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The Environmental Paris-ite: The Current and Potential Impacts of the Paris Agreement on Sustainable Finance and the Global Market

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The Environmental Paris-ite:
The Current and Potential Impacts of the Paris Agreement
on Sustainable Finance and the Global Market

Caitlin Boelsen
May 8th, 2017

ISP Research Proposal
Professor Jovanovic
Abstract

Since the passing of the Paris Agreement in December of 2015, organizations in relation to sustainable finance have received fresh attention. The purpose of this study revolves around this new legislation and the financial, environmental, political and social impacts it has had on the market and on sustainable finance. It also analyzes the future potential of carbon markets and renewable energy under the environmental pressure produced by the Paris Agreement. The underlying objective is to confirm whether or not the Paris Agreement has made substantial progress in the fight against climate change. This research is a blend of field research conducted through interviews of business professionals in the Geneva area and my own personal research. After an in-depth analysis, I conclude that there has been substantial progress due to the Paris Agreement on positively impacting the environment and market. However, there is still a necessity for even more legislative pressure if we want to live in a sustainable, climate-neutral world.

Acknowledgments

First and foremost, I would like to thank Dr. Goran Jovanovic and Esther Bonafont for their constant dedication to the SIT Finance, Banking and Social Responsibility Program. The resources, time and support they have contributed to our entire program has made this academic opportunity immaculate. I would also like to acknowledge the business professionals that have given their time to provide me with sophisticated insights. Steven Tebbe, Managing Director of CDP, Simon Henry, Programme Director at IETA, Sybille Gianadda, deputy director at Sustainable Finance Geneva, and two other anonymous professionals. Each interview was tailored to the
interviewee and their area of expertise, but they kept all knowledge relevant to my research. Next, I would like to thank Marc and Marie France Häfliger for supporting me through this entire semester. They have provided me with everything and more in order to foster a comfortable cultural, social and academic setting. Lastly, a warm thank you to the entire SIT staff here in Switzerland. You all have formed various opportunistic programs that I am so thankful to be a part of.

**Research Preface & Objectives**

Throughout my academic experience in Switzerland and Greece, various international proceedings have taken place affecting the European finance sector. Due to the shift in financial regulation and standards, I chose to conduct research on the increasingly prominent practice of sustainable finance under the Paris Agreement, which has been enforced since December of 2015. My curiosity around the methods of negative screening, ESG approach and thematic investing grew as I contemplated how the Paris Agreement has changed the way organizations make sound financial, environmental, political and social decisions.

• How has the origins and goals of each company been affected by the Paris Agreement?
• What is each company’s personal role in fulfilling the mission of the Paris Agreement?
• What kind of financial impact has these regulatory requirements had on different companies?
• What role do ‘stranded assets’ play in a company’s sustainable valuation?
• How has each company’s political relationships changed?
• Has the company undergone any structural changes in order to further their environmental or social impact?

• What methods of sustainable finance are thriving under the Paris Agreement?

• Are the future goals of the Paris Agreement realistically feasible?

**When I reference the word company, this addresses either the entity I was in contact with, an entity they represent or an entity they report on.

The scope of this research aims to justify the impact the Paris Agreement has had on such decisions. I also considered the emerging trends of carbon markets and renewable energy as they become increasingly prevalent in the movement towards sustainable financial practices.

• Is it forecasted that carbon markets will gain momentum or decrease in popularity due to the Paris Agreement?

• What role does consumer power play in carbon markets?

• What are the political relationships that surround carbon markets?

• To what extent is renewable energy supported in Europe?

• Where is the renewable energy market headed in the next 5 years?

Overall, this research proposal combines the knowledge of business professionals in the Geneva area with reputable academic and media journals in order to further analyze the impact of the Paris Agreement on current and future sustainable finance practices.
# TABLE OF CONTENTS

Abstract ................................................................. 2  
Acknowledgements ..................................................... 2  
Research Preface & Objectives ...................................... 3  
Context & Introduction ............................................... 6  
Methodology ............................................................ 8  
Ethics ................................................................. 10  
Literature Review ...................................................... 10  
Analysis of Findings .................................................. 12  
  
  *Case I.* .......................................................... 12  
  *Case II.* ......................................................... 16  
  *Case III.* ....................................................... 21  
Conclusion ............................................................... 25  
Works Cited .............................................................. 27  
Appendix A .............................................................. 30  
Appendix B .............................................................. 36  
Appendix C .............................................................. 39
Context & Introduction

On December 12, 2015, a monumental step in the ambitious efforts to combat climate change and adapt to its effects was made. For the first time in history, parties of the United Nations Framework Convention on Climate Change, or UNFCCC, reached an agreement to strengthen the global efforts towards climate-neutrality. The Paris Agreement is the culmination of years of efforts by the international community to bring about a universal, multilateral agreement on climate change (European Commission, “Paris Agreement”). Since the Paris Agreement entered into force, nations have come together like never before. “The Paris Agreement was a massive success, the world has never seen international support quite like this” stated Simon Henry, Program Director of the International Emissions Trading Association, or IETA (Simon Henry, Personal Interview, April 2017). Acting as a bridge between current policies and climate-neutrality, this legally binding covenant entails a global temperature ceiling of well below 2 degrees Celsius above pre-industrial levels while consciously pursuing a future limit of 1.5 degrees Celsius (UNFCCC, “Status of Ratification”). In addition to these requirements, the Paris Agreement also seeks new methods for countries to adapt structurally and financially to the impacts of climate change in order to pursue a climate-resilient pathway.

While these requirements and goals seem realistic in theory, mobilization and provision of financial resources, a new technology framework and enhanced capacity building must be put into place to see concrete compliance and progress (UNFCCC, “UNFCCC EHandbook”). Similar to any new legislative movement, there will be a constant battle between improvement and stagnation. The European Union’s main
negotiator, Artur Runge-Metzger, stresses that they are not only looking at what is technically feasible but what is socially bearable in regards to this kind of transition (Neslen, “EU Must Shut All Coal Plants by 2030”). One concern of this new agreement is that it may intensify the gap between developed and underdeveloped countries. However, with increased transparency and accountability, minimized loss or damage and international cooperation, the Paris Agreement will extract climate-positive practices from even the least developed countries. There is also strong support for giving financial aid to developing countries to help them cope with the impacts of climate change (Carrington, “Climate Change Impacts Are Already Hitting Us”).

