

The Role of Sustainable Investment in a Sustainable Commodity Network Assemblage by Heterogeneous Actors

DISSERTATION
of the University of St.Gallen,
School of Management,
Economics, Law, Social Sciences,
International Affairs and Computer Science,
to obtain the title of
Doctor of Philosophy in Organizational
Studies and Cultural Theory

submitted by

Alexander Tobler

from

Wildhaus-Alt St. Johann (St.Gallen)

Approved on the application of

Prof. Dr. Florian Wettstein

and

Prof. Dr. Pascal Dey

Dissertation no. 5155

Gutenberg AG, Schaan, Liechtenstein, 2021

The University of St.Gallen, School of Management, Economics, Law, Social Sciences, International Affairs and Computer Science, hereby consents to the printing of the present dissertation, without hereby expressing any opinion on the views herein expressed.

St.Gallen, May 28, 2021

The President:

Prof. Dr. Bernhard Ehrenzeller

TO MY DAUGHTER CAMILLE

Acknowledgments

Writing this dissertation has been a very valuable experience and I would like to thank all those who supported me during the research project. I am very grateful for the support and guidance I received from my doctoral supervisors, Florian Wettstein and Pascal Dey. This research benefited a great deal from their vast experience and knowledge. They were also constant motivators, who showed kindness and a passion for the topic. I am extremely happy that they willingly agreed to join me on this journey.

Furthermore, the study would not have been possible without the support of my interview partners. They gave me meaningful insight into their practices and shared their personal experiences with me. The study also benefited substantially from their openness in conversation. I also extend my thanks to many colleagues and friends. I especially thank Isabel Ebert, Antoinette Hunziker-Ebnetter, Laura Brand, Olivier Del Fabbro, Simon Grand, Peter Sigg and Olaf Holstein for their valuable input on the study and their compelling discussions. Also, I thank Lambert Koers, who acted as a very valuable sparring partner from the beginning and who supported me with his vast experience in the coffee market.

Finally, I am deeply grateful to my family. I was overwhelmed by their great support. Special thanks go to my wife for her unlimited patience and understanding.

Zurich, May 2021

Alexander Tobler

The Role of Sustainable Investment in a Sustainable Commodity Network Assemblage by Heterogeneous Actors

ABSTRACT

This qualitative study can be classed as sustainable investment research. Applying the actor-network theoretical framework, this dissertation analyzes how heterogeneous actors assemble to a sustainable commodity network, using the Swiss coffee network as an example. The study provides insights into local practices of the respective actors and the microprocesses involved in the network formation. The findings show that standards for sustainable investment as non-human actors transport agencies from actor to actor and play an important role in mobilizing more actors for sustainability. Investee companies adopt the standards criteria and thus enable the criteria to trickle down the supply chain, which may generate a positive impact. Besides featuring corporate actors, the network approach demonstrates the importance of non-corporate actors, like consumers and non-governmental organizations (NGOs), to the network formation process. The analysis also shows that the Sustainable Development Goals (SDGs) foster the network-building process and act as a key non-human actor. Finally, the study highlights the fact that the designing of standards for sustainable investment in commodities should be based on a set of principles with the goal of generating social and environmental impact.

Keywords: Sustainable investment · Sustainability standards · Commodities · Coffee · SDGs · Actor-network theory · Network dynamics · Local practices

Contents

1	INTRODUCTION	12
1.1	Introduction to this study	12
1.2	Introduction to commodity investments	14
1.3	Introduction to sustainable investment	19
2	LITERATURE REVIEW AND THE STUDY'S CONTRIBUTIONS	21
3	THE ACTOR-NETWORK THEORY AS A FRAMEWORK	26
3.1	Introduction to actor-network theory (ANT)	26
3.2	Criticism and 'after ANT'	27
3.3	The sociology of translation	28
3.4	Applications of ANT	30
3.5	ANT in the study	31
3.6	Final remarks	31
4	METHODOLOGY	33
4.1	Research questions	33
4.2	Boundary condition of the study	34
4.3	Research design	34
4.4	Choosing the case	35
4.5	Research project phases	36
4.6	Data collection – methods	37
4.7	Data collection – process	39
4.8	Data analysis	41
4.9	Final remarks	43
5	FINDINGS	45
5.1	Translation process prototype	45
5.2	The different actors and their individual networks	47
5.3	Zooming out: assemblage of individual networks to an aggregated network	109
6	DISCUSSION	121
6.1	The role of standards for sustainable investment in the formation of a sustainability network	122
6.2	ANT-inspired view on designing standards for sustainable investment	126
7	CONCLUSION	133
	APPENDIX A APPENDIX	136
A.1	Graph of the SDGs	136
A.2	Example for interview guide	137
	REFERENCES	152

The Role of Sustainable Investment in a Sustainable Commodity Network Assemblage by Heterogeneous Actors

SUMMARY

Investors in commodity markets are exposed to numerous sustainability challenges. Considering sustainability criteria in investment decisions is a way of addressing these issues. Applying the resources afforded by the actor-network theory (ANT), this research shows how heterogeneous actors assemble to a sustainability network using the Swiss coffee network as an example. The empirical foundation enabled obtaining an understanding of the local practices of the individual actors and the networks they are embedded in. Analysis is dedicated in particular to the role of standards for sustainable investment in mobilizing different actors. Standards for sustainable investment are regarded as “non-human actors” that transport agencies from actor to actor and may thus mobilize additional different actors for the sustainable cause. Furthermore, the microprocesses involved in this translation process are analyzed, revealing the different actors’ motivation to translate to the sustainability network and the challenges involved in getting actors enrolled. The network approach demonstrates that in addition to corporate actors, several non-corporate actors also need to be mobilized for sustainability. The insights gleaned have been used to make recommendations for relevant aspects to consider in the designing of sustainable investment standards. The research findings point to the fact that the effectiveness of sustainable investment standards is driven by their ability to get actors translated to the sustainability network. Investors define criteria that trickle down the supply chains and find their way into the local practices of the actors. On the basis of this analysis, five relevant principles for designing standards for sustainable investment have been identified: aligning goals, addressing issues, being rigorous, engaging with actors and being accessible.

The Role of Sustainable Investment in a Sustainable Commodity Network Assemblage by Heterogeneous Actors

SUMMARY IN GERMAN

Rohstoffinvestoren sind zahlreichen Herausforderungen im Nachhaltigkeitsbereich ausgesetzt. Die Berücksichtigung von Nachhaltigkeitskriterien bei Investitionsentscheidungen ist eine Möglichkeit, diese Probleme anzugehen. Unter Anwendung der Akteur-Netzwerk-Theorie zeigt diese Studie am Beispiel des Schweizer Kaffeenetzwerks, wie sich heterogene Akteure zu einem Nachhaltigkeitsnetzwerk zusammenschliessen. Die empirische Fundierung erlaubt es, ein Verständnis der lokalen Praktiken der einzelnen Akteure und der Netzwerke, in die sie eingebettet sind, zu gewinnen. Insbesondere wird die Rolle von Standards für nachhaltige Investitionen bei der Mobilisierung verschiedener Akteure analysiert. Standards für nachhaltige Investitionen werden als "nicht-menschliche Akteure" betrachtet, die Agencies von Akteur zu Akteur transportieren und so verschiedene Akteure für die Nachhaltigkeit mobilisieren können. Darüber hinaus werden die Mikroprozesse im Rahmen der Netzwerkbildung analysiert. Der Netzwerkansatz zeigt, dass neben den Unternehmensakteuren mehrere unternehmensfremde Akteure für die Konstruktion des Netzwerks benötigt werden. Die Erkenntnisse wurden genutzt, um Empfehlungen für relevante Aspekte bei der Gestaltung von Standards für nachhaltige Investitionen abzugeben. Die Ergebnisse weisen darauf hin, dass die Wirksamkeit von Standards für nachhaltige Investitionen von ihren Fähigkeiten abhängt, verschiedene Akteure für das Netzwerk zu gewinnen. Investoren definieren Kriterien, die entlang der Lieferketten zur Anwendung kommen. Auf der Grundlage der Analyse werden fünf relevante Prinzipien für die Gestaltung von Standards für nachhaltige Investitionen identifiziert: Ziele angleichen, Probleme angehen, rigoros sein, mit den Akteuren zusammenarbeiten und zugänglich sein.

Listing of figures

1.1	Commodity investment landscape	15
1.2	Different commodity investment strategies	18
1.3	Different investment approaches	19
2.1	Related research fields the thesis touches on	21
2.2	Overview of the different types of studies in sustainable investments	22
3.1	The study's grid used to analyze the network: the four moments of translation	29
4.1	Research activities	37
4.2	Example of a theme (interessement)	43
5.1	Coffee value chain	48
5.2	Sustainable coffee value chain in the example of Fairtrade	50
5.3	Actor-network by <i>THE INITIATIVE</i> (AF1)	51
5.4	Actor-network by <i>THE RATING AGENCY</i> (AF2)	57
5.5	Actor-network by <i>THE INVESTMENT ASSOCIATION</i> (AF3)	60
5.6	Actor-network by <i>THE COFFEE ASSOCIATION</i> (AP1)	65
5.7	Actor-network by <i>THE EXPERT ASSOCIATION</i> (AP2)	69
5.8	Actor-network by <i>STANDARD A</i> (SI1)	73
5.9	Actor-network by <i>STANDARD B</i> (SI2)	77
5.10	Actor-network by <i>THE TRADER</i> (PT1)	80
5.11	Actor-network by <i>SUSTAINABLE INVESTMENT A</i> (IN4)	83
5.12	Actor-network by <i>SUSTAINABLE INVESTMENT B</i> (IN1)	87
5.13	Actor-network by <i>SUSTAINABLE INVESTMENT C</i> (IN2)	91
5.14	Actor-network by <i>THE SUSTAINABLE BANK</i> (BA1)	96
5.15	Actor-network by <i>THE LARGE BANK</i> (BA2)	100
5.16	Actor-network by <i>THE RESEARCHER</i> (AC1)	103
5.17	Actor-network by <i>THE NGO</i> (NG1)	107
5.18	Aggregated actor-network (Source: Own diagram based on kumu.io)	111
5.19	Focus on processing and retail companies	112
5.20	Focus on trading companies	113
5.21	Focus on financial institutions	114
5.22	Focus on investment managers	115
5.23	Focus on asset owners	116
5.24	Focus on standard and certification schemes	117
5.25	Focus on consumers	118
5.26	Focus on NGOs	118
5.27	Focus on the SDGs	119
5.28	Focus on investor initiatives	120
6.1	Impact chain of standards for sustainable investment	123
6.2	Extended impact chain of standards for sustainable investment	125
A.1	The Sustainable Development Goals (SDGs)	136

A.2	Interview guide financial institution page 1	137
A.3	Interview guide financial institution page 2	138

1

Introduction

1.1 INTRODUCTION TO THIS STUDY

Sustainability has become increasingly important for investors. More and more, investors are considered to be important actors in achieving societal and environmental goals (Chew and Childe, 2019; UNCTAD, 2014). Furthermore, the awareness that investors are exposed to several sustainability issues has grown in recent years. Commodity investors, in particular, are exposed to numerous sustainability issues. One reason is that investing in bonds and stocks of commodity-related companies is associated with environmental pollution and social challenges (oekom research, 2016, pp. 13-16). Moreover, investments in futures markets are often blamed for causing price and volatility spikes in commodity markets (de Schutter, 2010; UNCTAD, 2011).

