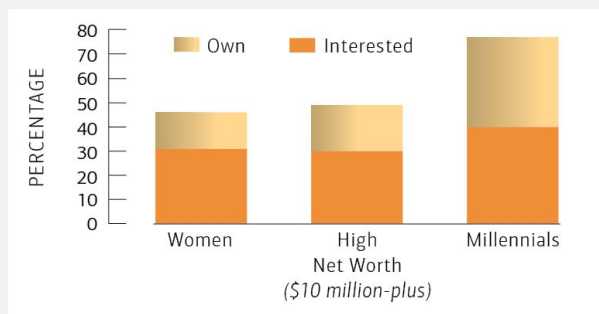
Source: US SIF Foundation data through 2018; Deloitte Center for Financial Services analysis through 2025.

Deloitte Insights | deloitte.com/insights

Figure 2:

Rising investor interest

New investments in ESG funds could total an estimated \$20 trillion in the next two decades. These demographic groups are taking the lead



Source: 2018 U.S. Trust Wealth and Worth Survey.

Figure 3:

Key Performance Indicators for Food & Agricultural Industry		
Environment	Social	Governance
Greenhouse Gas Emissions	Rights and well being of people in communities	Corporate Governance: BOD, Pay, independence)
Emissions from electricity & heating (% from renewable vs non-renewable)	Labor standards including child labor and bonded slave	Internal control and risk management
Energy Usage	Human capital management	Disclosure of information
Water Usage	Women share of workforce/management	Lobbying
Waste Management	Data protection & privacy	Political contributions
Reducing harmful pesticides used in crops to mitigate runoff and overapplication		Whistleblower schemes

Figure 4

Trends in sustainability reporting instruments

		2006		2010		2013		2016	
Reporting Instruments	Mandatory	35	58%	94	62%	130	72%	248	65%
	Voluntary	25	42%	57	38%	50	28%	135	35%
	Total	60		151		180		383	
Countries & Regions		19		32		44		71	(64 with instruments)

Figure 5

Figure 5: Number of instruments by issuing body, 2016

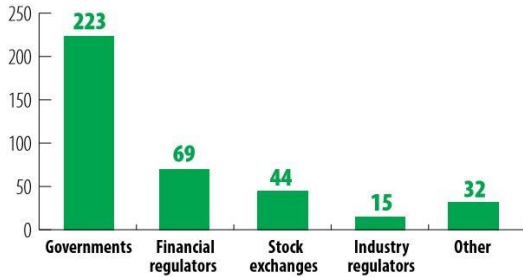


Figure 6: Aurora Organic Farm

GENERAL DISCLOSURES

102-1	Name of the organization	Aurora Organic Dairy
102-2	Activities, brands, products and services	Organic milk and butter for numerous retail store brands
102-3	Location of headquarters	Boulder, CO
102-4	Location of operations	United States of America; 6-7
102-5	Ownership and legal form	Privately held
102-6	Markets served	U.S. Food Retail Customers in all 50 states
102-7	Scale of the organization	86 ¹
102-8	Information on employees and other workers	38-39
102-9	Supply chain	8-9
102-10	Significant changes to the organization and its supply chain	2-3
102-11	Precautionary Principle or approach	N/A
102-12	External initiatives	N/A
102-13	Membership of associations	81
102-14	Statement from senior decision-maker	2-3
102-16	Values, principles, standards and norms of behavior	10; Core Values also highlighted throughout report
102-18	Governance structure	84
102-40	List of stakeholder groups	80-83
102-41	Collective bargaining agreements	0%
102-42	Identifying and selecting stakeholders	80-83
102-43	Approach to stakeholder engagement	80-83
102-44	Key topics and concerns raised	80-83
102-45	Entities included in the consolidated financial statements	86
102-46	Defining report content and topic Boundaries	80-83
102-47	List of material topics	5; 83
102-48	Restatements of information	87
102-49	Changes in reporting	None
102-50	Reporting period	2017-2018
102-51	Date of most recent report	September, 2017
102-52	Reporting cycle	Biennial since our first report in 2013
102-53	Contact point for questions regarding the report	Office of Sustainability: sustainability@aodmilk.com
102-54	Claims of reporting in accordance with the GRI Standards	This report has been prepared in accordance with the GRI Standards: Core option

COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS		
307-1	Non-compliance with environmental laws and regulations	None
419-1	Non-compliance with laws and regulations in the social and economic area	None
LABELING		
417-1	Requirements for product information and labeling	25
417-2	Incidents of non-compliance concerning product labeling information	None
417-3	Incidents of non-compliance concerning marketing communications	None
ANIMAL CARE		
G4-FP9	Animals by species or breed type	30
G4-FP10	Animal welfare policies and practices	27-35
G4-FP11	Total animals by housing type	30-33
G4-FP13	Non-compliance with transportation and slaughter standards	34
POLICIES ON ANTIBIOTICS AND HORMONES		
G4-FP12	Policies on antibiotics and hormones	35
FAIR PAY AND BENEFITS		
GRI 401-2	Benefits provided to full-time employees only	41
EMPLOYMENT OPPORTUNITIES AND RETENTION / TRAINING AND EDUCATION		
GRI 404-1	Average hours of training per year per employee	42 ³
GRI 404-2	Programs for upgrading employee skills and transition assistance	42
GRI 404-3	Employees receiving regular performance and career reviews	42
HEALTH AND SAFETY		
GRI 403-1 through 403-7	Management approach disclosures	45-47
GRI 403-9	Work-related injuries	45-47
RESPONSIBLE FARMING		
	Discussion of management approach and additional disclosures, as appropriate	54-65 ⁴
WATER		
GRI 303-1 through 303-2	Management approach disclosures	64-67 ⁴
GRI 303-3	Water withdrawal	64-67 ⁴
SOLID WASTE AND RECYCLING		
GRI 306-2	Waste by type and disposal method	72-73 ⁴
ENERGY		
GRI 302-3	Energy intensity	68-70 ⁴
GREENHOUSE GAS EMISSIONS		
GRI 305-4	GHG emissions intensity	74-77

¹ As a privately held Company, we have responded to most, but not all, of this disclosure due to confidentiality constraints.

² Reporting guidance provided by sustainability consultants with dairy industry expertise.

³ Average hours metric is provided in total; information is not collected by gender.

⁴ Accurate information not readily available for third-party suppliers. Also, as a privately held Company, our responses to some of these disclosures are in the form of intensities or distributions due to confidentiality constraints.

Figure 7:



Figure 8:

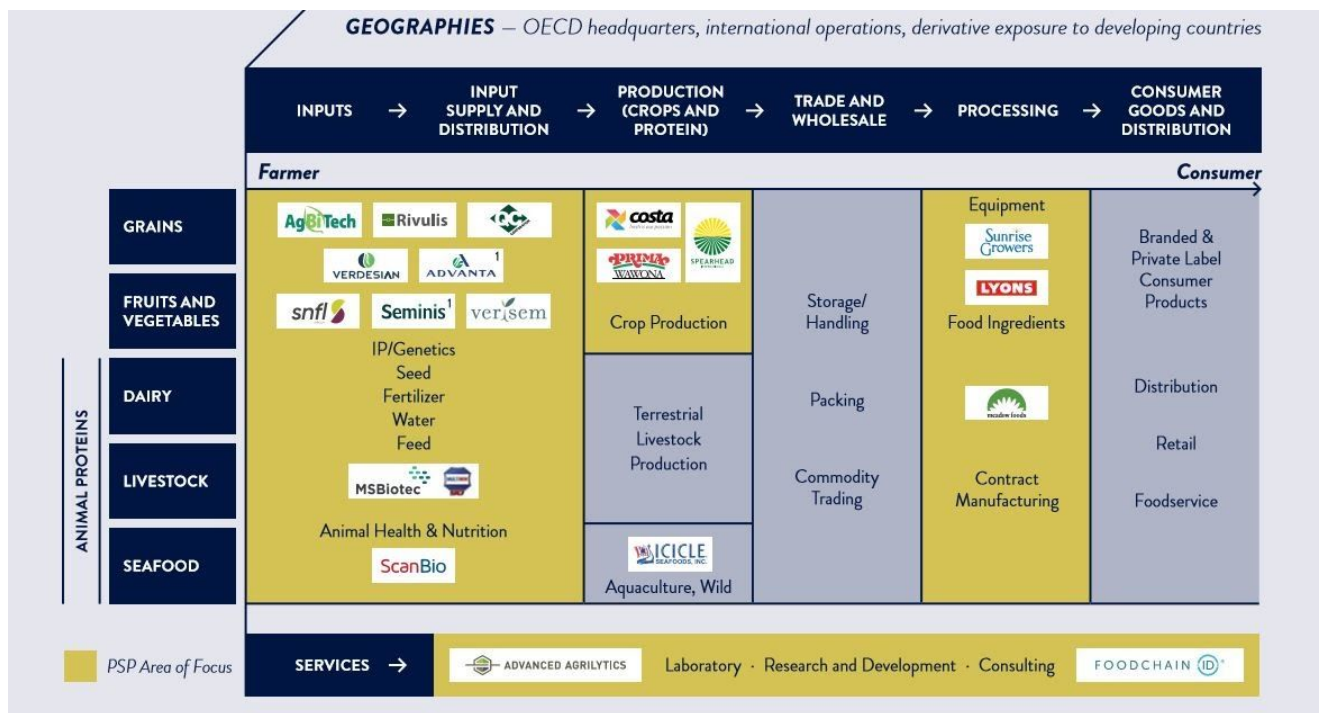


Figure 9:

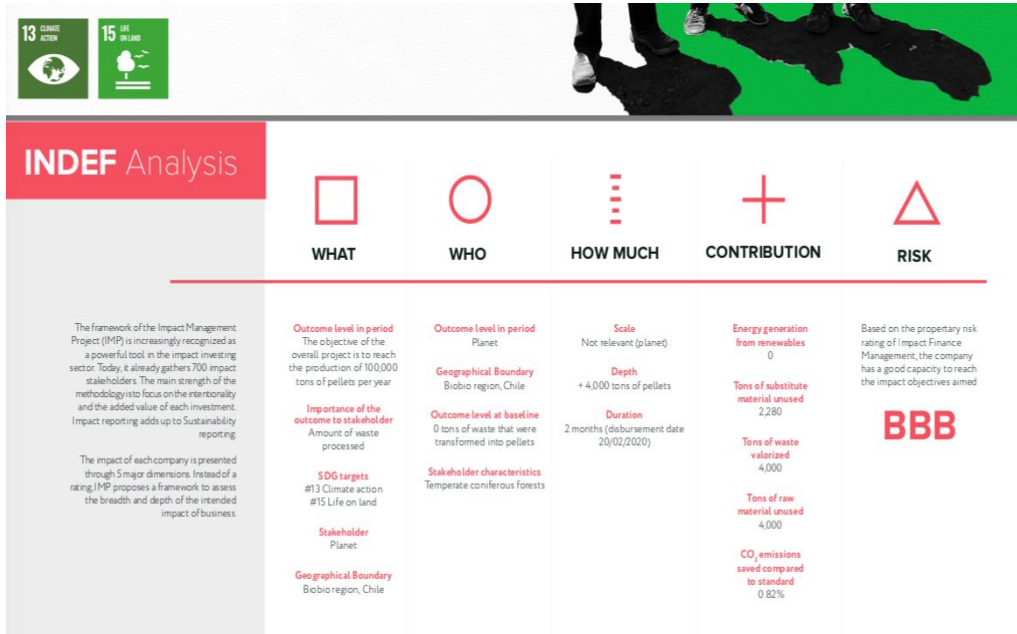


Figure 10:

STRENGTHENED FOOD SAFETY

Cumulative Total Impact
US\$365,252,270

Impact per \$ Invested
US\$1.6



How We Measure Impact

This metric measures the value added to the consumers in terms of illnesses or deaths avoided relating to foodborne diseases as a result of Mandata's investors' activities that strengthen food safety.

There are 2 primary activities involved in reducing consumers' exposure to contaminated food: cold chain technology and testing of processed foods. This metric measures the healthcare and economic cost savings of the avoided illnesses and deaths.