With the central aim of this convention being to strengthen the global response to the threat of climate change, all parties are also required to show initiative through nationally determined contributions, or NDCs (UNFCCC, “Status of Ratification”). These NDCs include regular reports on a party’s emissions and overall implementation efforts, which are recorded in a public registry in order to stay informed about and to further individual actions by parties. In addition to these contributions, parties are highly recommended to formulate and communicate long-term development strategies in regards to reducing their greenhouse gas emissions. Many European parties are committing to coal phase-out plans by 2025 or 2030, which is quite substantial considering there are approximately 300 coal plants in Europe (Neslen, “EU Must Shut All Coal Plants by 2030”). Thus, the important thing to remember when looking at the impact of the Paris Agreement is that its platform is based on long-term change.

After comprehending the origins and composition of the Paris Agreement, it is vital to gain an understanding on exactly what it is affecting. Sustainable finance has
created a newfound collaboration between an institution’s business model and the environment, creating a shift of focus from strictly prioritizing financial returns to promoting a positive social impact. This changeover has paved the way for sustainable finance and has influenced the business and investment decisions that organizations face everyday. The simple issue that sustainable investing addresses is that it’s generally less expensive to buy a product that has a poorer impact on its environment than the equivalent product that does less harm. But what if the price gap and other externalized costs could be quantified and assigned (Ridgeway, “The Sustainable Economy”)? This is becoming more realistic as responsible investing is growing increasingly fast as it accounts for 59 trillion dollars in assets under management (Kline, “9 Sustainable Investing Trends for 2016”). To further understand the concept, process and progression of sustainable finance, it is important to gain insight into the investment strategies behind this idea. Three approaches drive successful sustainable implementation, which include negative screening, ESG approach and active ownership. The correlation between sustainable finance methods and the Paris Agreement stems from the effort to penetrate the financial sector in a climate-neutral fashion. This relationship will be discussed in detail under the analysis portion of my research.

**Methodology**

This research proposal is the result of five weeks of field research dating from April 3rd to May 8th, 2017. Primary and secondary resources were utilized in order to better understand the impact of the Paris Agreement on the sustainable finance sector. For reputable primary sources, I conducted three structured, formal interviews and one informal interview with various business professionals. For each company I reached out
to, I sent a formal email to their contact explaining my research proposal topic and interview request. I was then put into contact with a professional from each organization that accepted and created an interview template unique to each company, yet relevant to my proposal outline. Each interviewee was recorded on a smartphone application, given their personal consent, while I took notes throughout the course of the interview. They were also asked their preference of anonymity regarding their name, profession, opinions and personal statements. My first formal interview was with Steven Tebbe, the managing director at CDP. We met at Globus café, a public venue at 14:00 on April 10th, 2017. This interview lasted approximately 90 minutes. That same day, I interviewed Simon Henry, a program director at the International Emissions Trading Association. I interviewed him at the IETA office in Geneva at 16:30 for 60 minutes. Using an informal approach, I interviewed two business professionals in the finance sector at the President Wilson Hotel in Geneva on April 21st, 2017. Direct quotes and notes were both transcribed during this 30-minute interview, however to protect their personal identity under their request, I will refer to them respectively as Interviewee 1 and Interviewee 2. For my last structured interview, I connected with Sybille Gianadda, a deputy director at Sustainable Finance Geneva on May 1st, 2017. Although we planned to meet the prior Monday, April 24th, unfortunately her son became ill and we had to reschedule. We met at the Sustainable Finance Geneva office branch in Geneva for 60 minutes. To further support and enhance my proposal, secondary sources such as academic journals, media reports and online professional publications were utilized. For detailed notes of all structured interviews and a daily work record, see appendices A and B.
**Ethics**

Due to the nature of this paper, vulnerable or minor populations were not contacted or interviewed. The source of primary interviews came solely from professional references and if there was any hesitation, that subject was not pursued. After an interviewee granted me the opportunity to connect with them, they were informed of the motivations behind my field research as well as the option to receive a copy of the final publication. Before initiating the interview, each professional was asked for their preference of confidentiality and anonymity in regards to their personal or professional identity, ideas, opinions and personal statements. After receiving consent from each individual, I asked permission to take notes as well as record the interview on my smartphone application in order to keep ideas and statements as accurate as possible. After my method of interviewing was confirmed, I carried out structured, formal interviews with three professionals and informal interviews with two professionals. At the conclusion of each interview, I read back key findings to each interviewee in order to confirm their stance on each question. I then followed up with each professional, as well as their respective organization, with a formal thank-you email showing my gratitude for the time and knowledge they contributed to my research. Each interview took place in the greater Geneva area at either a public venue or a private office, depending on each individual’s preference and availability. Overall, my interview method was informative, sensitive and honest, adhering to all of SIT’s ethical policies.

**Literature Review**

The United Nations Framework Convention on Climate Change database provides the most thorough and prominent information in regards to the Paris Agreement.
This information generator covers the background, negotiations, focus and process of the Paris Agreement and supplies the general public with the transparency regarding this monumental contract. It also allows access to the nationally determined contributions Interim Registry in order to disclose the objectives of such contributions. This is a key database to access when researching the Paris Agreement in order to digest the most recent and proper information regarding the specifics of this monumental contract.

Another prominent source that provides publications, reliable news and statistical evidence around the Paris Agreement and climate energy is the International Energy Agency database. This technological center reports and analyzes major transformations around the Paris Agreement and the global energy system as a whole. Their mission is driven by a focus on energy security, economic development, environmental awareness and worldwide engagement (International Energy Agency, Official Website). Although this database produces a wide range of information, it is pertinent to understanding every market or environmental trend that is affecting sustainable finance under the Paris Agreement.