In the academic discourse, commodity-specific studies focus on whether or not investors impact prices and volatility in commodity futures markets (Haase et al., 2016b; Irwin et al., 2009). The literature also deals with sustainability issues associated with farmland investment (Daniel, 2012; Kapstein, 2018). But the literature lacks a detailed analysis of commodity investors and how their actions are passed along the supply chain to other actors. This study thus fills this gap by analyzing the local practices of commodity investors and their associations to other actors by example of the Swiss coffee network. Commodity investors are seen as actors embedded in a network of heterogeneous actors. The study also sheds light on the microprocesses involved in the network formation, including the motivations of the different actors to join the network-building process. As a second contribution, the study provides insights into the designing of standards for sustainable investment in commodities. Standards for sustainable investment are considered a solution to address sustainability issues (UNCTAD, 2014). They are thus of crucial importance. Surprisingly, designing of

such standards is a topic still neglected by academic studies. Literature about sustainable finance focuses on the performance of sustainable investment strategies compared to conventional ones (Capelle-Blancard and Monjon, 2012; Friede et al., 2015). Furthermore, many studies focus on “which” sustainability approaches may influence investee companies and thus impact social and environmental conditions (Dyck et al., 2019; Dimson et al., 2015; Kölbel et al., 2020). However, to date the literature has neglected just “how” standards for sustainable investment must be designed in order to be most effective in generating social and environmental impact. This study consequently addresses this academic lack of important information and derives recommendations for designing standards for sustainable investment in coffee. Similarly to physical sustainability standards for commodities (e.g. Fairtrade), the definition of standards for sustainable investment has been extended to a standard system including not just the standard itself but also assurance and monitoring mechanisms. While the study does not strive for generalizability, its findings do contribute not only to the commodity-specific literature but also to the general body of literature on sustainable finance.

Three research questions guide the study: *How do heterogeneous actors assemble to form a sustainable commodity network? What is the role of standards for sustainable investment in commodities in the formation of a sustainability network? How can standards for sustainable investment be designed in order to meet social and environmental goals?* These research questions are explored by applying a case study design, where the unit of analysis is the Swiss coffee network. Coffee was chosen for several reasons. For instance, investors can build up direct exposure to coffee with investments in futures, and indirect exposure with investments in companies that trade, process or retail coffee. Trade is key for coffee as it is mainly grown in developing and emerging countries and processed in developed countries. Moreover, coffee growing and trading face several sustainability issues that can be addressed by a sustainability standard (Sjoerd Panhuysen and Pierrot, 2018; Rabobank, 2018). The Swiss network was chosen because Switzerland is a major trading hub for coffee (STSA, 2018). Furthermore, based in Switzerland, the author had easier access to the relevant actors. Data was mainly collected by semi-structured interviews that were transcribed, coded and systematically analyzed. Interviews were held with financial actors and those operating in physical coffee markets (e.g. standard organizations and a coffee trader). The research draws on actor-network theory (ANT). ANT was developed in science and technologies studies (STS) and is primarily associated with the authors Michel Callon, Bruno Latour and John Law (Callon, 1990, 1984; Latour, 1986; Law, 1992). The focus of ANT is on heterogeneous networks. Together with its principles generalized agnosticism, generalized symmetry and free association, it served as a suitable lens for conducting the research (Callon, 1984). ANT was used as a device for three applications. Firstly, ANT was used for mapping the actors within the sustainability network. Secondly, ANT was

used to describe how heterogeneous actors with different beliefs and interests assemble to a sustainability network using the four moments of translation developed by Callon (1984). Furthermore, the ANT-lens was applied to analyze the role of sustainable investments in a sustainability network. The findings have then been used to develop recommendations for designing standards for sustainable investment.

The study is structured as follows: Section 1.2 provides an introduction to commodity investments. Section 1.3 gives a brief introduction to the different sustainability approaches. The literature review, including the study's contributions, follows in Chapter 2. That chapter also offers a comprehensive overview of the literature about sustainable finance and distinguishes between commodity-specific and general studies. Moreover, a short overview of the literature about coffee sustainability standards is provided. The study's contributions are systematically derived by identifying gaps in the existing literature. After gap identification, the ANT framework is introduced in Chapter 3. This introduction provides background information and explains how ANT is applied in the study. After introduction of the theoretical framework, the methodology follows in Chapter 4. This chapter includes the research questions and a description of the research design and the case. Furthermore, data collection and analysis are explained in detail. After the discussion of the methodology, the findings are presented in Chapter 5. That chapter also provides insights into the actors' individual accounts. Furthermore, the findings are also illustrated in aggregated form by means of sketches of the aggregated commodity network. The relevant discussion is provided in Chapter 6. In particular the role of standards for sustainable investment in building a sustainability network is discussed. Finally, the ANT-inspired results are used to make recommendations for designing standards for sustainable investment. The study ends with the conclusion in Chapter 7.

1.2 INTRODUCTION TO COMMODITY INVESTMENTS

Commodity investments can be roughly categorized as direct or indirect investments (see Figure 1.1). Direct investments include productive real assets like farmland and investments in physical commodities. Indirect investments include debt and equity investments of commodity-related companies. Moreover, they include investments in derivatives. The focus of this study is on liquid investments including physical commodities, derivatives and publicly traded stocks and bonds.

Besides differentiating between direct and indirect commodity investments one can also differentiate between different investment strategies.



Figure 1.1: Commodity investment landscape
Source: Own diagram based on Tobler et al. (2017)

BOND INVESTMENTS

By buying bonds investors lend money to borrowers (issuers, e.g. a company) (Vanguard, 2015b). The borrower promises to repay the money in the future. This usually includes the loan principal and regular interest payments (Vanguard, 2015b).^{*} Bonds are issued for a defined time period (maturity) and once that time period has expired, the borrower repays the bond principal. After public bonds have been issued, they can be traded. While the contract terms remain the same (principal value, maturity, interest rate etc.), prices may fluctuate based on prevailing market conditions. Investors usually invest in bonds to receive income and diversify their portfolios (Vanguard, 2012). Bonds offer a steady income stream with the interest rates earned and allow spreading capital across several asset classes.

Furthermore, bond prices do not usually move in tandem with other asset classes in a portfolio, like stocks. Bonds thus have the potential to reduce the volatility of a portfolio. Companies use bonds as a funding source to finance their business. Bond investments represent an important funding source for companies, besides other sources like equity and loans. In this study, bond investments refer to bond investments in commodity-related companies. These include companies along the whole commodity supply chain, including traders, manufacturers and retailers.

EQUITY INVESTMENTS

By buying shares of a company the investor owns fractions of the company and becomes a shareholder (Vanguard, 2015a). Shareholders participate proportionally in potential gains and losses in company value. Furthermore, they have the right to vote on certain decisions like the election of the board of directors (Dunham and Singal, 2016). The earnings situation permitting, a company may distribute part of the profit to shareholders in the form of dividends. Earnings can also be reinvested in the company and not distributed via dividends. Investors usually invest in equities due to their characteristics as growth assets. Equities have a significant return potential over the long term. If the company is performing well, the traded share prices may increase significantly. Return potential comes at the cost

^{*}For the sake of simplicity, we do not distinguish between different types of bonds and do not address default risk.

of downside risk. Share prices can also be volatile (Vanguard, 2015a). For companies, share capital represents the company's own funds. Share capital is raised when the company is funded. It can also be increased with capital increases or accumulated earnings. In contrast to bonds, equities do not have a maturity date (Dunham and Singal, 2016). In this study, equity investments refer to investments in shares of commodity-related companies. These include companies along the whole commodity supply chain, including traders, manufacturers and retailers.

DERIVATIVE INVESTMENTS

Derivatives are contracts “(...) that derive their value from the performance of an underlying asset (...)” (Singal, 2016, p. 345). They include futures, forwards, options and swaps. This study focuses on futures, which are traded financial contracts with a symmetric payoff profile. Forwards and futures are agreements between a seller to sell and a buyer to buy a per contract defined commodity (underlying) at a defined future date (maturity) at a certain price (Singal, 2016). At the maturity date, the seller is obliged to deliver the commodity to the buyer. Futures differ from forwards by being standardized contracts that can be traded on exchanges (Singal, 2016). Sellers willing to sell and buyers willing to buy are matched at the exchange, which acts as an intermediary between the two parties by demanding collateral (Singal, 2016). Futures markets have the function of transferring price risk. Producers and consumers of commodities can use futures markets to hedge price risk of the respective commodity. Producers usually want to hedge in advance against falling prices as that would decrease the value of their sales. For example, a coffee producer will harvest a certain amount of coffee in six months. The futures price for six months is currently 100 cents/lb. The producer sells his harvest forward and fixes this price of 100 cents/lb. Consumers usually have opposite needs. They need the commodity as an input and thus want to hedge in advance against rising prices. Referring to the above example, a food company might need coffee in six months and buys a certain amount forward at 100 cents/lb. Futures markets offer both parties, the seller and buyer, a way to insure these risks by fixing a price for the respective commodity in advance. Investors balance the hedging needs of consumers and producers as these needs do not perfectly coincide normally. Investors “provide liquidity and risk-bearing capacity” for those that have hedging needs (Irwin et al., 2009, p. 389). Historically, investors invested in commodity futures to earn a risk premium, hedge inflation and diversify their portfolios (Gorton and Rouwenhorst, 2006). Futures are flexible and liquid financial instruments that allow investors to enter long and short positions in a commodity. Investors can close their futures positions before the contracts expire due to their liquid nature (and avoid physical transactions). Investors close a position by entering the opposite trade, e.g. a buyer can sell the same futures contract and thus close the

position (Singal, 2016). Furthermore, by trading futures, investors do not have to deal with the issues of physical transactions, such as inspection (Telser, 1981). Besides via futures, investors usually gain exposure to commodities via index funds, swaps or structured products (Irwin and Sanders, 2011). For the latter three, “(...) positions often find their way to the commodity futures markets” because the payoff of the investment vehicles is replicated by entering the futures markets (Irwin and Sanders, 2011, p. 4). In contrast to debt and equity investments, the investor grants no funding to the commodity-related companies. The investor offers commodity producing and consuming countries liquidity so that they can hedge their price risks.

