



BETTER RETURNS, BETTER ENVIRONMENT, BETTER WORLD

Terra Alpha Investments LLC Q1 2018 Newsletter

Note: These newsletters focus on the work at Terra Alpha beyond our investment research and fund management. Due to SEC rules, fund investors and accredited parties receive separate communications. Please contact us directly if you are interested in investment updates.

Q1 2018 has been an active time for Terra Alpha both internally and externally. Early in January we held our annual Advisory Board meeting in our new Washington, DC office. New board member Margot Lee Shetterly ([hyperlink all advisors](#)) joined our esteemed group of Frank Loy, George Serafeim, Susan Tolson, and Ellen Stofan PhD for a day of engaging updates and solicitation of opinion. Throughout the quarter, we continued to develop our Environmental Productivity™ scoring process to enable more refined differentiation between companies across the market. We participated in a number of events where we discussed the importance of Environmental Productivity for all decision-makers. We ended the quarter with the release of our latest Environmental Productivity research report, [Eroding Value](#).

This newsletter discusses:

- Terra Alpha advocacy outreach opportunities
- Overview of the state of environmental data disclosure
- Proxy season - annual meetings and voting highlights
- 2018 World Economic Forum (Davos) meeting main theme takeaways
- The recently released report on [Dirt - Eroding Value](#)
- TAI in the News
- TAI team member spotlight - Brendan Corbett, Research Analyst

TERRA ALPHA ADVOCACY WORK

Recent examples of our outreach:

- **Real Impact Tracker (RIT)** - Amy and Elizabeth presented in a [webinar](#) to launch the RIT certified community of investment funds - those demonstrating their top tier criteria for impact.
- **Duke University Fuqua Business School - ClimateCAP Conference** - we participated in a panel on how to price climate change risks.
- **Brown University** - Tim and Advisor Emerita Katherine Collins guest-lectured the sustainability course taught by Professor Cary Krosinsky.
- **College of William and Mary** - Tim and Advisor Ellen Stofan co-taught a class on the science and economics of the climate.

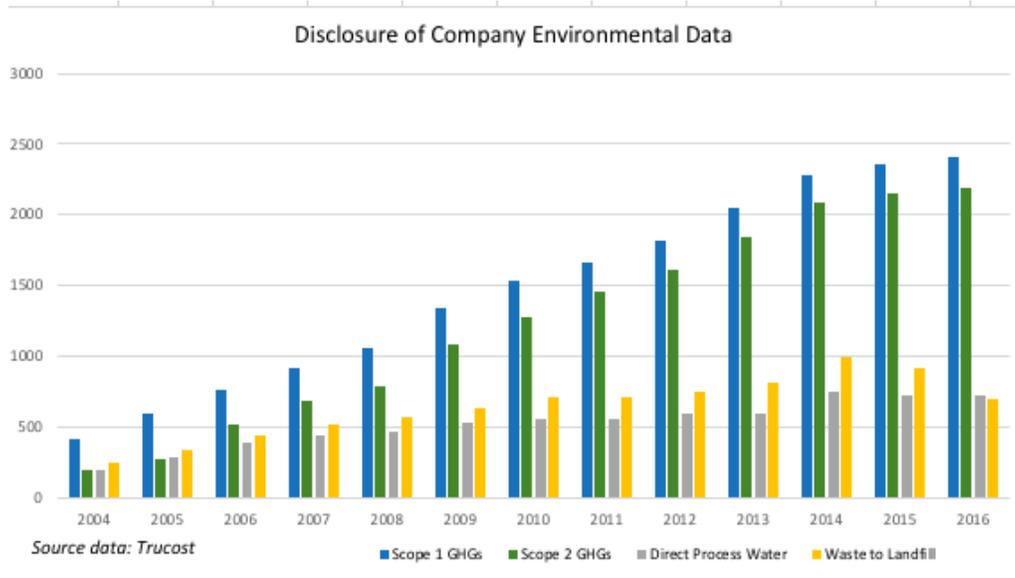
We were invited to be part of a number of important forums this quarter. Tim attended the **World Economic Forum** in Davos (see notes below) as well as **New York University's**

Stern School of Business CSB Practice Forum on how to improve the understanding of the financial value of sustainability issues for companies. Amy joined the **CECP - CEO Force for Good** conference for the third time and was struck in particular by the CEO of Unilever and his fundamental dedication and leadership in shifting the model of business's role in society to one with permission to operate as a responsible partner. As leaders increasingly represent this attitude, the Environmental Productivity™ of companies will become ingrained and recognized as important and valuable. Three members of the team all attended the **CERES Investor Network Summit** in NYC; the day prior, Amy and Elizabeth were part of the Investor Network meeting where themes of valuing forests were on the table, as well as how asset owners will implement the TCFD scenario evaluation of a portfolio. Amy also participated in several roundtable conversations this quarter about ESG disclosure run by **Yale University and World Forum for Sustainable Business** where the collection of businesses, academics, and other investors led to in-depth discussions and sharing of ideas.