Under each database that was utilized in this proposal, various pieces of personal or formal literature contributed to the research process. This information was then combined with the academic knowledge I have gained through my study abroad courses regarding sustainable finance and the current environmental state of Europe. A multitude of other professional articles also guided the findings of my field research, including but not limited to Investment & Pension Europe, The Guardian and The Climate Group. This research proposal is a direct result from this collaboration of information and knowledge.
Analysis of Findings

After analyzing the ins and outs of the Paris Agreement, I carried out field research in the form of interviewing business professionals around the Geneva area that have direct or methodological ties to sustainable finance practices. Concurrently, I have applied the knowledge I have accumulated to the current and future financial industry. I will present these findings in the form of three case studies; one study related to each structured interview while also integrating the informal interviews as support material throughout my analysis. Case I will address the practice of positive screening and how the Paris Agreement has encouraged the financial, political, and environmental impacts of this method. Case II will explore the social influences that organizations driven by sustainable finance incur as well as professional resources that support their existence. Different methods will be analyzed at their current state as well as forecasting future degrees of traction under the influence of the Paris Agreement. Case III will focus on future environmental forecasts, such as carbon markets and renewable energy, and how the Paris Agreement has stimulated these trends. Through this analysis of professional environments, it is apparent that the collective efforts and progress of different sustainable finance methods, carbon markets and renewable energy will play a prominent role in reaching climate-neutrality under the Paris Agreement.

Case I: CDP & Positive Screening Under a Global Disclosure System

In order to better understand the financial, political and environmental affects that the Paris Agreement has already had on the market, I connected with the managing director of CDP, Steven Tebbe. CDP is a market-based mechanism that represents asset owners, such as a church, as well as asset managers, or banks. The mandate is renewed every year with over 800 investor signatories to date (Steven Tebbe, Personal Interview,
April 2017). They issue an open and transparent questionnaire annually, urging responses from large stock listed companies on behalf of the investors that serve as their shareholders. As companies report their information, they are given the option to either go public with that report or to remain private to investors as CDP publishes their annual rating on the environmental risk and preparation state of each entity (Steven Tebbe, Personal Interview, April 2017). This process is considered positive screening as the focus highlights rating leaders. In the positive screening approach of sustainable finance, companies are favored based on identifiable key issues in their environment, social and governance criteria. Once a material issue has surfaced, risk mapping occurs in order to forecast possible financial consequences, transmission factors or financial value drivers (Sybille Gianadda, Lecture, 2017). This is usually a more knowledge-intensive process because it requires a superior understanding of which factors are relevant to each industry (Freedman, “Adding Value to Investing”). This is explains why CDP is by far the largest and most sophisticated corporate database in the world, representing nearly 100% of accessible investor capital.

Currently, positive screening practices are gaining traction under the Paris Agreement due to their proactive nature as a risk management tool. Financially, CDP focuses their positive screening on long-term value, investor support and opportunities. For example, once an entity agrees into the mandate, various expenses and costs are incurred in order to review their current position and implement future sustainable practices. These sustainable changes can range from product modification to complete structural renovations. However, once these resources are invested to attain an environmentally conscious business structure and educated management, financial
outperformance is extremely likely (Steven Tebbe, Personal Interview, April 2017). By achieving this high share price, a company no longer suffers from noncompliance and therefore, will eventually emit any stranded assets, which have been defined as “assets that have suffered from unanticipated or premature write-downs, devaluations or conversion to liabilities” (Baron and Fischer, “Divestment and Stranded Assets in the Low-Carbon Transition”). The variety of stranded assets stem from differences in scope, methodology and overall key assumptions, all of which have burdened the market and investors for decades. To quantify the transition into a 2 degrees Celsius world, CPI estimates that $50 billion will be stranded in power generation, $600 billion in coal and $400 billion in gas (Baron and Fischer, “Divestment and Stranded Assets in the Low-Carbon Transition”). Once this loss is consumed, ESG valuation merged with raw financial valuation will convey a new sense of transparency. “I guarantee you that in 10 years time, investors will laugh that they ever analyzed a company based solely on its financial valuation and not its ESG valuation as well”, exclaimed Tebbe (Steven Tebbe, Personal Interview, April 2017). Nonetheless, sustainable success, which has been sufficiently encouraged by the Paris Agreement, has a direct relationship with financial outperformance, proving that measuring the environment is an accurate proxy for measuring how well a company is run.

While measuring the environmental impact an organization has made can lack quantifiable evidence or consistent methodology, many environmental changes have been tracked reliably. Of the 5,600 companies that CDP tracks globally, about 2,500 of those report directly to CDP about their implemented modifications, which can be as small as changing their light bulbs or as large as revamping their business model (CDP, Official
Altogether these 2,500 companies make up about 60% of the global market capital. That sort of coverage is something to be proud of and hopefully we can use that leverage to raise the sustainable standards in the global market”, stated Tebbe (Steven Tebbe, Personal Interview, April 2017). On the other hand, the 3,100 companies that do not report directly are motivated by CDP through supply chain interaction. For example, WalMart has over 100,000 different suppliers, so they rely on CDP to rank the top 100 suppliers in order to maximize their environmental efficiency (Steven Tebbe, Personal Interview, April 2017). This sort of supply chain engagement also increases leverage for small-scale companies that may not even be listed on the stock exchange or on the radar of reputable investors. The future of this interaction between CDP and tracked companies aims to increase transparency and engagement in order to strengthen positive environmental impacts that align with the goals of the Paris Agreement.