PHYSICAL INVESTMENTS

In physical investments, in contrast to those in futures, no contracts for future delivery are traded but the physical commodity itself for immediate delivery. Physical commodity investing is challenging because the commodity needs to be stored (Kayser et al., 2011). As a result, investments are mainly made in commodities that can be relatively easily stored, like precious metals (e.g. gold, silver and platinum) or industrial metals (e.g. aluminum and copper). Storage of agricultural commodities can be difficult “due to spoilage” (Kayser et al., 2011, p. 6) and is therefore not common. The motivation of investors to hold physical commodities can be explained by speculative storage holding. According to Deaton and Laroque (1996), commodity inventories are accumulated if the futures price is greater than the current spot price plus carrying costs. This arbitrage opportunity is exploited by the speculative storage holder until the spread has finally disappeared. If expected spot prices are lower than current spot prices or are expected to increase by less than carrying costs no inventories are held (Deaton and Laroque, 1996). Inventories may play an important role in global supply of commodities by smoothing price spikes (Deaton and Laroque, 1992). During periods of low supply, prices usually increase. As a result, storage holders sell their inventory at higher prices and thus increase the supply. This in turn leads to lower prices. In times of excess supply and low prices storage holders build up their inventories and thus stabilize prices. The buffer function of stocks thus plays an important role in stabilizing.

DIFFERENT INVESTMENT STRATEGIES

Commodity investments can be used by investors to follow different investment strategies. These can be roughly split into directional and non-directional investment strategies (see Figure 1.2). In directional investment strategies, investors enter a long or short position in a specific commodity. The expectation is that the price of the commodity will increase (long position) or decrease (short position). These types of strategy are usually implemented with commodity derivatives including futures, forwards and swaps. The expectations can

be based on fundamental views like supply and demand data or can be purely systematic. Examples of systematic approaches to directional strategies are momentum, carry or mean-reversion approaches. In momentum trading, one assumes that the asset prices that have increased in the past will continue to increase further and exploits this tendency (Hixon et al., 2018). As such, commodities are bought (sold) whose prices recently increased (decreased). In the carry strategy, commodities are selected with high implied roll yield (Hixon et al., 2018). That is, commodity futures investors aim at profiting from the convergence of lower forward prices towards higher spot prices.[†] The return to the carry strategy is a compensation paid by market participants to investors who are willing to assume risk. In the mean-reversion strategy, those commodities are selected whose prices deviate significantly from the historical mean. It is assumed that prices converge to their long-term mean and this dynamic can be exploited for investment purposes (Gresham, 2019). Non-directional

Directional strategies				Non-directional strategies			
Funda- mental	Momen- tum	Carry	Mean- reversion	Inter- commodity spread	Calendar spread	Location spread	Quality spread

Figure 1.2: Different commodity investment strategies
Source: Own diagram

strategies include inter- and intra-commodity spread trading. In an inter-commodity spread trade, the investor plays relative mispricing between commodities. A popular example is trading the crush spread, where the investor tries to profit from mispricings between the input commodity soybean and the outputs soybean meal and soybean oil. For instance, the investor goes long in soybean futures and short in soybean oil and soybean meal futures (Hilpold and Kaiser, 2013). In an intra-commodity spread, the investor tries to take advantage of changes in the price spreads of a specific commodity (Hilpold and Kaiser, 2013). These can be price differences of different expiration months on the futures curve (calendar spread). For instance, an investor simultaneously takes a long position in the July contract while taking a short position in the December contract. Furthermore, the investor may try to profit from price differences in the same commodity on different exchanges (location spread). As an example, the investor simultaneously takes a long position in gold traded in New York while shorting gold traded in London. Furthermore, the investor can trade the quality spread by buying the same commodity of different quality grades. An investor can take a long position in Robusta coffee while taking a short position in Arabica coffee.

[†] Assuming spot prices and valuations remain the same and the investor applies a long-only investment strategy.

THE DIFFERENCE IN PHYSICAL TRADERS AND COMMODITY INVESTORS

Physical commodity traders ensure that commodities are brought from location A to B, in the desired quality and quantity, and at the desired time. As such, they have the function of transforming commodities in space, time and form (Trafigura, 2018). Transformation in space includes transportation of commodities from the place of supply to the location where there is a demand for the commodity. Transformation in time includes dealing in “mismatches in supply and demand” (Trafigura, 2018, p. 30). During times of excess production, commodities are stored. In times of shortages, inventory supplies are used to serve the excess demand. Lastly, commodity traders are involved in the transformation in form. Raw materials may not have the specific characteristics customers require and may need to be processed to some extent (Trafigura, 2018). The business model of commodity traders can be characterized as exploiting arbitrage opportunities (Pirrong, 2014). An arbitrage opportunity exists when “(...) the value of a transformation (...) exceeds the cost of making the transformation” (Pirrong, 2014, p. 8). As such, the focus of an arbitrage opportunity is not the absolute price level of commodities, but the difference between transformed and untransformed commodities.

1.3 INTRODUCTION TO SUSTAINABLE INVESTMENT

Sustainable investment approaches integrate environmental, social and governance (ESG) factors into the investment decision-making process (Von Wallis and Klein, 2015). A selection of common controversies that investors address is shown in Table 1.1. Figure 1.3 provides an overview of the different investment approaches. According to Goodall and Malmberg (2013), traditional investment approaches have only limited or no focus on ESG factors. The first level in sustainable investing that takes ESG factors into account is screening, which distinguishes between negative and positive screening (Hancock, 2005). Negative screening excludes certain companies from the portfolio if they belong to a controversial industry or exhibit controversial business practices as defined by the investor (e.g. companies from the tobacco or defense sector). Positive screening follows a best-in-class

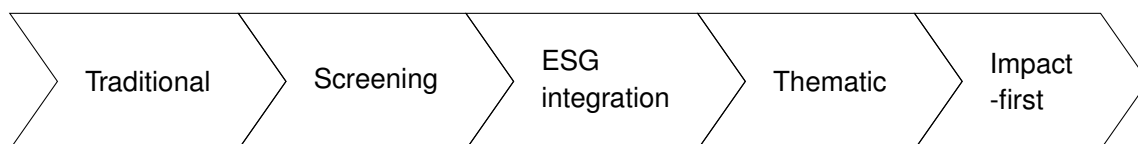


Figure 1.3: Different investment approaches

Source: Bridges Ventures (2012) and Goodall and Malmberg (2013)

approach, where the investor selects (and thus supports) companies that are environmental, social and governance (ESG) leaders in their respective business sector. ESG integration includes ESG factors into the investment and risk-management processes (Goodall

and Malmberg, 2013; Van Duuren et al., 2016). Thematic investing selects assets that address a sustainability issue such as investment in assets that can be assigned to “clean energy” and that address climate change (Bridges Ventures, 2012, p. 2). Investors following an “impact-first” approach also support assets that address a social or environmental agenda. This approach differentiates itself from thematic investing in the level of market return. While a thematic investor seeks competitive market returns, the impact-first investor may be willing to give up some of the profit in exchange for generating impact (Bridges Ventures, 2012). According to Goodall and Malmberg (2013), screening, ESG integration and thematic investing can be recognized as responsible investment approaches. “Impact investing” begins with the stricter forms of thematic investing approaches and encompasses impact-first. In this paper, the terms “sustainable” and “responsible” investment are synonymously used for reasons of simplicity. Which sustainability approaches are used and how they are parametrized is normally defined individually, in the investor’s guidelines for sustainable investment or standards for sustainable investment. The goal of these standards

Environmental	Social	Governance
– Emissions – Biodiversity – Land contamination – Waste – Water use – Community health	– Income inequality – Union relationships – Workforce exploitation – Gender equality – Human rights – Religious values	– Board diversity – Executive compensation – Auditor independence – Reporting transparency – Board independence – Antitrust violations

Table 1.1: Selection of social and environmental controversies
Source: Own display based on Grim and Berkowitz (2018)

for responsible investment is to achieve certain desired social and environmental outcomes (Goodall and Malmberg, 2013; EVPA, 2015). Investors usually define their own standard criteria, and therefore, the implementation of sustainable investment is categorized by great heterogeneity. There are no established sustainable investment standards (Sandberg et al., 2009). This contrasts with the existence of established sustainability standards in the physical sector, like Fairtrade or Rainforest Alliance-Utz. The result in the non-physical sector is thus individual investment approaches that have different criteria and thus different implementation of sustainable investment strategies by the actors involved.

This chapter offered an introduction to the different sustainable investment approaches. In the next chapter, the literature review and the description of the study’s contributions follow.

2

Literature review and the study's contributions

Sustainability topics have increasingly attracted the focus of academic studies in recent years. While this thesis mainly makes contributions to the field of sustainable finance, it also touches on other research fields (see Figure 2.1). These include studies about physical sustainability standards and the coffee market. The chapter first gives a detailed review of the literature on sustainable finance and the study's contributions before proceeding to explore the literature on physical sustainability standards in the coffee sector.