Impact per year = (Market share of cold chain capacity owned and leased x % Contamination risk avoided due to cold chain + Market share of cooler trucks owned and leased x % Contamination risk avoided due to cooler trucks + Market share of food tested x % Contamination risk avoided due to testing) x Estimated Indian population consuming packed or processed foods x Annual average healthcare spending on FBDs x Average % equity stake and % debt share

Sources

¹ Sullivan, Kristen and Collins Sean. “Advancing Environmental, Social, and Governance Investing.” Deloitte Insights, 2020. US SIF Data through 2018 Deloitte Center for Financial services analysis through 2025.

www2.deloitte.com/us/en/insights/industry/financial-services/esg-investing-performance.html

² Bank of America. “Study Shows Why ESG Is Important - Bank of America.” About Bank of America, 13 Jan. 2020, about.bankofamerica.com/en-us/what-guides-us/esg-a-z-report.html#fbid=dm26qgKS4dF.

³ Business Wire. “Health and Wellness Food Market 2020-2024: Increasing Adoption of Healthy Eating Habits to Boost Growth: Technavio.” Business Wire, 18 Mar. 2020, www.businesswire.com/news/home/20200317005775/en/Health-Wellness-Food-Market-2020-2024Increasing-Adoption-Healthy.

⁴ Jones, Meredith. “For ESG Investors, the Newest Challenge Is Separating Fact from 'Greenwashing'.” *MarketWatch*, MarketWatch, 15 Oct. 2019, www.marketwatch.com/story/for-esg-investors-the-newest-challenge-is-separating-fact-from-greenwashing-2019-10-15.

⁵ Jube, Leena and Sean Li. “Interview with KT Michaelson, Former Managing Director at ESG Frameworks.” 16 Jul. 2020.

⁶ Dremptic, S., Klein, C. & Zwergel, B. The Influence of Firm Size on the ESG Score: Corporate Sustainability Ratings Under Review. *J Bus Ethics* (2019). <https://doi.org/10.1007/s10551-019-04164-1>

⁷ Oh, Sunny. “Here's What You Need to Know about the \$12 Trillion ESG Investment World.” *MarketWatch*, MarketWatch, 18 Dec. 2019, www.marketwatch.com/story/heres-what-you-need-to-know-about-the-12-trillion-dollar-esg-investment-world-2019-12-18.

⁸ Sullivan, Kristen and Collins Sean. “Advancing Environmental, Social, and Governance Investing.” Deloitte Insights, 2020. US SIF Data through 2018 Deloitte Center for Financial services analysis through 2025.

www2.deloitte.com/us/en/insights/industry/financial-services/esg-investing-performance.html

⁹ Bank of America. “Study Shows Why ESG Is Important - Bank of America.” *About Bank of America*, 13 Jan. 2020, about.bankofamerica.com/en-us/what-guides-us/esg-a-z-report.html.

¹⁰ Sullivan, Kate. “Enabling ESG Investing as We Emerge from COVID-19.” *Accenture Capital Markets Blog*, 9 June 2020, capitalmarketsblog.accenture.com/enabling-esg-investing-as-we-emerge-from-covid-19

¹¹ “Women in the Labor Force: a Databook : BLS Reports.” *U.S. Bureau of Labor Statistics*, U.S. Bureau of Labor Statistics, 1 Dec. 2018, www.bls.gov/opub/reports/womens-databook/2018/home.htm.

¹² O’Sullivan, Eleanor. “The New Face Of Investors.” *Financial Advisor*, 2017, www.fa-mag.com/news/the-new-face-of-investors-34006.html.

¹³ Picchi, Aimee. “More Women Are Now Outearning Their Husbands – and Emotions Can Be Big.” *USA Today*, Gannett Satellite Information Network, 3 Mar. 2020, www.usatoday.com/story/money/2020/03/03/gender-wage-gap-more-women-out-earning-husbands/4933666002/.

¹⁴ O’Sullivan, Eleanor. “The New Face Of Investors.” *Financial Advisor*, 2017, www.fa-mag.com/news/the-new-face-of-investors-34006.html.

¹⁵ Bank of America. “Study Shows Why ESG Is Important – Bank of America.” *About Bank of America*, 13 Jan. 2020, about.bankofamerica.com/en-us/what-guides-us/esg-a-z-report.html.

¹⁶ Duffin, Published by Erin, and Jul 20. “U.S. Population by Generation 2019.” *Statista*, 20 July 2020, www.statista.com/statistics/797321/us-population-by-generation/.