Additionally, there is a very strong political component to the Paris Agreement and CDP’s role in environmental success. With increased regulation and rapidly changing standards, there needs to be a new level of engagement between investors and politicians or governments. “Politicians cannot hold these huge corporations accountable anymore, they are simply too large and have too much influence over the market to fail” describes Tebbe (Steven Tebbe, Personal Interview, April 2017). Due to this dominance, investors need to step in and collaborate with political forces in order to place a sustainable obligation on these corporations. The Paris Agreement has created a coalition of investors that have started putting pressure on companies while also communicating to politicians that stricter legislation is possible. For an honest, positive debate to take place between politicians and the industry, investors need to moderate the market (Carrington, “Climate
Change Impacts Are Already Hitting Us”). CDP plays a prominent role in this communication as they contribute the hard evidence needed to gain and maintain the support of investors. One relevant example of strong political leadership under the Paris Agreement is the French government. After passing article 173, which requires every investor to disclose the carbon footprint of their investments, it is the wish of many that France’s model will create a snowball effect and eventually wipe out the need for organizations like CDP. This bold piece of legislation will be addressed further into my analysis.

Overall, CDP was a very relevant and transparent organization to investigate through the lens of the Paris Agreement. While acting on behalf of such a large network of investors, which represents approximately $100 trillion, and having formal and direct political relations, CDP has exercised positive screening in a new light (CDP, Official Website). This global disclosure system illustrates the kind of measurement and management practices that the Paris Agreement pushes for in order to become a climate-neutral market. “It’s not rocket science,” states Tebbe, “sustainable practices should have been something we did all along” (Steven Tebbe, Personal Interview, April 2017). Only if corporations simultaneously focus on opportunity and risk will they be able to truly measure and understand their environmental impact. Under the influence of the Paris Agreement and organizations like CDP, I conclude that investors and companies will become educated in a way that brings calmness to the market and the environment.

Case II: Sustainable Finance Geneva & the Trending Methods Behind the Paris Agreement

While taking into account how the Paris Agreement has influenced financial, political and environmental alterations, I wanted to further understand the social advantages and repercussions that came along with it. To satisfy this part of my research,
I formally interviewed Sybille Gianadda, the deputy director at Sustainable Finance Geneva. Sustainable Finance Geneva was created in 2008 based off of a tri-fold model of networking, local promotion and sustainable innovation (Sybille Gianadda, Personal Interview, May 2017). Through organizing events for sustainable finance professionals to exchange expertise and collaborate on new projects, Sustainable Finance Geneva serves as a social foundation. By forming such a strong social structure, they are able to educate students and professionals on sustainable ways to react to global challenges, such as climate change. To support this system, they also formulate reports that condense informative professional platforms to focus on where each method of sustainable finance is heading. Before analyzing the forecasted trends of each method, it is important to understand the process and ambition behind each practice as well as how each relates to the environmental goals of the Paris Agreement.

One strategy that is vital to the process of sustainable investing is negative screening, also referred to as the exclusion tactic. Entire sectors are excluded as either product-based or norm-based screening occurs if they do reach certain social, environmental or governance criteria. Product-based screening relies on a single focus, such as nuclear weapons or tobacco, while norm-based screening has a more in-depth analysis of important controversies (Sybille Gianadda, Lecture, 2017). Negative screening is the most commonly used strategy in sustainable finance due to the simplicity of its implementation. This is also the reason that many investors consider it the gateway strategy to continuing on the path of green finance. One criticism of this approach is that there is no net impact of negative screening since there will always be investors that have no sustainability criteria (SRI World Group, “Socially Responsible Investing News and
Information”). However, with the Paris Agreement now in effect and the passing of Article 173 in France, the existence of such investors may be coming to a halt. Therefore, exclusion will continue to be very efficient in many industries and remain an important liaison for various other aspects of sustainable finance.

Nonetheless, the ESG approach remains the central focus of investor, company and government efforts under the Paris Agreement. By incorporating material ESG risks and growth opportunities directly into the valuation report of each company, this type of non-financial report actually fosters the motivation for companies to become more socially responsible and transparent, thus encouraging sustainable finance practices (Singapore Management University, “The Need for Sustainable Finance”). Given this transparency, it is easy for investors to understand how a company handles their social, environmental and governance risks in terms of reputation, opportunity and competitive edge. Therefore, the valuation of a company under ESG methodology is prevailing over the bare financial valuation due to the pressure the Paris Agreement has put on companies and investors.

Surprisingly, the least stable method of sustainable finance, thematic investing, has gained the popularity to prove relevant with the growing interest in renewable energy. Thematic investing entails selection on the basis of environmental, social or governance themes (Sybille Gianadda, Lecture, 2017). Currently, trending focuses include, but are not limited to, renewable energy, sustainable agriculture, education and health. While these themes may be relevant now, the practice of thematic investing has struggled to attract investors from year to year based on inconsistent portfolio performance (Sybille Gianadda, Personal Interview, May 2017). Although there may be fluctuating
performance measures from time to time, due to the emphasis that the Paris Agreement has put on reducing emissions and the support it has given to the renewable energy sector, thematic investing is forecasted to gain traction.

As different methods of sustainable finance become more or less attractive to investors and the market, one trend that is reaching exponential heights is the factor of engagement. Companies, investors and governments are becoming more aware of the environmental issues our world faces and that the only way to combat this unsustainable lifestyle is to unite forces and address these challenges head-on. Under the Paris Agreement guidelines and this newfound climate consciousness, the approach of active ownership comes into play. This method proves to be the most impactful based on its high engagement factor, as stakeholders pursue direct interaction with management in regards to promoting the best ESG practices and to improve disclosure (Sybille Gianadda, Lecture, 2017). Due to the fact that engagement is favored over exclusion in this process, the role of the asset owner is strengthened. Given these components, the structure of this strategy is a catalyst for awareness and support of a company’s transition towards sustainability. Investors seek out companies with high visible environment, social and governance performance because many times, they are more viable in the long run (Ridgeway, “The Sustainable Economy”). The long-term scope that investors are moving towards along with the Paris Agreement regulations are pressuring companies to become more climate-conscious, creating a new competitive edge in the market. This sort of shareholder activism and advocacy is a vital aspect of sustainable finance in the perspective of individuals as well as corporations.
Aside from the engagement factor, the growing trend of divestment has been a direct result of the passing of the Paris Agreement. Divestment is understood as “the action or process of selling off subsidiary business interests or investments” which is often motivated by climate change-related risks (Baron and Fischer, “Divestment and Stranded Assets in the Low-Carbon Transition”). Various methodologies of divesting include full, partial or value chain divestment. Not only have these strategies gained prominence among activists and institutional investors, principal government funds have also followed suit, such as the Norwegian Sovereign Wealth Fund and Sweden’s Pension Fund AP2. One criticism that hinders the momentum of divestment is that when an investor divests certain companies or whole sectors, they lose their ability to influence corporate behavior or improve transparency through engagement with senior management or by filing resolutions (Baron and Fischer, “Divestment and Stranded Assets in the Low-Carbon Transition”). However, divestment remains an important catalyst in the efforts to reduce emissions, as seen in appendix C, and helps fulfill consumers and investors demand for climate-conscious activity. To date, $2.6 trillion is assets across 43 countries have committed to some form of divestment (Baron and Fischer, “Divestment and Stranded Assets in the Low-Carbon Transition”). Therefore, tracking the effect of divestment today and in the future is vital as the phenomenon gains importance and diversity under the Paris Agreement.