LITERATURE ON SUSTAINABLE FINANCE AND THE CONTRIBUTIONS OF THIS STUDY

Figure 2.2 provides an overview of the different types of studies in sustainable finance. A differentiation is made between general studies about sustainable finance and commodity-specific ones.

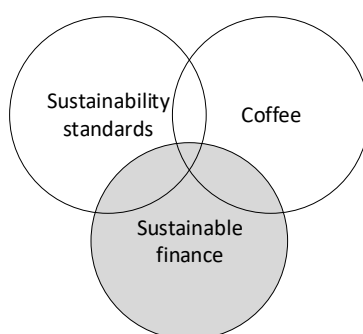


Figure 2.1: Related research fields the thesis touches on
Source: Own diagram

Commodity-specific studies include those that research the role and impact of investors in futures markets. For instance, Irwin et al. (2009) and Cheng and Xiong (2014) analyzed the role of investors in futures markets in the commodity price boom of 2007/2008. While Irwin et al. (2009) found no statistical evidence that investors consistently impacted futures prices, Cheng and Xiong (2014), on the other hand, concluded that financial investors affected risk sharing and price discovery processes. Haase et al. (2016a) reviewed 100 studies about the impact of speculation in commodity futures markets and found no evidence of consistent adverse effects of speculation. Moreover, the sustainability issues associated with farmland investments have been widely explored by commodity-specific studies. For instance, Daniel (2012) analyzed the role of private equity investments in the land grab debate. He examined the power relations present in land deals and the relationship between private equity investment and development finance. Kapstein (2018) analyzed the governance role of voluntary guidelines like the *Voluntary Guidelines on the Governance of Tenure of Land, Forests and Fisheries* in the land grabbing controversy. He highlighted the benefits of these guidelines and their limitations. McNellis (2009) described the activities of institutional investors investing in developing country agriculture. The author concluded that investments are primarily driven by risk and return considerations and the "(...) social ramifications of their investments take a secondary or tertiary consideration" (McNellis, 2009, p. 10).

Figure 2.2: Overview of the different types of studies in sustainable investments
Source: Own diagram

Another category of literature is summarized as studies about sustainable investors them-

selves. Some of these studies deal with the motivations of investors to engage in sustainable investments. As an example, Jansson and Biel (2011) compared private and institutional investors' motives for investing sustainably. Both groups are guided by social and environmental values. While private investors are more influenced by beliefs about returns, institutional investors focus on reducing financial risks. Von Wallis and Klein (2015) found that investors decide to adopt a sustainability approach due to financial motives and personal values. Other studies deal with the process of investors integrating sustainability criteria into the investment decision process. Authors like Michelson et al. (2004) have adopted a process view, approaching ethical investments and explaining how investors implement screening. Brandstetter and Lehner (2015) suggested including sustainability impact scores in addition to conventional financial inputs in portfolio optimization. And, as an example, Amel-Zadeh and Serafeim (2018) analyzed how investors use ESG information in various types of sustainability approaches including screening and engagement.

Studies about the governance function of sustainable investment constitute another major body of literature. These studies can be roughly divided into research about investor initiatives and those examining the impact of sustainable investments. Gond and Piani (2012), for instance, demonstrated that investor initiatives like the Principles for Responsible Investment (PRI) can foster collective action by "lowering barriers to entry", "support collaborative efforts" and "create conditions for a lasting dialogue between investors and managers" (Gond and Piani, 2012, pp. 64-65). Sievänen et al. (2013) found that the PRI may help institutional investors in translating responsible investment into practice and promote the adoption of responsible investment. Woods and Urwin (2010) argued that the PRI contribute to the standardization of responsible investment terminology and the growing awareness of the importance of integrating ESG criteria into investment decision-making processes. Weber (2018) takes a similar line, emphasizing that the PRI with their high number of signatories help in mainstreaming environmental and social issues in the financial industry. Studies about the impact of sustainable investment explore whether different sustainability approaches have an impact on investee companies. Dyck et al. (2019) and Dimson et al. (2015) showed that engagement approaches can influence investee companies to improve their social and environmental performance. Rivoli (2003) analyzed the impact of screening approaches and found that companies have an incentive to adopt sustainable business practices to avoid divestments. Heinkel et al. (2001) concluded that the avoidance of polluting companies by sustainable investors adversely affects stock prices and increases the cost of capital. The incentive for polluting companies to improve their business practices depends on the share of sustainable investors. Kölbel et al. (2020) provided a literature review on investor impact. They conclude that engagement with investee companies is relatively effective in generating investor impact, while the effect of strategies based on capital allocation is less clear.

This study at hand makes two contributions in the field of sustainable investment. Firstly, it adds to the understanding of the practices of investors with exposure to commodity markets, and how they are associated to other actors (see gray box to the right in Figure 2.2). Existing commodity-specific studies focus on the impact of investors on prices and volatility in commodity futures markets and sustainability issues in farmland investment. There is a lack of a thorough analysis of commodity investors and how their actions trickle down the supply chain in terms of an impact chain. This study fills this gap. It researches investors and their associated actors with the Swiss coffee market as an example. This study bridges the financial and non-financial worlds and contributes to the understanding of how financial and non-financial actors are connected. It applies a network approach and analyzes the microprocesses involved in the formation of the Swiss sustainable coffee network. The analysis is not limited to investors and corporate actors, but also includes non-corporate actors as well, and perhaps very importantly, non-human actors. With respect to non-human actors, special attention is given to the role of standards for sustainable investment and the SDGs in the network-building process. Moreover, the study provides insights into how standards for sustainable investment in coffee should be designed in order to be most effective in terms of generating social and environmental impact (see gray box to the left in Figure 2.2). While the study does not strive for generalizability, these findings also contribute to the general body of literature about the governance function and impact of sustainable investment. Existing studies focus on “which” approaches have an impact on investee companies and may change business practices towards sustainable ones. This study extends the academic literature by providing insights into “how” standards for sustainable investment should be designed in order to generate social and environmental impact. The definition of standards for sustainable investment is broadened to a standard system that encompasses the standard itself and assurance and monitoring mechanisms.

LITERATURE ON SUSTAINABILITY STANDARDS AND COFFEE

The nature of the subject of this thesis also inherently connects it to the literature on physical sustainability standards. This corpus of works includes studies about the standards’ governance function and impact. The issue of standards multiplicity is also addressed.

For instance, Taylor et al. (2005) highlighted the alternative governance function of fair trade coffee in Latin America. This role is established by formal organizational agreements and informal social and political aspects. Auld (2010) concluded that certification schemes’ success is dependent on other initiatives addressing coffee sector issues. Grabs (2020), moreover, explored the governance role of sustainability standards in the coffee sector. While aspects like the organizational institutionalization of standard-setting bodies are advanced, there are still “(...) barriers to the practice-oriented institutionalization of market-

driven regulatory governance” (Grabs, 2020). These barriers include product differentiation or high industry concentration. Dietz et al. (2019) described the governance role of sustainability standards in the example of the Honduran coffee sector. They found a decoupling of the standards and local practices of farmers and analyzed determinants that could lead to successful implementation of the standards.

Other studies analyzed whether sustainability standards generate a positive impact or not. Studies like those of Mitiku et al. (2017) showed, in the example of the Ethiopian coffee market, that sustainability standards can generate a positive impact. Similar findings were derived by Akoyi and Maertens (2018) concerning the Ugandan coffee market. On the contrary, Chiputwa et al. (2015) found no significant impact of several certification schemes analyzing poverty among Ugandan coffee farmers. Similarly, Jena et al. (2012) found limited impact of certification schemes on the livelihood of Ethiopian small-scale coffee farmers.

Furthermore, other studies explore the driving forces behind standards multiplicity. For instance, Manning et al. (2012) analyzed the role of different types of stakeholders and their national context in shaping the broadening and co-evolution of sustainability standards in the example of coffee. These researchers found that standards multiplicity was driven by national conditions in consuming and producing countries. Reinecke et al. (2012) analyzed the emergence of a standards market in the example of coffee. The authors found that market dynamics are driven by “meta-standardization” and “differentiation” among standards (Reinecke et al., 2012). Turcotte et al. (2014) performed a cross-sector analysis of standards multiplicity and complemented the analysis of the coffee sector with the forestry and the textile sectors.

While the dissertation is not aimed at making a contribution to the literature on physical sustainability standards and coffee, it does add to the understanding of different types of actors in the coffee market and how they are associated to each other. In particular, by exploring the governance role of standards for sustainable investment and analyzing how physical and financial sustainability standards are connected it complements the literature on the governance function of physical sustainability standards. Similarly, by providing insights into how standards for sustainable investment should be designed in order to generate social and environmental impact and depending on physical sustainability standards it complements the physical standards literature. Moreover, the thesis addresses the multiplicity in standards for sustainable investment and thus treats similar issues to those in the physical market.

3

The actor-network theory as a framework

The actor-network theory (ANT) serves as the theoretical concept to identify and theorize on how heterogeneous actors translate to a sustainable commodity network. ANT sheds light on the local practices of actors along the value chain and the microprocesses involved in the network formation process. This analysis includes the associations and motivations of the different actors to join a sustainability network. ANT-inspired insights are also used to analyze the role of sustainable investment and to derive inputs for drafting standards for sustainable investment in commodities.

3.1 INTRODUCTION TO ANT

ANT emerged during the 1980s in the field of science and technology studies and was mainly developed by Michel Callon, Bruno Latour and John Law (Callon, 1984, 1990; Latour, 1986; Crawford, 2005; Law, 1992). As such, its roots lie in the analysis of sociotechnical processes “(...) whose spokespersons have paid particular attention to science and technologic activity” (Crawford, 2005, p. 1). The focus of ANT is on explaining the dynamics of influence and power relationships in networks. In this context, ANT uses the concept of translation to describe the processes through which actors become associated to each other and how their interactions span a network. According to Castree (2002) and Murdoch (1997), ANT avoids discussions about binary dualisms such as social-natural, subject-object, and local-global, with epistemological and ontological convictions thus prevailing. As a result, the definition of actors not only includes human but also non-human actors and is consequently characterized by great heterogeneity. The network is connected to the actor “(...) in an effort to bypass the distinction between agency and structure” (Crawford, 2005, p. 1).