¹⁷ Accenture. The “Greater” Wealth Transfer – Capitalizing on the Intergenerational Shift in Wealth, 2012: <https://www.accenture.com/us-en/insight-capitalizing-intergenerational-shift-wealth-capital-markets-summary>

¹⁸ Morgan Stanley. *Sustainable Signals*, Institute for Sustainable Investing, 2019, www.morganstanley.com/pub/content/dam/msdotcom/infographics/sustainable-investing/Sustainable_Signals_Individual_Investor_White_Paper_Final.pdf.
Allianz. “ESG Investor Sentiment Study .” AllianzLife, 2018, www.allianzlife.com/-/media/files/allianz/pdfs/esg-white-paper.pdf.

¹⁹ Duffin, Published by Erin, and Jul 20. “U.S. Population by Generation 2019.” *Statista*, 20 July 2020, www.statista.com/statistics/797321/us-population-by-generation/.

²⁰ Mosaic, ZSpeak by Global. “Gen Z Is WE Generation.” *Medium*, Medium, 20 May 2020, medium.com/@zspeak/gen-z-is-we-generation-6ac170135034

²¹ Mintel. “Millennial Healthy Eating Decisions .” *Mintel*, Mintel Survey, 27 Aug. 2019, www.usatoday.com/story/money/2019/08/26/millennial-eating-decisions-healthy-convenience-social-elements/2072794001/.

²² Vennare, Joe. “Gen Z Will Become The Ultimate Wellness Consumer.” *Fitt Insider*, 25 Apr. 2019, insider.fitt.co/gen-z-wellness/.

²³ Vennare, Joe. “Gen Z Will Become The Ultimate Wellness Consumer.” *Fitt Insider*, 25 Apr. 2019, insider.fitt.co/gen-z-wellness/.

²⁴ Duffin, Published by Erin, and Jul 15. “High Net Worth Individuals U.S. 2019.” *Statista*, 15 July 2020, www.statista.com/statistics/300464/us-high-net-worth-individuals/.

²⁵ Elkins, Kathleen. “There Are 618,000 Millennial Millionaires in the US—and 44% of Them Live in 1 State.” *CNBC*, CNBC, 22 Oct. 2019, www.cnbc.com/2019/10/17/heres-where-the-millennial-millionaires-live-around-the-us.html.

²⁶ “World Wealth Report 2020: North America Surpasses Asia-Pacific in High Net Worth Individual Wealth Growth for First Time in Eight Years While COVID-19 Brings Uncertainty.” *Capgemini US*, 13 July 2020, www.capgemini.com/us-en/news/research-world-wealth-report-2020/.

²⁷ Bioy, Hortense. “Investors Back ESG in the Crisis.” *Morningstar UK*, Morningstar, Inc., 5 Dec. 2020, www.morningstar.co.uk/uk/news/202274/investors-back-esg-in-the-crisis.aspx.

²⁸ Bioy, Hortense. “Investors Back ESG in the Crisis.” *Morningstar UK*, Morningstar, Inc., 5 Dec. 2020, www.morningstar.co.uk/uk/news/202274/investors-back-esg-in-the-crisis.aspx.

²⁹ Bioy, Hortense. “Investors Back ESG in the Crisis.” *Morningstar UK*, Morningstar, Inc., 5 Dec. 2020, www.morningstar.co.uk/uk/news/202274/investors-back-esg-in-the-crisis.aspx.

³⁰ Basar, Shanny. “Sustainable Funds Have Inflows Amid Pandemic.” *Markets Media*, 13 May 2020, www.marketsmedia.com/sustainable-funds-have-inflows-despite-pandemic/.

³¹ Poppick, Laura. “The Effects of COVID-19 Will Ripple through Food Systems.” *Scientific American*, Scientific American, 26 Mar. 2020, www.scientificamerican.com/article/the-effects-of-covid-19-will-ripple-through-food-systems/.

³² Radmin. “Energy Sustainability & ESG.” *EnHelix*, 2 Jan. 2020, www.enhelix.com/esg-software/.

³³ “Our Story: Media Intelligence Platform.” *Signal AI*, 20 Dec. 2019, www.signal-ai.com/about-us.

³⁴ “ESG Data: AI Powered ESG Insights & Analytics.” *Truvalue Labs*, 2 Jan. 2020, truvaluelabs.com/.