By taking all current and future practices of sustainable investing into consideration, it is apparent that the market and investors are pushing the standards of the Paris Agreement to a new level. This effort is evident through expanding platforms such as Ceres, an organization that empowers investors to drive climate solutions through the
economy. There has been exponential growth in the form of resolutions and innovative tools to mobilize company and investor leaders in pursuing sustainable practices on a state, federal and global level (Sybille Gianadda, Personal Interview, May 2017). The Institutional Investors Group on Climate Change, or IIGCC, is another social platform that aligns with the goals of the Paris Agreement. IIGCC provides investors with a collaborative space to encourage public policies, investment practices and corporate behavior that address long-term risks and opportunities associated with climate change (IIGCC, Official Website). IIGCC’s impact on the European market in regards to sustainable finance is substantial, seeing as they have a network of more than 136 members, including some of the largest pension funds and asset managers in Europe (IIGCC, Official Website). Between the pressure that the Paris Agreement puts on companies and the vast network of climate-positive social platforms and sustainable finance methods, long-term environmental goals will be fulfilled.

Case III: IETA & the Future of Carbon Markets Under the Paris Agreement

Although the Paris Agreement entered into force in 2015, the new standards and regulations that were put into place aim to influence the future as well. This contract has become a very important center and supporter of carbon finance, especially after France passed article 173, which requires reports regarding how they measure emissions in investments (Sybille Gianadda, Personal Interview, May 2017). However, the use of carbon markets began far before the Paris Agreement. Founded in 1999, IETA has continued to strengthen its model as a business association for the private sector of business behind carbon markets. For the sake of this proposal, a carbon market can be defined as “the trading of carbon emission allowances to encourage or help countries or companies to limit their carbon dioxide emissions” (Lexicon Financial Times, “Carbon
Market”). IETA acts on behalf of about 140 companies that prefer carbon markets to combat climate change and are in support of low carbon projects (Simon Henry, Personal Interview, April 2017). Through the support of the Paris Agreement, organizations like IETA forecast continued growth of carbon markets, particularly in China and Canada.

However, since companies need to pay for carbon permits, this puts a price on carbon emissions as a waste product, which also puts a price on the market failure of emissions. While the current price is only 5 euros per ton, with the supply of permits decreasing in order to meet the EU’s pollution goal in 2020 to 2030, the price per ton is forecasted to increase drastically which would take a huge toll on specific business decisions. It is this attempt at putting a price on emissions that has made carbon markets a very political atmosphere, especially since there is no tangible product behind carbon (Simon Henry, Personal Interview, April 2017). In turn, national governments have become very influential in the structure of carbon markets. Nonetheless, due to the inevitable scarcity of permits, carbon markets aim to be as efficient as possible in reducing emissions while still remaining cost-sensitive (Simon Henry, Personal Interview, April 2017). This way, companies are granted some degree of flexibility in meeting regulations instead of enforcing strict quotas on emissions, which would be extremely expensive and unattractive to many companies. Although there will be a point in which every company will need to invest financial and human resources into completely sustainable innovation, the current structure of carbon markets is what makes it a very feasible option to combat climate change for the next 5 to 10 years.

One interesting setback of carbon markets is how influential consumer power is regards to carbon permits and carbon reduction projects. Many individuals criticize the
trading and buying of carbon permits and demand instant innovation for long-term infrastructure or immediate structural changes (Simon Henry, Personal Interview, April 2017). There is this idea that carbon reduction projects aren’t enough to combat carbon emissions for the time being. However, what many people don’t understand is that releasing 100 tons of carbon in a factory in Asia, and saving 100 tons of carbon in Canada by planting trees has the exact same net effect no matter where you are in the world. Therefore, carbon reduction projects are a very feasible way of picking up some of the slack in the short term that these permits create while carbon markets slowly and cost-effectively drain the legal amount of emissions and permits to meet the goals of the Paris Agreement.

Another forecasted trend that has received a plethora of international support, especially after the passing of the Paris Agreement, is the use of renewable energy. Although coal’s use is falling by about 1% a year in Europe, it still generates a quarter of the continent’s power and a fifth of its greenhouse gas emissions which is why the urge for renewable energy is stronger than ever before (Neslen, “EU Must Shut All Coal Plants by 2030”). In fact, there is actually a push from global governmental and business leaders to transition to 100% renewable energy worldwide in order to achieve climate goals (William Brittlebank, “Global Leaders Call for 100% Renewables Transition”). The UN Development Program as well as 30 leading companies including Apple and Bank of America supports this movement of RE100. Major players are transforming their business model completely in order to support renewable energy. For example, IKEA has installed almost 700,000 solar panels on its stores worldwide and has announced the construction of even more (William Brittlebank, “Global Leaders Call for 100%
Renewables Transition”). Overall, renewables will make very large strides in the coming decades. However, the next frontier under the Paris Agreement is to expand their use in the industrial, building and transportation sectors where enormous potential for growth exists (International Energy Agency, “World Energy Outlook 2016”).