Overall, ANT is based on three principles: generalized agnosticism, generalized sym-

metry and free association (Callon, 1984). The first principle requires that the researcher observing the network takes a neutral stance, avoids any *a priori* assumptions of the characteristics of the network and it requires impartiality. The accounts of the respective actors are not questioned. As a result, the actors' descriptions of themselves and other actors as well as personal interpretations are not modified or censored (Callon, 1984). This allows for an in-depth analysis of a phenomenon. Generalized symmetry refers to the above mentioned unconventional definition of actors. ANT extends the definition of actors to include human and non-human entities and treats these as equally important in regard to ontological and epistemological insights (Latour, 1996). An actor is defined as "(...) any entity able to associate texts, humans, non-humans and money" (Callon, 1990, p. 140). Entities irrespective of being human or non-human "(...) take their form and acquire their attributes as a result of their relations with other entities" (Law, 1999, p. 272). A network is defined by all actors in relation to each other (Del Fabbro, 2019). The second principle requires that all actors whether human or non-human be analyzed with the same grid in order to prevent discrimination (Callon, 1984). In the third and last principle, free associations, and any *a priori* assumptions about the identity and relationships between actors are abandoned. The identity of human and non-human actors and the relationships between them are "allowed to fluctuate" (Callon, 1984, p. 222). These three principles are the basis for the sociology of translation that is applied in this study to analyze the network formation process.

3.2 CRITICISM AND 'AFTER ANT'

While the concept of ANT has enjoyed great popularity since its development, it has also faced criticism. For instance, such criticism has alleged that ANT resembles a type of "Machiavellian management theory" with its focus on the central actors and its allies with other actors (Gad and Jensen, 2010, p. 58). Its focus on central and privileged actors has also been criticized by feminists (Gad and Jensen, 2010; Star, 1991). Furthermore, one of the as yet unsettled issues is whether ANT is a theory or a method (Gad and Jensen, 2010). Ambiguity and criticism have forced key proponents of ANT to make a number of clarifications and sketch the possible future of ANT (after ANT).

In his article *On recalling ANT*, Bruno Latour pointedly identified four challenges of actor-network theory: the words 'actor', 'network' and 'theory' as well as the hyphen (Latour, 1999). When ANT was developed, networks were meant as a "(...) series of transformation – translations, traductions – which could not be captured by any of the traditional terms in social theory" (Latour, 1999, p. 25). This contrasts with newer understandings of networks being a web of connected nodes or the World Wide Web. Another challenge is the word 'actor' in its combination with the word 'network' and connected by a hyphen. It reminds one of traditional discussions about the agency/structure dualism that the authors did not want

to fuel and attempted to bypass (Latour, 1999; Law, 1999). The third challenge, the word 'theory', refers to the misconception that ANT is an additional theory to explain the behavior of social actors. Latour (1999, p. 19) stressed that ANT is another way to learn from actors: "(...) actors know what they do and we have to learn from them not only what they do, but how and why they do it". As such, ANT was not intended to provide a theory of the social but to provide "(...) a very crude method to learn from the actors without imposing on them an a priori definition of their world-building capacities" (Latour, 1999, p. 20). The hyphen is seen as the fourth challenge of ANT. One reason is the entrance into the debate about agency and structure that was not the intention of the initial proponents. The second reason is the notion of treating human and non-human actors. According to Latour (1999, 21), "[b]y dealing simultaneously with human and non-human agencies, we have happened to fall into an empty space between the four major concerns of the modernist way of thinking".

What is the potential of ANT in the future? Latour (1999, p. 22) stressed that ANT should not be labelled as a theory of the social but as a "(...) theory of the space or fluids circulating in a non-modern situation". John Law explored in his article *After ANT: complexity, naming and topology* ways of dealing with the inherent tensions of ANT, and makes the case for upholding complexity (Law, 1999). A consequence of ANT having become an institutionalized theory is the risk that ANT gets "(...) a rigid and naturalized way of thinking" which may end up overly simplifying reality (Gad and Jensen, 2010, p. 59). Therefore, Law (1999, p. 7) calls for "sensibility for complexity" in applying ANT.

3.3 THE SOCIOLOGY OF TRANSLATION

There are different translation approaches to describe manifold cases of how actors relate to each other to form a network. The most common translation models are those introduced by the initial proponents. Callon (1990, p. 133), for example, introduced the techno-economic network model to "(...) describe a coordinated set of heterogeneous actors which interact (...) to develop, produce, distribute and diffuse methods for generating goods and services". Latour (1983) applied a translation model to a study of Louis Pasteur's work with anthrax and found that it was Pasteur's work that triggered the interest of actors outside the laboratory and got them enrolled and enlisted (and triggered change in French society). Law (1987) described heterogeneous engineering to show how technological systems consisting of heterogeneous elements (humans, technical artefacts and natural phenomena) are constructed, using the example of Portuguese expansion in the fifteenth and sixteenth centuries.

This study at hand primarily applies the four moments of translation proposed by Callon (1984) for understanding how networks emerge. In his work about the domestication of scallops and the fishermen of St. Brieuc Bay, France, Callon (1984) summarized the process



Figure 3.1: The study's grid used to analyze the network: the four moments of translation
Source: Own diagram

of translation as: problematization, interessement, enrollment and mobilization (see Figure 3.1). This approach corresponds to the phases of the network formation process found in the data. Moreover, it has the advantage of giving the analysis a sound structure. In the first moment, problematization, an initiating actor identifies other actors that have interests consistent with those of the initiating actor. In this first process of building an actor-network, some actors seek to position themselves as “indispensable” (Callon, 1984, p. 202) in solving the problem they have identified. Besides defining the problems and solutions, they also map other actors in the network. In the next translation process, ‘interessement’, the other actors are convinced that the initiating actors’ interests are consistent with their own interests and an attempt is made to lead them to the point where they are willing to join the actor-network. A successful interessement leads to the third moment of translation, enrollment. This involves assigning a specific role to each of the actor within the actor-network who accept it and thus assume an active part in the actor-network. Callon (1984, p. 211) describes enrollment as “(...) the group of multilateral negotiations, trials of strength and tricks that accompany the interessements and enable them to succeed”. In the fourth moment, mobilization, the initiators ensure via “a set of methods” that the allied “spokesmen” act in line with the initiators’ interests and do not betray them (Callon, 1984, p. 196). The initiators aim at retaining ongoing support from the enrolled actors for the underlying ideas. Network stability is gained by mobilizing more allies, which means that the actor-network

with its underlying problem statement and suggested solutions gets institutionalized.

The last moment demonstrates that networks are continuously changing and evolving. The notion of translation is of a rather dynamic and less static process: "Translations may change as time passes" (Callon, 1990, p. 143). Actors may reject translations or circumstances may trigger retranslations. Callon (1990) introduces the term "convergence" and "irreversibility" to describe the stability of a network. Convergence is driven by alignment and co-ordination. Alignment is the extent of effective translation that "(...) generates a shared space, equivalence and commensurability" (1990, p. 145). Rules and conventions allow limiting the number of translations: "(...) conventions tend to rarefy the universe of possible actors by organizing imputation and limiting the numbers of translations that can be easily stabilized" (1990, p. 147). By limiting the number of translations, the network gains strength. The adoption of conventions and rules is referred to as co-ordination. The term "irreversibility" is defined by "the extent to which it is subsequently impossible to go back to a point where that translation was only amongst others" and "the extent to which it shapes and determines subsequent translations" (1990, pp. 149-150). In principle, all translations are reversible, but they vary in terms of their difficulty in reversing.

According to Callon (1990, pp. 148ff.), a convergent network is formed by strong alignment and co-ordination of actors. Hence, "(...) the more its actors work together, and the less their very status as actors is in doubt" (1990, p. 148). Or in other words, translation and intermediaries lead to consent among actors and constant re-translations are stabilized. This should not imply that everyone performs the same activities. More precisely, it describes how all these heterogeneous actors converge. Each actor acts according to their skills and knows how to mobilize skills within the network. Furthermore, convergence is driven by the level of standardization among actors and intermediaries. Standardization may range from reference standards to full compatibility.

3.4 APPLICATIONS OF ANT

While this explorative study is mainly aimed at making a contribution to the field of sustainable finance, ANT is not a typical framework applied to that particular field. There are a few studies in sustainable finance that draw on ANT. For instance, Gond and Boxenbaum (2013) combine ANT and institutional work "(...) to identify and theorize the activities involved in the glocalization of [responsible investment] (...)" (p. 707). Drawing on ANT, Arjaliès and Bansal (2018) studied how investment managers apply ESG criteria in practice. ANT is commonly used in studies about sustainability in physical markets. In supply chain theories, ANT-inspired network approaches extend traditional value chain analysis. Value chain analysis tends to put too much weight on vertical dimensions and does not sufficiently consider non-firm actors (Bush et al., 2015, p. 10). Network approaches like the global production

network analysis builds on ANT and considers vertical and horizontal dimensions (e.g. social and environmental factors) as well as firm and non-firm actors (Bush et al., 2015; Coe et al., 2008; Hughes et al., 2008; Raynolds, 2009; Busch and Juska, 1997; Murdoch, 2000). Moreover, Jarosz (2000) draws on ANT to analyze the role of the relation of cooperation and trust among actors in the formation of regional agri-food networks and sustainable agriculture. ANT is also a frequently applied framework in studies about sustainability standards. For instance, Raynolds (2002) partly draws on ANT to study the role of fair trade in linking producers and consumers. Dubuisson-Quellier and Lamine (2008) use ANT to analyze how fair trade organizations try to enroll consumers for sustainability. Callon's concepts about markets are applied by Whittaker (2006) to analyzing fair trade coffee. Another application of ANT in the commodity sector is the analysis of resistance to a mine in New Caledonia – a study on how power dynamics affect alliances and translations (Horowitz, 2012).

While ANT is widely used in studies about physical markets, its application in sustainable finance is relatively rare and underrepresented. The following section demonstrates the case for applying the concept to study the role of standards for sustainable investment in commodities.