DATA DISCLOSURE OVERVIEW

“Measure it and they will manage it” remains a basic truism in the TAI approach. Overall disclosure of environmental data continues to increase, expanding our TAI potential investment universe, and, significantly, increasing the awareness by companies in the capital markets about their natural resource use. Disclosure is the critical first step to greater resource-use efficiency and greater Environmental Productivity™.

When we first started TAI, we could access environmental data for about 1700 companies globally (due to the lagging time table of disclosure). Nearing the three year mark for the Fund, there are now closer to 2400 companies disclosing.



Within our portfolio, the increase shows up as well.

Disclosure of water and waste 2015 - 2018 (lagging data)

2015:	2018:
46%	69% disclosing water
49%	60% disclosing waste
40%	54% disclosing water & waste

PROXY SEASON MEETINGS IN FULL SWING – DISCLOSURE A THEME

Our TAI Proxy Voting Guidelines emphasize disclosure as an overarching theme in our active voting of all company shareholder meetings. Interestingly, the trend in annual meeting resolutions this year illustrates a broadening interest in greater disclosure, not only around environmental factors; companies are being asked to disclose lobbying expenditure, gender representation, pay gaps, climate-related data and scenario planning.



Some companies have gotten ahead of shareholder resolution requests - for example, **Starbucks** was asked for a sustainable packaging report, and the company announced plans to produce a fully recyclable and compostable cup within three years.

Internationally, the proxies do not have the same scope of shareholder resolutions, though one theme shared globally has been to preserve the ability of shareholders to participate in expressing views through the voting process - in the US it has been to preserve access to presenting proxies, and internationally to preserve shareholders' ability to participate in bylaws changes.

LEADERS IN ENVIRONMENTAL PRODUCTIVITY™

ABB “**designs to recycle**” meaning most products come with recycling instructions and can be dismantled easily. More than half their revenue comes from the portfolio of products that **enable their customers to be more resource efficient**. They introduced a new target to raise their eco-efficiency portfolio so that it accounts for 60% of ABB’s revenues by 2020. Nearly 80 recycling or waste reduction projects were underway in ABB in 2017. The most significant new initiative in 2017 was the introduction of a quarterly KPI system at the 300 largest ABB facilities to track progress on sorting and recycling of non-hazardous waste. These sites represent more than 95% of ABB’s generation of non-hazardous waste. They have already nearly met their 2020 recycling goal. In 2017, more



than 250 energy-saving projects were underway at ABB sites (expected annual energy savings of 35GWh). Impressively, they increased the emission reduction target, to reduce emissions intensity by 40% (vs 2013) by 2020 (previously was reduce energy intensity by 20% by 2020). They also introduced a quarterly KPI system at 300 largest manufacturing sites (accounting for 95% of ABB energy usage) to track progress on energy saving efforts.



Adidas has long been a leader in manufacturing efficiency and **forward-thinking** product efforts that address being more efficient with natural resources. This past year, **they sold one million shoes made from 95% plastic waste salvaged from the ocean near Maldives**. They have also launched a bathing suit incorporating recycled plastic.

DAVOS 2018 REFLECTIONS (by CIO Tim Dunn)

I was fortunate to be able to attend the World Economic Forum in Davos again this year along with 70+ Heads of State, 3,000 official attendees, and 50,000 other folks who took good advantage of the event. My reflections that are particularly pertinent to Terra Alpha follow:

Climate Change/Energy Transformation-

This topic took a different, perhaps more serious tone this year than last year. Companies seem more genuinely committed to change and more willing to reconsider businesses decisions in order to assure that they are preparing for a changing world.

- 2017: \$300B was invested in Renewable Energy projects and \$400B on traditional oil and gas projects. The gap is narrowing, but not fast enough.
- Five of seven G7 leaders spoke extensively about Climate Change in their remarks (only President Trump and PM Theresa May did not),
 - India's PM Modi made the religious/cultural case for acting.
 - French President Macron pledged to shut all coal-powered generating plants by 2021.
- Conversely, Australia is planning a new coal mine to serve India coal-power plant needs.
- Globally, pollution deaths far exceed violent crime deaths (except in Brazil), either due to polluted water or poor air quality.
- Great panel of European energy leaders/CEOs of energy transformation with a strong agreement that decarbonization is happening, though time-line is in much debate. (This contrasts with differing commentary from US oil & gas CEOs.)

Gender and Diversity-

- Conflicting realities - all of this year's WEF co-chairs were women and numerous sessions on gender issues, but only 21% of delegates were women.
- Justin Trudeau gave the best and most powerful speech with 50% devoted to serious plans to drive gender equality - it was poignant and powerful. As the host of the next G7 meeting, he pledged to have this issue be central to those discussions.