Overall, the long-term efforts and goals of the Paris Agreement can be seen through arising trends in the market. Carbon markets are gaining traction as the supply of carbon permits decreases due to the limiting legislation produced through the Paris Agreement. Although it may be criticized for not tackling climate change head on, it has proven to be a very successful strategy for companies due to the flexibility it offers as well as the cost-sensitive nature of this market. On the other hand, renewable energy has taken popularity to a whole new level with the RE100 movement. While some deem this idea too ambitious, many reputable government and business leaders have gotten major companies on board with this notion. Regardless of which forecasted trends actually pan out to the extent they are expected to, the Paris Agreement has created a shift towards a more long-term focus for many prominent players in the market. Due to this motivation, the Paris Agreement will continue to acclimate sustainable finance methods to future climate goals.

Given the available resources for my field research, the conclusions drawn ran inherently parallel to the forecasted course of the Paris Agreement. Overall, this leads me to believe that the Paris Agreement has impacted various sustainable finance methods at the financial and structural levels. Thus, it also impacts the way organizations approach environmental and social challenges. In return, these strategies of sustainable investing are accelerating progress towards the 2 degrees Celsius goal. They are also contributing
efforts towards various other climate-neutrality actions that the Paris Agreement has addressed. By maintaining this reciprocating relationship with companies and investors, the Paris Agreement will continue to positively impact the market and environment.

**Conclusion**

Throughout these 5 weeks of research, I have gained a plethora of knowledge and experience surrounding the Paris Agreement, sustainable finance, carbon markets and renewable energy. The opportunity to network and witness the different perspectives of multiple business professionals added a whole new dimension to my personal research. After analyzing my personal and professional findings, there is confirmation that the Paris Agreement has drastically affected the sustainable finance sector as well as the global market. This contract has shown opportunity in some areas, such as carbon markets and renewable energy, as well as failures, particularly in the coal market. Since it passed, the Paris Agreement has also populated the actions of divestment and engagement around the globe. The push to measure the carbon footprint of companies and of investor portfolios has been deemed environmentally effective and will continue to make positive impacts on climate change.

While the environmental progress has been positive, many concerns remain that the regulations are still too lax. While it is important to consider the financial implications of changing business and market standards, both should have been environmentally conscious from the start but they weren’t. This has now created the pressure of time as our climate and raw, natural resources are becoming more and more unsustainable. “We didn’t take care of our environment, and that is a market failure”, explains Steven Tebbe (Steven Tebbe, Personal Interview, April 2017). While many
companies are attempting to set ambitious energy goals for years to come, the environment needs every leading corporation and government to act as an advocate.

To conclude, only time can tell whether the financial, environmental, political and social impacts of the Paris Agreement will suffice. Based off of my personal and professional field research, I recommend that legislation becomes stricter with age, carbon markets are utilized for the time being, and sustainable innovation be a required focus around the globe. I concur that positive screening and thematic investing are making progress and positive impacts, however there needs to be a stronger push for structural changes, not only surface level modifications. Overall, since the passing of the Paris Agreement, the world has now embarked on a historic transformation. This has created the opportunity for studying the correlation between the environment and finance like never before. In 2018, there will be an assessment on implementation and collective progress, which will serve as a formal indication of our current environmental state. Given the outcome, I deem that to be a very interesting opportunity to research how the legislation has progressed, what environmental changes have occurred and where sustainable finance is headed past 2020. When it comes to sustainable development, every country is a developing country. However, with unconditional support and effort, I conclude that the globe can beat climate change. Alone we can go quickly, but together we can go far.
Works Cited

Primary sources


Secondary sources


Appendix A: Interview Notes

CDP Interview
April 10, 2017
Geneva, 14:00
Steven Tebbe

Describe the background, origins and goals of CDP (Any details you see fit for better understanding the company)
- CDP works with institutional investors: Asset owners (Church) and asset managers (banks)
- Represents both, renewed mandate every year, over 800 investor signatories, 100 trillion USD, nearly 100% of accessible investor capital
- Targets big stock listed companies on behalf of investors who are their shareholders,
- Open and transparent questionnaire
- Companies report to CDP and give information, by far the largest corporate data base in the world
- Annual rating on environmental risk and preparation state of companies
- Cost of capital of a company with a high rating goes down, easier investing and innovation, better credit
- Gives to the option for companies to go public with this report or remain private to investors
- Partner with CDP to retrieve data, prevents people commercializing data
- Primarily about carbon: green house gas emissions, adding water and deforestation (most measurable focuses)
- Natural earth value about 80% in three focuses
- All three interconnected locally, natural capitals

What is your personal role in this mission?
- Managing director for Europe (CEO)
- Headquarters in London (global), European in Berlin
- Europe need to take into account 27 different countries, currencies, languages, etc.
- Europe is the only region with direct environmental leadership with strong legislation
- CDP is a market based mechanism

Financial Impact?
- Focus on leaders and positive screening
- Once agree into the mandate, expenses and costs incurred to review current position and to implement future sustainable practices
- Focus on long term value, investor support, opportunities
- Risk management tool
- Company resistance, threaten with investor skepticism
- Stocks are suffering from noncompliance (Caterpillar)
  - Stranded assets
• Companies that do the best are the ones who outperform financially (High share price)
• Good management team is very relevant to sustainable success
• Measuring environment is a proxy for measuring how well a company is run

**Environmental Impact?**
• Energy producers in Germany separate entity’s into positive renewable energy and “bad bank”
• Direct environmental changes, tracked more than 10,000 different
  o Changing lightbulbs to changing their business model
  o Half risk mitigation and half opportunity detection, overlap sometimes
• Track around 5,500 globally, 2500 report to CDP makes up about 60% of global market capital
• Other 3000 CDP motivates through supply chain interaction
  o Walmart: over 100,000 different suppliers, gives CDP top 100, goes on behalf of Walmart to these suppliers to fill out questionnaire
  o Increases leverage for companies that aren’t even listed on the stock exchange and aren’t on the radar of investors
  o Future leverage for expanding to even the smallest of suppliers who are in theory not very transparent
• Europe about 80% of market capital representation, 75% for US, biggest penetration due to biggest market