3.5 ANT IN THE STUDY

ANT's focus on heterogeneous networks and its principles generalized agnosticism, generalized symmetry and free association made this particular theoretical framework the suitable lens for conducting the research (Callon, 1984). ANT served as a device for three applications in the study. First, ANT allowed to map the actors within the sustainability network by applying its mantra "follow the actors themselves" (Latour, 2005, p. 12). Second, ANT permitted to describe how heterogeneous actors with different beliefs and interests assemble to form a sustainability network. The four 'moments' of translation proposed by Callon (1990) allow light to be shed on local practices of actors along the supply chain and the microprocesses involved in network formation. Third, the ANT lens is applied to analyze the role of standards for sustainable investment, as non-human actors, in a sustainability network. In particular, the study explores the associations between financial and non-financial actors and how sustainability standards may generate social and environmental impact. The ANT-inspired insights are subsequently used to derive inputs for designing standards for sustainable investment in commodities. In this respect, the study takes an alternative view of governance of sustainable investment in commodities, through its network approach.

3.6 FINAL REMARKS

This chapter introduced ANT as the theoretical framework the study draws from. Besides

providing background information, the chapter described how ANT is used in the study. The next chapter gives insights into the methods applied.

4

Methodology

This chapter describes the study's research methodology. It includes the research questions, the study's boundary condition and the research design (incl. the case and description of the project phases). Furthermore, the data collection and analysis are explained in detail.

4.1 RESEARCH QUESTIONS

The process of deriving this study's research questions started with the basic question proposed by Janesick (2010, p. 382) "What do I want to know in this study?". The answer to this question is: *By using the ANT resources, the study aims to show how actors along the supply chain are mobilized for sustainability. Moreover, it aims to demonstrate which investment standards can contribute to achieving social and environmental goals and how they can be designed in order to increase the probability that these goals are met.* The following research questions were determined on this basis and served as the foundation for the study:

1. How do heterogeneous actors assemble to form a sustainable commodity network?
2. What is the role of standards for sustainable investment in commodities in the formation of a sustainability network?
3. How can standards for sustainable investment be designed in order to meet social and environmental goals?

The first question is aimed at identifying and theorizing on how heterogeneous actors translate to a sustainable commodity network. It sheds light on the local practices of actors

along the value chain and the microprocesses involved in the network formation including the associations and motivations of the different actors. Research question two focuses on the role of sustainable investments in a sustainability network. In particular, it explores the associations between financial and non-financial actors and how sustainability standards may generate social and environmental impact. The third research question makes a contribution to the field of designing guidelines for sustainable investment in commodities. The study takes an alternative view of governance of sustainable investment in commodities, through its network approach.

4.2 BOUNDARY CONDITION OF THE STUDY

A boundary condition with respect to the potential of sustainability standards to generate positive social and environmental impact on the ground is introduced for the analysis. This study focuses on the role of standards for sustainable investment and how they may translate to the local practices along the supply chain and generate social and environmental impact. In the course of this analysis, the alignment of financial standards with physical sustainability standards is evaluated. This study does not analyze whether sustainability standards can indeed generate a positive impact because, potential impact of physical sustainability standards is not point of the analysis and would open up another research field. Those interested in the debate about the impact of sustainability standards can choose from among numerous studies (Chiputwa et al., 2015; Jena et al., 2012; Ruben and Fort, 2011). For the remainder of the study, however, it is thus assumed that sustainability standards may have a positive impact. This assumption has empirical support and can also be supported by the gathered data. Although some of the interviewees mentioned disadvantages of sustainability standards, no one contested the standards' potential for generating positive impact.

4.3 RESEARCH DESIGN

This research project is an exploratory study. 'Standards for sustainable investment in commodities' is a relatively new and under-researched topic. The research problem of this work has not been clearly defined. This project aims to "formulate problems" and "clarify concepts" in order to get a better understanding of the underlying research problem (Sue and Ritter, 2012, p. 2). The research questions have been kept relatively general, qualitative in nature and are thus not formulated in the form of a quantitative testable hypothesis. The intent is to explore the research questions and not to find a final solution to the underlying problem. Both the explorative character and the ANT framework favor a case study design (Yin, 2018). The research issues cannot be separated from the context and therefore need to be studied in the context of the individual heterogeneous cases (i.e. individual

commodities). The case study design also allows for gaining a profound understanding of a phenomenon, i.e. the local practices of the actors in the commodity network. The research questions are explored using the example of the Swiss coffee market. The reasons for selecting the coffee market are shown in the next section.

4.4 CHOOSING THE CASE

While at a very abstract level many value chains of different commodities have elements in common (production - processing - consumption) each supply chain is very different from the others. For instance, the soft commodity coffee is grown and ultimately distributed in roasted form. Oil is extracted from below the earth's surface and refined into different petroleum products. Copper is mined, smelted and refined into products like cathodes. The study focuses on a single case to obtain a profound understanding of the local practices within the network. Besides fundamental and financial explanations for choosing the case of coffee, there are also reasons of available literature and data (Yin, 2018). The following financial and fundamental requirements for selecting the case were defined:

1. The commodity is traded in futures markets
2. The commodity has global relevance (with respect to production volumes) and relevance to daily life
3. The commodity has significant physical trading volumes
4. The commodity belongs to the soft commodity complex and is a food commodity (preference for a commodity exhibiting smallholder issues)
5. The commodity is not a derivative (e.g. soybean oil)

The analysis should apply not only to equity and bond investors but also to those who invest in futures markets. The futures investor is also one of the actors along the supply chain. While complying with requirement 2, a commodity was picked that has global relevance. A commodity fulfilling requirement 3 allows capturing of cross-border issues arising from trade and also looking at the role of trading houses as actors along the supply chain. A commodity produced and consumed locally would not yield the same level of insights. Food commodities are more in the public focus with respect to responsibility issues. In food commodities issues like manipulated prices or those of supply have a direct impact on our well-being. Therefore, soft commodities are the preferred research objects. A research object is preferable that has rather fragmented production carried out by many different small producers. This allows for insights into power relations between producers and buyers. The last requirement ensures use of the underlying commodity and not a derivative of it. Table

Crop Class	Commodity
Cereals	– Wheat – Corn
Oilseeds	– Soybean – Rapeseed
Beverage crops	– Coffee – Cocoa
Sugar	– Sugar

Table 4.1: Traded food commodities excl. livestock and derivatives of the respective food commodity (based on the holdings of the Bloomberg Commodity Index
Source: Own diagram based on Bloomberg (2017)

4.1 shows the major food commodities that are traded in futures markets. The commodity coffee was selected for this study. A significant share of coffee is produced by smallholder farmers. According to Fairtrade (2013, p. 13), small farms grow around 80% of coffee. Furthermore, trade in the commodity is important, as it is grown mainly in developing countries and processed in developed countries. Additionally, several parts of the supply chain are accessible by investors, meaning that standards can thus have significant leverage. Besides the fundamental and financial explanation for choosing coffee, literature (also with regards to related topics like physical labels) is available and data can be accessed. The case includes actors from the respective supply chain. The following actors were interviewed: Five financial institutions (banks and specialized asset managers), two investor initiatives, one sustainability rating agency, one coffee industry association, one commodity expert association, one physical trading company and roaster, two sustainability standard organizations (labels), one non-governmental organization (NGO) and one representative from academia. The unit of analysis is the Swiss coffee network. The study focuses on Swiss actors due to the global relevance of Switzerland in the coffee market. Switzerland is a major trading hub for coffee with a market share of over 50% (STSA, 2018). Furthermore, a base in Switzerland gave the author easier access to the actors for collecting the data.

4.5 RESEARCH PROJECT PHASES

The study comprised two phases. The first phase began in 2017. Figure 4.1 shows a rough chronology of the different activities undertaken during the two phases. The purpose of the preliminary phase was to clarify the relevance of the research questions and roughly map the actors and controversies in the coffee network. During this phase, the author conducted interviews, held discussions with experts and attended various conferences and events. The second phase comprised data collection, transcription of the interviews and

		2017	2018	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20
Phase 1	Access to selected actors										
	Literature review										
	Developing of broad research questions										
	Piloting unstructured interviews										
	Conference visits										
	Developing of narrower research questions										
	Piloting semi-structured interviews										
	Piloting data analysis of semi-structured interviews										
Phase 2	Semi-structured interviews										
	Transcribing										
	Data analysis										
	Theorizing										
	Bringing all together										

Figure 4.1: Research activities
Source: Own diagram

data analysis. The final tasks included theorizing and bringing together all parts into a coherent form.

4.6 DATA COLLECTION – METHODS

Data was derived from several sources including interviews, several types of documents and conference notes and observations. Other methods were used to supplement data collection. According to Yin (2003), the quality of the case study research will increase if the following components are included: multiple sources of evidence, a case study data base and a chain of evidence. The latter ensures “(...) explicit links between the questions asked, the data collected, and the conclusions drawn” (Yin, 2003, p. 83).

4.6.1 INTERVIEWS

Interviews were the main method of data collection and were conducted with key actors of the coffee network. Applying the ANT research lens, the interviews were used to map the sustainable commodity network. Both actors and controversies were mapped. The interviews had the purpose to explain the formation process, or how actors assemble to form a sustainability network, and to gain a detailed understanding of the local practices. The interviews were also used to tap expert knowledge and for clarification of specific comprehension questions. The type of interviews were focused and semi-structured, following questions from an interview guide (Merton et al., 1990). Interviews were held in German and English. The quotations used in the dissertation from German interviews were trans-

lated in the final stage of the research project. The function of the interview guides was to direct the conversation toward the issues to be explored. To account for the heterogeneity of the respective actors, different interview guides were created for physical-oriented and financial actors. Despite having had an interview guide, the interviews occasionally turned into unstructured conversations. The author permitted such shifts to keep the interviews more conversational in nature in order to gain the maximum amount of information. But an attempt was made to direct the conversation in such a manner that all interview guide topics were discussed. The questions in the interview guide were carefully selected and formulated. The researcher must “(...) appear genuinely naive about the topic and allow the respondent to provide a fresh commentary about it” (Yin, 2003, pp. 90-91). The advantage of using interviews is that this approach constitutes a “targeted” and “insightful” data collection method (Yin, 2018, p. 114). Targeted in the sense that interviews focused on the relevant topics of the underlying case. Insightful in the sense that they tapped the profound knowledge of the experts about their respective fields, while providing richness, in the form of personal perceptions and attitudes (Yin, 2018). Observations during the interviews contribute to such richness (Marshall and Rossman, 2016). Moreover, the interviews allow for asking follow-up questions and elaborating a certain topic in more detail (Marshall and Rossman, 2016). Disadvantages included biases, potential reflexivity or simply inaccuracies (Yin, 2018). Furthermore, interviews depend on trust between the interviewer and the participant. The interviews were conducted directly with the experts. The interview guides were sent in advance of the meetings. The aim of every interview was for the interviewee to answer all questions on the guide, if possible. With the exception of one interview all were recorded. Additional questions after the interviews were answered by the interviewees in written form or via phone call.