³⁵ World Resources Institute. “World Resources Report: Creating a Sustainable Food Future.” *A Synthesis Report*, 2018, research.wri.org/sites/default/files/2019-07/creating-sustainable-food-future_2_5.pdf.

³⁶ Roth, Nina. “The Meaty Realities of Food Production: News & Insights: BMO GAM.”, 5 May 2020, www.bmogam.com/nl-en/intermediary/news-and-insights/the-meaty-realities-of-food-production/.

³⁷ Roth, Nina. “The Meaty Realities of Food Production: News & Insights: BMO GAM.”, 5 May 2020, www.bmogam.com/nl-en/intermediary/news-and-insights/the-meaty-realities-of-food-production/.

³⁸ World Resources Institute. “World Resources Report: Creating a Sustainable Food Future.” *A Synthesis Report*, 2018, research.wri.org/sites/default/files/2019-07/creating-sustainable-food-future_2_5.pdf.

³⁹ World Resources Institute. “World Resources Report: Creating a Sustainable Food Future.” *A Synthesis Report*, 2018, research.wri.org/sites/default/files/2019-07/creating-sustainable-food-future_2_5.pdf.

⁴⁰ World Resources Institute. “World Resources Report: Creating a Sustainable Food Future.” *A Synthesis Report*, 2018, research.wri.org/sites/default/files/2019-07/creating-sustainable-food-future_2_5.pdf.

⁴¹ Holt-Giménez, Eric & Shattuck, Annie & Altieri, Miguel & Herren, Hans & Gliessman, Steve. (2012). We Already Grow Enough Food for 10 Billion People ... and Still Can't End Hunger. *Journal of Sustainable Agriculture - J SUSTAINABLE AGR.* 36. 595-598. 10.1080/10440046.2012.695331.

⁴² University of Guelph. "Not enough fruits, vegetables grown to feed the planet." *ScienceDaily*. ScienceDaily, 25 October 2018. <www.sciencedaily.com/releases/2018/10/181025151042.htm

⁴³ University of Guelph. "Not enough fruits, vegetables grown to feed the planet." *ScienceDaily*. ScienceDaily, 25 October 2018. <www.sciencedaily.com/releases/2018/10/181025151042.htm

⁴⁴ Basar, Shanny. “Sustainable Funds Have Inflows Amid Pandemic.” *Markets Media*, 13 May 2020, www.marketsmedia.com/sustainable-funds-have-inflows-despite-pandemic/.

⁴⁵ Lisa Sweet, Head of Business Strategy and Engagement. “Here's How Food Trends Are Changing in the Era of Climate Awareness.” *World Economic Forum*, 2019, www.weforum.org/agenda/2019/09/food-plants-sustainable-eating-climate-change/.

⁴⁶ Hutcherson, Sarah. “The Rise of Flexitarians: Plant-Based Foods Top GrubHub's List of Delivery Favorites.” *TriplePundit*, 5 Mar. 2020, www.triplepundit.com/story/2020/flexitarians-grubhub-people-love-plant-based-foods/86781.

⁴⁷ Arborview Capital. “Annual Impact Report: Investing in Sustainable Growth”, 2018, <https://static1.squarespace.com/static/56786e401c121003acaa029a/t/5be090080ebbe8bd6063b1be/1541443603879/2018+Arborview+Impact+Report.pdf>

⁴⁸ Reinicke, Carmen. “Beyond Meat's Blockbuster Year Has Ignited the Plant-Based Food Industry. Here Are 6 Companies That Have Launched Fake 'Meat' Products to Compete.” *Business Insider*, 6 Sept. 2019, www.businessinsider.in/stock-market/beyond-meats-blockbuster-year-has-ignited-the-plant-based-food-industry-here-are-6-companies-that-have-launched-fake-meat-products-to-compete-/articleshow/71016769.cms.

⁴⁹ Poiniski, Megan. “Vital Farms Stock Climbs 60% after IPO.” *Food Dive*, 3 Aug. 2020, www.fooddive.com/news/vital-farms-stock-climbs-60-after-ipo/582760/.