**Political Impact?**
• Having real facts and data is very powerful
• Huge political problems of creating stricter environmental legislation
  o Voter power

**What future trends do you forecast for CDP and sustainable investing?**
• Snowball effect, companies pay attention to risk
• Revolves around risk and opportunity
• In 10 years, all companies will be evaluated on ESG data
• European legislation: NFI reporting, must report on ESG issues
• France: article 173, every investor has to disclose the carbon footprint of their investments, will hopefully snowball into other countries
• Hopefully CDP will disappear one day
• Negative screening is becoming relevant in investing practices (German catholic church example)

**What impact has the Paris Agreement had on CDP?**
• Good leadership in France and with the French government
• Need help to put pressure on the trade association
• Brings engagement between investors and company management
• Created a coalition of investors to put pressure on companies and tell politicians that stricter legislation is possible
• Huge involvement, contributes evidence and support of investors
• Politicians cannot hold these huge corporations accountable anymore, too big to fail, investors hold these companies accountable
• Bring calmness to the market, educating investors

IETA Interview
April 10, 2017
IETA Office Geneva, 16:30
Simon Henry

Describe the background, origins and goals of ICROA/IETA (Any details you see fit for better understanding the company)
• Formed in 1999, business association for private sector of business behind carbon markets
• Carbon markets: put a price on carbon emissions since it’s a waste product, puts a price on the market failure, price becomes part of business decisions
• Must buy certificate or permit for the amount of carbon they emit from auctions, over time the supply of permits decreases so by 2020/2030 EU meets their pollution goal, in turn of this scarcity, price of permits go up and influence business decisions
• At some point, renewables must become cheaper than coal/carbon
• Europe market has 12,000 installations
• How do I comply with regulations in the cheapest way possible?
• Allows for flexibility in how companies meet regulations, if you put a strict quota on carbon emission it would be much more expensive
• Carbon markets \(\rightarrow\) be efficient as possible in reducing emissions in a costly manner
• Companies prefer this approach since it gives them flexibility rather than having choices imposed upon them
• Current European price: 5 euros per ton, super cheap, 2006/7/8 before crisis was 30 euros a ton
• Cost of renewables is falling drastically
• Offset: another type of carbon certificate
  o EX) Building forests that saves emissions for less than 5 euros per ton

What is your personal role in this mission?
• IETA is the business association for companies that prefer carbon markets for climate change, supports low carbon projects
• Polluter pays principle, money comes from polluter and goes into new innovations to reduce carbon emissions
• About 140 companies they serve
• Facilitate innovation indirectly
• Work with members in other carbon markets and represent views of members to policy makers
• European carbon market is first formed
Financial Impact?
• Since you have to pay for carbon permits, try to find a way to produce less carbon
• Innovating these new techniques is also an expense incurred
• Power sector is where the most change is happening
  o Rapid transition away from coal and gas into wind and solar
  o Seeing much more structural changes, RWE & EON (Uniper)
• Emissions technically increase with GDP if there are no emission targets

Environmental Impact?

Political Impact?
• Works with European commission
• Reflects members views
• Holds meeting with national governments
• Influence political structure of carbon markets
• California: carbon markets a carbon tax? Good example of lobbying in IETA
• Carbon markets are very political
• Trying to put a price on emission reduction made it very political since there is no tangible product behind carbon, similar to commodity market?
• Crisis puts less emphasis on climate change, thus carbon markets
• Copenhagen conference 2009 was a complete failure

Social Impact?
• Consumer power is very influential
• May criticize the trading and buying of carbon permits and demand the innovation of long-term infrastructure or structural changes

What future trends do you forecast for IETA?
• Continued growth of carbon markets (China, Canada)
• See markets linking to maximize on techniques and reap benefits across countries
• Increased use of mechanisms drives projects such as carbon offsets
• Carbon prices will increase over time in theory (Carbon graphs)

What impact has the Paris Agreement had on IETA?
• Huge success, largest international agreement that UN oversaw
• Very broad agreement, many thought that it isn’t strict enough
• Huge international support for it though
• Start of the Chinese carbon market later this year
• Aviation and shipping are difficult since they occur in international airspace or water
• Implement global targets for aviation industry
• Quota protocol: 37 countries, set rules for international emissions agreements and targets
• Paris agreement has provisions for new market mechanisms, allows national governments to trade emissions
• Some countries don’t support carbon markets
• Article 6: Affects IETA’s work, creates new work and raises awareness for their members

**Mckinsey diagram on carbon**

Sustainable Finance Geneva
May 1st, 2017
Office in Geneva, 15:00
Sybille Gianadda

Describe the background, origins and goals of Sustainable Finance Geneva (Any details you see fit for better understanding the company)

• Created in 2008: tri fold
  ○ Network of sustainable finance professionals, exchange expertise and start new projects together
  ○ Promote Geneva as a key financial center for sustainable finance, foundation based
  ○ Work on innovation in sustainable finance, very local company

What is your personal role in this mission?

• Deputy director, small team
• Organizing events (networking), working on reports of sustainable finance
• Provide knowledge and expertise for people, how to react to global challenges such as climate change
• EDUCATING on sustainable finance
• Partners with a university in Geneva to promote practices

Financial Impact?

• Many companies are putting their financial resources towards sustainable innovation, but SFG doesn’t directly work with or network with them
• Demand for a carbon footprint of the portfolios is a huge push from large institutional investors
  ○ Sometimes they even demand this information using their own methodology

Environmental Impact?

• Educating and networking the sustainable finance sector specifically in Geneva
• No direct correlation to the environment, more of a social impact of educating and spreading expertise

Political Impact?