4.6.2 COMPLEMENTARY DATA COLLECTION METHODS

Documents were collected and examined to derive the conceptual framework. The types of documents collected were academic studies, reports published by organizations (e.g. supranational organizations or NGOs), books, internal and external company documents, and newspaper articles. Documents stemmed from different fields including governance theory in responsible investments and physical commodity markets. Meeting observations also complemented the transcribed recordings. This means that additional insights were gained to get a better picture of the respective actors. At each conference meeting, as much information as possible was recorded by hand and the hand-written documents were drafted into conference summaries. These conference summaries were checked for accuracy and supplemented by additional information.

4.7 DATA COLLECTION – PROCESS

4.7.1 SAMPLING STRATEGY FOR SELECTING RESEARCH PARTICIPANTS

The study applied ANT's approach to "follow the actors themselves" (Latour, 2005, p. 12) and drew on convenience and snowball sampling to select the interviewees in the Swiss coffee network (Etikan et al., 2016; Given, 2008; Goodman, 1961). A lot of the interviewed actors were those named in the pilot interviews. More actors were added in the subsequent interviews as well. Pilot participants were also selected by the author on the basis of personal experience, industry contacts and discussions with experts. The author himself is part of the industry and thus a well-established insider. Moreover, the selection of actors to interview was significantly driven by limited access. Many actors declined to participate in the study or did not even respond to letters or calls. For instance, there was no retailer willing to participate in the study and several NGOs were not available for a discussion. It was also extremely difficult to get in contact with trading companies. Moreover, smallholder farmers were excluded from the interview session. Several of the interviewed actors like sustainability standards and NGOs partly claimed to represent the point of views of smallholders. Additionally, the access to smallholder farmers is difficult and representativeness would require interviewing a large number of them, which was beyond the scope of the study. There were ultimately 17 actors accessible for a total of 27 interviews. Although this figure allowed for studying the phenomenon in-depth, the small sample may not be representative of the population of the respective actor. Therefore, the actors' answers were treated with caution because responses may have been biased or simply not true. To address this issue, the statements made by the actors were, whenever possible, verified by available literature to increase the reliability of the findings. Table 4.2 shows the list of participants per category for phases 1 and 2. Details about the respective participants are shown in Table 4.3.

4.7.2 PILOTING INTERVIEW PHASE

Six interviews were held during a piloting phase prior to starting the major interview session. Four of the six interviews were held in 2017 and were informal and unstructured. The remaining two semi-structured interviews were held in 2018. The interviews were used to:

- Become familiar with the interview process, anticipate possible problems that may come up during the interviews (e.g. dealing with different languages of the various actors)
- Get a feel for the length of interviews
- Become familiar with the use of tools like the audio recorder (e.g. technical issues and reaction of interviewees to recording)

Actor	Phase 1	Phase 2
Financial institutions	1	5
Sustainability initiatives	1	2
Industry associations	2	2
Investor initiatives	1	2
Sustainability rating agency	-	1
Trader and roaster	1	1
NGO	-	1
Academia	1	1

Table 4.2: Summary of participants
Source: Own diagram

- Refine interview guides
- Gain initial insights on the research topic

The two semi-structured interviews were recorded and transcribed.

4.7.3 ETHICAL CONSIDERATIONS

As the research project relied heavily on input of human subjects, protection of the participants was crucial (Yin, 2018). The study observed the following principles on the ethical conduct of research (National Research Council, 2003, pp. 24-26):

- Fair selection of research participants
- Informed consent
- Confidentiality protection
- Assessment of harms, risks and benefits

The study required the selection of a few representatives of the actors in the coffee network. The decision had to be made in favor of including a few and excluding many potential actors. The groups of actors were treated equally and in a fair manner in the selection process. All prospective participants were provided information about the research project in advance to give them a basis for deciding whether or not they wanted to participate in the study. This was accomplished by sending them a short piece of information describing the research project. Once participants agreed to participate in the study, they received a letter confirming to them that all data collected during the project would be treated as confidential. Participants declared their agreement to the interview and the data collection process by

signing the “Participant Consent Form” or by agreeing to the form on the audio recording. The data analysis was carried out using code names for the participants in order to assure anonymity. The code names for the respective interviewees are shown in Table 4.3.

4.7.4 THE INTERVIEW PROCESS

The empirical data was mainly collected in 2019 in 21 interviews and 6 informal discussions (without any interview guide or audio recording). The interviews were directly arranged. Interview participants received the interview guides one week in advance of the meeting. Most of the interviews were carried out in the offices of the interviewees. The interview sessions started with a brief personal introduction followed by a short description of the research project. At the beginning of the official part of the interview, interviewees were told that their participation was voluntary and that they had the right to withdraw at any time. Participants received an explanation of the fact that their input would be treated as confidential. They were also requested to agree to the recording of the interview, and, had the right to stop the recording at any time during the interview. At the beginning of the interviews, the interviewees were asked to describe their role in the coffee network. While the start of the interviews was fairly standardized, the interviewer allowed a semi-structured course for the remainder of the interview. The interview guides were applied in a flexible manner. The questions were not explored in a strict order. The conversational nature of the interviews sometimes represented a challenge to explore all pre-defined topics. Furthermore, during the interviews new questions arose that were immediately addressed by formulating other new questions. The interviews lasted from 60 to 90 minutes and were stopped once all relevant questions had been answered or time windows lapsed. Once interviewees had answered all questions on the interview guide, they were asked to add any remarks or important topics that, in their point of view, had not been covered. Any open questions or those requiring further clarification were answered by the interviewees in written form or by phone call. Before ending the interviews, all participants were asked whether they consented to being contacted again.

4.8 DATA ANALYSIS

4.8.1 INTRODUCTION TO INTERVIEW DATA ANALYSIS

The interviews were analyzed through the ANT lens, which served as a theoretical tool kit to explore the process of sustainability spreading across the coffee network. The interview analysis goal was to find answers to the research questions. The analysis was guided by themes. According to Braun and Clarke (2006) themes can be identified via an inductive or deductive approach. This study applied a combination of the two approaches to its

data analysis. Initially, the patterns identified were “strongly linked to the data themselves” (Braun and Clarke, 2006, p. 83). This step is inspired by grounded theory in the sense that the theory development was based on the data “(...) without any particular commitment to specific kinds of data, lines of research or theoretical interests” (Strauss, 1987, p. 5). Subsequently, the patterns were analyzed through the ANT lens. The ANT concept was applied to structure the gathered data.

4.8.2 PERFORMANCE OF INTERVIEW DATA ANALYSIS

The thematic analysis was based on the framework by Castleberry and Nolen (2018). They described the thematic analysis process by using the five-step framework of Yin (2011): compiling, disassembling, reassembling, interpreting, and concluding. *Compiling* started with transcription of the interviews. All recordings of the interviews were transcribed. The transcription was performed adhering to the original recording as closely as possible in order to gain the maximum information possible. Only pauses, discourse markers, and filler expressions like “err” (as long as they did not convey a certain meaning like affirmation) were omitted. Transcribing the data rendered it accessible for subsequent analysis. Rereading the transcriptions enabled the author to become more familiar with the data (Braun and Clarke, 2006).

Disassembling was carried out after compiling the data to create groupings. The data was disassembled by coding. Coding “(...) involves identifying interesting features of the data systematically across the entire data set and occurs at multiple levels” (Castleberry and Nolen, 2018, p. 809). Codes were initially used as tags to find and categorize data. These codes were later employed to find similarities across the full data set and served as the basis for drawing conclusions. Firstly, a set of open codes was generated from the two pilot interviews. These two interviews included two associations and were designed to offer a broad range of viewpoints for creating initial codes. This set included around 50 initial codes in the first stage. Three more interviews were independently coded in the second stage, in which 50 codes were generated. There was a large overlap with those found in the first stage. In the third stage, the codes (adjusted for the overlap) were merged and utilized for coding all interviews. Before beginning to code all interviews, a “code book” was created containing the definitions of all codes, in order to ensure consistency during the coding process of the full data set (Castleberry and Nolen, 2018, p. 809). The software program Atlas.ti was used for coding.

During *reassembling*, codes were used to create themes. Patterns of codes formed a theme, the purpose of which was to capture “(...) something important about the data in relation to the research question, and represents (...) meaning within the data” (Braun and Clarke, 2006, p. 82). Themes were explored by thoroughly examining the empirical

data. The data set was also combined with the theoretical framework to find themes. The identified themes include problematization, interessement, enrollment, mobilization, actors and designing guidelines. An example of a theme is shown in Figure 4.2.



Figure 4.2: Example of a theme (interessement)

Source: Own diagram based on ATLAS.ti

In the final two steps, *interpreting and concluding*, interpretations were based on discussion links between themes and global findings based on all codes (Castleberry and Nolen, 2018). Furthermore, interpretations were derived by using the coded data to answer the research questions. Interpretations were then used for the conclusion.

4.9 FINAL REMARKS

This chapter gave an overview of the study's research methodology including the research questions, the boundary condition and the research design. The data collection and analysis were also explained. In the next chapter follow the findings.