⁵⁰ Shieber, Jonathan. “Blackstone's Growth Investors Lead a \$200 Million Investment into Oatly, the Oat-Milk Juggernaut.” *TechCrunch*, TechCrunch, 14 July 2020, techcrunch.com/2020/07/14/blackstones-growth-investors-lead-a-200-million-investment-into-oatly-the-oat-milk-juggernaut/.

⁵¹ Rowland, Michael Pellman. “Califia Farms Raises \$225 Million In Funding As It Aims To Rule The Plant-Based Dairy Market.” *Forbes*, Forbes Magazine, 4 Feb. 2020, www.forbes.com/sites/michaelpellmanrowland/2020/01/15/califia-farms-just-raised-225-million-by-attracting-plant-curious-consumers/.

⁵² Zarling, Patti. “Why Danone Plans to Buy up to 25 Food Startups.” *Grocery Dive*, 25 June 2018, www.grocerydive.com/news/grocery--why-danone-plans-to-buy-up-to-25-food-startups/533910/.

⁵³ Kocmanova, Alena & Nemecek, Petr & Docekalova, Marie. (2012). Environmental, Social and Governance (ESG) Key Performance Indicators for Sustainable Reporting. 655-662. 10.3846/bm.2012.085.

⁵⁴ “ESG Integration – Sustainable Investing – Investment Themes.” BlackRock, 2020, www.blackrock.com/ch/individual/en/themes/sustainable-investing/esg-integration.

⁵⁵ Clark, Feiner and Viehs (2015) “From the stockholder to the shareholder: How sustainability can drive financial performance”, University of Oxford and Arabesque Partners

⁵⁶ MSCI ESG Research LLC, FactSet, Refinitiv, Sustainalytics, BofA Global Research U.S. Equity & Quant Strategy

⁵⁷ Lodh, Ashish. “ESG and the Cost of Capital.” *MSCI*, 25 Feb. 2020, www.msci.com/www/blog-posts/esg-and-the-cost-of-capital/01726513589.

⁵⁸ Fink, Larry. “Larry Fink's Letter to CEOs.” *BlackRock*, 2020, www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter.

⁵⁹ Jube, Leena, Goswami, Akshay and Sean Li. “Interview with Devon Bonney, Associate at SASB.” 31 Jul. 2020.

⁶⁰ United Nations Sustainable Development – 17 Goals to Transform Our World.” United Nations, United Nations, www.un.org/sustainabledevelopment/.

⁶¹ Sustainability Accounting Board. Processed Food Sustainability Accounting Standards. 2018.

⁶² Jube, Leena, Goswami, Akshay and Sean Li. “Interview with Devon Bonney, Associate at SASB.” 31 Jul. 2020.

⁶³ Task Force on Climate-Related Financial Disclosures: TCFD – About. TCFD, 2020, www.fsb-tcfd.org/about/.

⁶⁴ “Signatories.” PRI, 2020, www.unpri.org/signatories.

⁶⁵ Aurora Organic Dairy. 2019 *Sustainability Report*. 2019.

⁶⁶ Jube, Leena, Goswami, Akshay and Sean Li. “Interview with Siobhan Cleary, Director at GRI.” 30 Jul. 2020.

⁶⁷ Global Reporting Initiative. Sustainability Topics for Sectors: What do stakeholders want to know? 2013.

⁶⁸ “What.” Impact Management Project, 23 Dec. 2019, impactmanagementproject.com/impact-management/impact-management-norms/what/.

⁶⁹ KPMG International, GRI and United Nations Environment Programme. Carrots & Sticks. 2016.

⁷⁰ Green Finance: Parliament Adopts Criteria for Sustainable Investments: News: European Parliament.” Green Finance: Parliament Adopts Criteria for Sustainable Investments | News | European Parliament, 18 June 2020, www.europarl.europa.eu/news/en/press-room/20200615IPR81229/green-finance-parliament-adopts-criteria-for-sustainable-investments.

⁷¹ Temple-West, Patrick. “US Congress Rejects European-Style ESG Reporting Standards.” Financial Times, 12 July 2019, www.ft.com/content/odd92570-a47b-11e9-974c-ad1c6ab5efd1.

⁷² Paine Schwartz Partners. Sustainability Report. 2019. <https://www.paineschwartz.com/wp-content/uploads/2020/05/Paine-Schwartz-Partners-Sustainability-Report-2020.pdf>
Goswami, Akshay and Sean Li. “Interview with Matthew Hershenson.” 30 Jul. 2020.