Technology-

- Blockchain was perhaps the most oft stated word at WEF - with participants expressing their belief (unsubstantiated) that the technology can do everything from tracking conflict minerals to rare species. I walked away more concerned that while there is great promise for the technology, it also has some obvious shortcomings and risks - particularly around the front end of the authentication process.
- AI/Machine Learning/Enhanced learning - very little evidence of real progress in the use of these technologies, though much concern about the risks.
- Data/Big Data/Tech Giants - lots of criticism and discussion about societal risks of the control and monetization of data by companies.
- NEC Corporations noted that their face recognition systems can read and identify 30 million faces/second.
- Yuri Harari (author of Sapiens) - provocative talk "Will the Future be Human". He made the case that we are nearing the end of homo-sapiens because we will soon use technology to evolve our species. Further he stated that the most valuable asset today is data and those that control the data will lead (in the past it was landowners, and then owners of production).

Food and food systems-

These are vexing issues and there are no current strategies for altering the trajectory we are on short of changing eating behaviors (e.g., eating a lot less beef) and massive change in government agricultural policies and subsidies.

- The agricultural sector will soon be the #1 source of GHG emissions globally - and we have no real strategy to slow, much less reverse, the growth of emissions. Beef/pork production is the primary contributor.
- Every year the planet loses the equivalent of Germany's land mass in healthy soil.
- Over 2 billion mis-nourished humans on the planet. One billion don't have enough food, one billion have too much food.
- Weather pattern and water changes will, of course, add further challenges.

In summary, while nothing truly earth-shattering, it was a great opportunity to hear from thought-leaders, political leaders, and business leaders. There is a heightened level of awareness that time is short in terms of shifting our economy to address major environmental and economic equity issues.

DIRT - THE NEED FOR AWARENESS

We concluded our initial research on soil health and released a report, [Eroding Value: Why Dirt Matters to Business Leaders and Investors](#), which highlights the need for much broader awareness of the importance of healthy soil. The report makes the case that soil health needs greater attention from business leaders and investors, noting risks and opportunities, providing some examples of healthy soil practices already in place, and sharing some resources of where to find more information.

(This is the fourth of our research reports that discuss the key environmental factors - clean air, clean freshwater, raw materials, healthy soil, and forests - that are essential to our society and economy. All four reports and an overview of our Environmental Productivity approach are freely available on [our website](#).)

Key Takeaways:**Dirt - The Facts:**

- Soil is a critical natural resource for global economies, ecosystems, and societies
- Demand on arable land is growing (by 6 million hectares/14.8 million acres/year)
- Globally, soil health is degrading with impacts on crop production, water use, deforestation, and carbon release

Risks and Opportunities are Very Real:

- Inaction heightens risk of production disruption, higher costs, and damage to reputation
- More productive and resilient soil lowers long-term costs and supports proactive brands

Much Work Is Needed to Reverse the Decline of Soil Health:

- A common methodology for measuring healthy soil
- Widespread change in field and crop management to more sustainable practices
- Corporate leadership to set examples and broaden understanding of the issue

INTERNSHIPS at Terra Alpha

Since 2014, we have had over 20 interns spend time at Terra Alpha, working with our investment, advocacy, or investor development professionals. We see this as one way to expand awareness of the importance of Environmental Productivity. We believe that these internships provide a great opportunity for students in college or graduate school, or recently graduated, to learn from our work while supporting our mission.

We are very pleased to see these interns take their experiences at Terra Alpha with them as they move on to the next phase of their careers. Several of our current full-time team members started as interns, while others have moved on to roles at other organizations that are related to their experience at TAI - a Policy Analyst with UN Principles for Responsible Investing, a Senior Program Officer at Climate Leadership Council, an ORISE Fellow at the EPA, and an associate in the Performance Improvement area of EY (Ernst & Young).

TAI IN THE NEWS

- [Asian Companies Are Working To Protect Against Climate Change, But Will It Be Enough?](#) (Written by Research Advisor Jill Baker, who also writes posts for Forbes.com.)
- [Hidden Figures Author Margot Lee Shetterly Joins Terra Alpha Investments Advisory Board](#)

TAI SPOTLIGHT - Brendan Corbett, Research Analyst



Brendan was the first analyst hired by Terra Alpha (June 2015), with a degree in Environmental Policy and Finance from the College of William & Mary. Initially he led our EP research on carbon efficiency and was the primary author of our report *Emitting Money*. As a research analyst he covers energy and industrial companies.

He is an avid soccer player who is generally up for most any sport, and enjoys hiking all over Virginia. His ideal trifecta of fun is anything involving traveling, cooking/eating good food and spending time outside.

Brendan was born in Japan, grew up in McLean, VA, and counts Bethany Beach, DE, where he spent many a summer growing up, as his second home.

Being mindful of our impact on natural spaces and systems is of deep interest and importance to him. His interest in all things sustainability was piqued on several nature-oriented trips he was lucky enough to experience growing up - seeing places like the Serengeti in Tanzania, rainforests in Peru and the Galapagos Islands. Learning about the anthropogenic challenges all

these places faced was and is a strong driver of his dedication to sustainability and what drew him to Terra Alpha and its mission.