• Works with UNDP
• Low degrees political relationships

Social Impact?
• Social impact utilizing local networking, educating and expertise on sustainable finance

**What future trends do you forecast for Sustainable Finance Geneva?**

• Divestment and carbon footprint information

• Thematic investing had a rough start with portfolio performance so its difficult to keep attracting investors

• Rapid diminishing coal industry
  - Losing a lot of investing interest because of the growing consciousness of climate

• ESG integration is on the rise, climate change is one of the main criteria
  - Best in class is becoming less relevant
  - Risk and opportunities are addressed and more precisely value a company by offsetting stranded assets

**What impact has the Paris Agreement had on Sustainable Finance Geneva?**

• Push for green products

• Analyze the market since they aren’t directly selling or producing products or invests

• Huge progress on measuring the carbon footprint of portfolios

• Thematic investing prevalent
  - Ex. Renewable energy

• Montreal Pledge: lead by the PRI (UN organization)
  - Launched in 2014
  - First step is publishing the information related to their carbon footprint and portfolios

• Article 173 in France, must report how they measure emissions in investments
  - Paris Agreement becoming a very important center for carbon finance
  - Most countries this is a voluntary action

• Methodology challenge: scope 1, 2 or 3?
  - Double accounting issues
  - False or missing data

• True cost, MCI, South Pole, Inrate in Europe that sell carbon related data so they can be integrated in the portfolio

• Many companies want to limit emissions to a competitive point

• Much more engagement with companies around climate change

• Ceres
  - Many resolutions that are brought to the general assembly
  - Huge growth here
  - Gain a lot of support
  - Of the most powerful tools that investors have on climate change
  - Choose to divest (coal) or choose to engage

• Divestment, engagement and carbon footprint transparency have been the largest trends since the Paris Agreement passed
Less to do with regulations and specifics of the Paris Agreement, more to do with demand of the consumers, market and investors

- IIGCC: huge actor in Europe on climate change
- Institutional investors: pension fund or large asset owners
- Bank of England addressed the financial risks of climate change, Mark Carney

**Appendix B: Progress Journal**

Caitlin Boelsen  
ISP Progress Journal  
April 3rd-May 8th 2017

**Monday April 3rd, 2017**

- Did individual research on sustainable finance and related topics in order to form a concrete proposal
- Emailed with ISP advisor Benoit Lambert

**Tuesday April 4th, 2017**

- Skype meeting #1 with advisor (Benoit)
  - Ran through topic ideas with him and brainstormed subtopics such as carbon markets, carbon credits, impact of the Paris Agreement, ect.
  - Brainstormed possible entities to reach out to for interviews
- Gathered emails from multiple entities and formulated some emails

**Wednesday April 5th, 2017**

- Had a class meeting and introduced a rough proposal idea and interview ideas to professor
- Researched more possible entities to interview

**Thursday April 6th, 2017**

- Finalized interview ideas and sent out 10 interview emails

**Friday April 7th, 2017**

- Emailed with 3 entities for an interview opportunity
- Set up 2 interviews for Monday April 10th
- Formulated interview questions and prepared for my interviews on Monday

**Monday April 10th, 2017**

- 1st structured interview with Steven Tebbe, Managing Director (CEO) of CDP
  - Met at Globus, a café in Geneva
  - Very positive experience, got great input from Steven
- 2nd structured interview with Simon Henry, Programme Director at IETA
Met at the IETA office in Geneva  
Very positive experience as well, gave me good input and got me thinking about altering my final proposal topic  
American intern sat in on our interview

**Tuesday April 11th, 2017**
- Sent formal thank-you emails to Steven Tebbe, CDP, Simon Henry and IETA  
- Cleaned up my notes/transcripts from my interview with Steven Tebbe

**Wednesday April 12th, 2017**
- Had a class meeting from 2pm-5pm  
  - Evaluated papers from the previous semester  
- Met with Professor Jovanovic about my interviews and topic update  
- Started writing the “acknowledgements” section of my paper

**Thursday April 13th, 2017**
- Cleaned up my notes/transcripts from my interview with Simon Henry  
- Finalized an interview with Sybille Gianadda from Sustainable Finance Geneva for Monday April 24th  
- Completed the layout of my final paper

**Friday April 14th, 2017**
- Off for Easter

**Monday April 17th, 2017**
- Off for Easter

**Tuesday April 18th, 2017**
- Completed the “acknowledgements” section  
- Drafted and mostly completed the “Methodology” section

**Wednesday April 19th, 2017**
- Personal research day of the Paris Agreement

**Thursday April 20th, 2017**
- Wrote a large portion of the “context introduction” section with the prior day’s research  
- Updated my works cited page

**Friday April 21st, 2017**
- Conducted two informal interviews  
  - Hotel President Wilson at a finance conference  
- Cleaned up notes from interviewee 1 and interviewee 2

**Monday April 24th, 2017**
• Was supposed to have my third structured interview, but had to reschedule for Monday May 1st because her son got sick
• Researched carbon markets and renewable energy sources

**Tuesday April 25th, 2017**
• Drafted and completed the “preface & objectives” section
• Meeting #2 with advisor (Benoit)
  o General update on proposal progress
  o Discussed my first two structural interviews and my two informal interviews

**Wednesday April 26th, 2017**
• Drafted and completed the “ethics” section
• Started putting my appendices together

**Thursday April 27th, 2017**
• Drafted and completed Case I: CDP

**Friday April 28th, 2017**
• Finished my “context and introduction” section
• Updated my works cited

**Monday May 1st, 2017**
• 3rd structured interview with Sybille Gianadda, Deputy Director at Sustainable Finance Geneva
  o Met at Sustainable Finance Geneva office in Geneva
  o Very positive experience and very relevant for my topic

**Tuesday May 2nd, 2017**
• Drafted and completed my "literature review" section
• Drafted and completed Case II: Sustainable Finance Geneva

**Wednesday May 3rd, 2017**
• Drafted and completed Case III: IETA & Future Trends of Carbon Markets
• Updated my works cited
• Had wrap-up class session from 2-4pm

**Thursday May 4th, 2017**
• Completed the "Analysis and findings" section
• Drafted and completed my “conclusion” section
• Final skype meeting with my advisor (Benoit)

**Friday May 5th, 2017**
• Final editing day
• Final update of works cited and appendices
• Completed the “abstract” section
• YAY IM DONE!

Appendix C: Divestment Track Diagram

Source: HSBC, 2015.