⁷³ Mandala Capital, Impact Report, 2020
<https://mandala-capital.com/wp-content/uploads/2020/04/Mandala-Capital-Impact-Report-2020.pdf>

⁷⁴ Impact Finance, 1st Quarterly Report 2020
https://static1.squarespace.com/static/5d2de89b6590550001fe69c6/t/5ebeco07458831518f515054/1589559343438/Impact_Finance_Fund_Quarterly_Report_Q1_2020.pdf
Jube, Leena, Goswami, Akshay and Sean Li. “Interview with Cedric Lombard.” 31 Jul. 2020.

⁷⁵ Omnivore Impact Policy and Omnivore’s Commitment to Responsible Investing, 2019
<https://www.omnivore.vc/wp-content/uploads/2019/12/Omnivore-Impact-Policy.pdf>
<https://www.omnivore.vc/wp-content/uploads/2019/12/Responsible-Investing.pdf>

⁷⁶ Impact Report, 2019
<https://agriculturecapital.com/impact-reports/https://agriculturecapital.com/impact-reports/>

⁷⁷ Zeder Annual Report, 2020
<http://www.zeder.co.za/Zeder-Annual-Report-2020.pdf>

⁷⁸ “Investment Strategy.” Cultivian Sandbox Ventures, 4 Aug. 2020, cultiviansbx.com/investment-strategy/.
Goswami, Akshay and Sean Li. “Interview with Christian Horn.” 30 Jul. 2020.

⁷⁹ “Our Focus.” *InvestEco*, 17 Nov. 2015, investeco.com/our-focus/.
Jube, Leena, Goswami, Akshay and Sean Li. “Interview with Chuck Holt.” 10 Jul. 2020.

⁸⁰ “Social Responsibility – Proterra Investment Partners.” Proterra Investment Partners – Private Equity Firm, 2020 www.proterrapartners.com/social-responsibility/.

⁸¹ “MissionPoint Partners LLC.” *Missionpoint Capital*, 2020 mppgrp.com/.

⁸² Closed Loop Capital, 2020 closedloopcapital.com/.

⁸³ “Investment Approach.” AGR Partners, 2020 agrparkers.com/investment-approach/.

⁸⁴ “Tillridge Global Agribusiness Partners.” *Tillridge Global Agribusiness Partners*, 2020, www.tillridge.com/.

⁸⁵ NCH Capital, 2020 nchcapital.com/.

⁸⁶ HOME, 2020 en.hosencapital.com/.

⁸⁷ Paine Schwartz Partners. Sustainability Report. 2019. <https://www.paineschwartz.com/wp-content/uploads/2020/05/Paine-Schwartz-Partners-Sustainability-Report-2020.pdf>

⁸⁸ Impact Finance, 1st Quarterly Report 2020 https://static1.squarespace.com/static/5d2de89b6590550001fe69c6/t/5ebeco07458831518f515054/1589559343438/Impact_Finance_Fund_Quarterly_Report_Q1_2020.pdf

⁸⁹ Mandala Capital, Impact Report, 2020 <https://mandala-capital.com/wp-content/uploads/2020/04/Mandala-Capital-Impact-Report-2020.pdf>

⁹⁰ Kelly, Owen J et al. “Utilizing Dietary Nutrient Ratios in Nutritional Research: Expanding the Concept of Nutrient Ratios to Macronutrients.” *Nutrients* vol. 11,2 282. 28 Jan. 2019, doi:10.3390/nu11020282

⁹¹ Kelly OJ, Gilman JC, Ilich JZ. Utilizing Dietary Micronutrient Ratios in Nutritional Research May be More Informative than Focusing on Single Nutrients. *Nutrients*. 2018;10(1):107. Published 2018 Jan 19. doi:10.3390/nu10010107

⁹² “Sustainability Software.” Software Advice, 2020, www.softwareadvice.com/cafm/sustainability-comparison/.

⁹³ “Accuvio Pricing, Features, Reviews & Comparison of Alternatives.” GetApp, 25 Mar. 2019, www.getapp.com/operations-management-software/a/accuvio/.