Actor	Code	Representative
Investor initiative	AF1	Head of environmental issues
Sustainability rating agency	AF2	Senior ESG analyst, financial institutions
Association for sustainable finance	AF3	Executive director
Coffee industry association	AP1	Executive director
Commodity expert association	AP2	President
Standard organization	SI1	Business development manager and responsible for coffee
Standard organization	SI2	Responsible for emerging markets
Coffee trader and roaster	PT1	Member of the management board
Asset management company	IN1	Head of sustainability investing research
Asset management company	IN2	Head of ESG analytics
Asset management company	IN4	Chief executive officer and founding partner
Bank	BA1	Responsible for sustainability policy
Bank	BA2	Senior ESG specialist
Academia	AC1	Senior researcher with focus on speculation in commodity markets
NGO	NG1	Senior advisor sustainable finance

Table 4.3: Summary of participants
Source: Own diagram

5

Findings

This chapter gives an overview of the findings. The analysis uses ANT resources and applies the sociology of translation as described in Chapter 4. The findings section starts with portraying the interviewed actors and their description of the network they are embedded in. These networks are referred to as “individual networks”. These “individual networks” are assembled to form a “aggregated network”, a network that contains the information of the individual networks. This two-step process has several advantages. It allows for giving the individual actors a voice, while not marginalizing any of them. It allows for showing the rich amount of data collected and the heterogeneity of the different actors, including the actors’ heterogeneous motivations for joining the actor-network. Furthermore, merging the different views allows for triangulation. Deriving confirmation of certain pieces of information collected by different independent sources (i.e. actors) increases the reliability and credibility of the results. The individual actors, their roles and associations are described for each individual network. Having similar accounts of the network actors and their associations supports more robust results and addresses the potential issues with a small number of interviews. In the following sections, the respective actors are named by their abstract identification code.

5.1 TRANSLATION PROCESS PROTOTYPE

The following passages summarize the ideal typical translation process according to the four moments of translation by Callon (1984). This process is used as a template for the next sections. It is important to emphasize that the empirical data does not necessarily reflect a perfect alignment of these four moments. Furthermore, the results should not be interpreted as a sequential process but translations steps that overlap many times. The

network-building process is first described in the sense of a “happy path”. As such, intersement will automatically lead to enrollment. Failures in getting actors enrolled are summarized separately in terms of boundary conditions of the network-building process.

Problematization

In the first moment, problematization, an initiating actor identifies other actors that have interests consistent with the initiating actor's. In this first process of building an actor-network, some actors seek to position themselves as indispensable (Callon, 1984, p. 202) in solving the problem they have identified. Besides defining the problems and solutions, they also map other actors in the network that have beliefs consistent with theirs and that are needed to solve the problem. This step is reflected in the following individual networks by describing the actors' motivation to join the network and their strategies for getting other actors enrolled in sustainability.

Intersement and enrolment

In the second translation step, intersement, the central actor uses a set of actions in an attempt to interest other actors identified in problematization. The other actors must be convinced of the problem and proposed solution, i.e. the other actors must be convinced that the initiating actors' interests are consistent with their own interests; an attempt is made to lead them to the point where they are willing to join the actor-network. If the efforts are successful, the newly recruited actors may weaken their links to the network they were embedded in before and participate in the new, emerging network. A successful intersement leads to the third moment of translation, enrollment. This involves assigning a specific role to each of the actors within the actor-network, who accept the role thus assuming an active part in the actor-network. Callon (1984, p. 211) describes enrollment as: “(...) the group of multilateral negotiations, trials of strength and tricks that accompany the intersements and enable them to succeed.”

Mobilization

In the fourth moment, mobilization, the initiators aim to retain ongoing support from the enrolled actors for the underlying ideas and try to mobilize other actors that belong to other networks. This forms a larger network. In this stage, the controlling actors become the spokesmen that speak on behalf of the other actors.

5.2 THE DIFFERENT ACTORS AND THEIR INDIVIDUAL NETWORKS

5.2.1 ACTOR 0: COFFEE

Coffee is the main actor spanning the sustainable coffee network and was the focus of the interviews with the actors portrayed in the following sections. This section contains the supply and demand data on coffee. Moreover, the certification scheme is described using the Fairtrade system as an example.

Importer	thousand bags	% of total	Exporter	thousand bags	% of total
European Union	47,500	43%	Brazil	32,700	29%
USA	25,000	22%	Vietnam	24,000	21%
Japan	6,750	6%	Colombia	12,000	11%
Canada	2,950	3%	Indonesia	6,096	5%
Russian Federation	2,900	3%	Honduras	5,500	5%
Other	24,622	22%	Other	31,683	28%

Table 5.1: Largest coffee importing and exporting countries in 2019/20
Source: USDA

SUPPLY AND DEMAND

Coffee is mainly grown in Brazil, Vietnam and Columbia and imported by the European Union and the USA (see Table 5.1). Therefore, coffee serves as a good example of the spatial dimensions of production and consumption along the supply chain. Many different activities (see Figure 5.1 and Table 5.2) and actors are involved in the production of the end product coffee. At the farming stage, cultivation and harvesting are mainly performed by smallholders and estates (Gereffi et al., 2014). Estimates range from 20 to 25 million farmers who are working in coffee production (Lernoud et al., 2017). Coffee is then processed and milled by smallholder farmers, cooperatives, estates and/or traders. Coffee beans are subsequently traded by trading companies, then shipped to roasters. Roasters range from small roasters and coffee chains to coffee manufacturers and large roasters. Coffee is then sold to consumers by supermarkets, restaurants and coffee bars. The value chain of coffee can be classified as “buyer-driven” (Manning et al., 2012, p. 198) with power of control tilted in favor of large roasters. Companies like Nestlé, JAB Holdings and J.M. Smucker

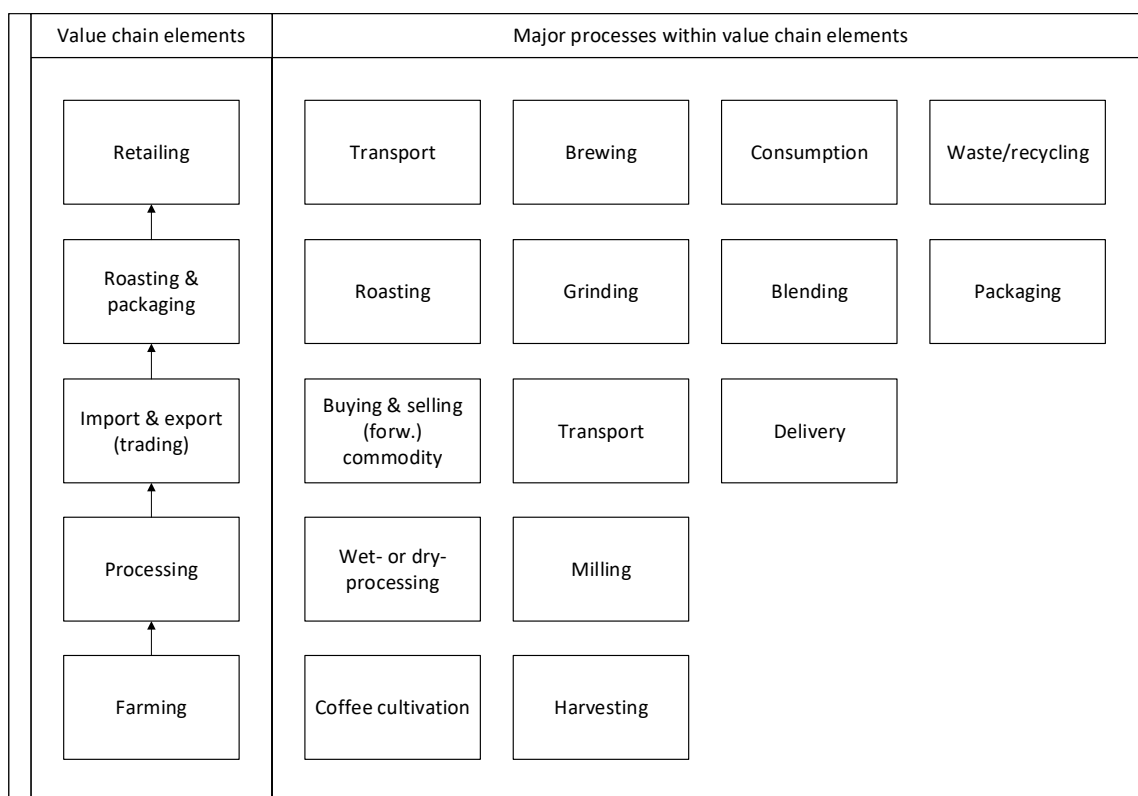


Figure 5.1: Coffee value chain

Source: Based on Gereffi et al. (2014) and Brown et al. (2007)

dominate the market for roasting (Sjoerd Panhuysen and Pierrot, 2018; Ponte, 2019), while on the production side, a significant share is attributed to smallholder farmers.

THE ROLE OF SUSTAINABILITY STANDARDS

Sustainably produced commodities are increasingly becoming mainstream. For coffee, the production area currently compliant with at least one sustainability standard amounts to around one quarter of total coffee grown (Lernoud et al., 2017, p. 89). Sustainability issues in the coffee market include volatile prices, smallholder issues and biodiversity (Lernoud et al., 2017, p. 105). Sustainability standards are a way to address these challenges by defining social, environmental and economic sustainability criteria and certification processes (Manning et al., 2012, p. 199). Producers, buyers and consumers take responsibility and address the prevalent social and ecological challenges with the goal of generating positive impact. Sustainability standards address these issues by ensuring that producers are paid prices that cover the costs of sustainable production, enabling pre-financing for those wishing it, facilitating long-term trading partnerships and defining criteria to guarantee that the production and trade of certified products is sustainable (FLO, 2017b). Coffee has seen the development of numerous standards including Fairtrade, UTZ-Rainforest Alliance and 4C (Lernoud et al., 2017, p. 88). Fairtrade serves as an example for illustrating how stan-

	Actors
Farming	– Smallholders – Cooperatives – Estates
Processing	– Smallholders – Cooperatives – Estates – Traders
Trading	– Trading companies – Certified importers – Direct trade importers
Roasting	– Large roasters – Coffee manufacturers – Coffee chains – Coffee bars
Retailing	– Supermarkets – Restaurants – Coffee bars

Table 5.2: Actors along the value chain
Source: Gereffi et al. (2014) and Manning et al. (2012)

dards generate a sustainable value chain. Other standards and the differences between them are discussed in numerous studies (Manning et al., 2012; Muradian and Pelupessy, 2005; Reinecke et al., 2012). Fair trade is based on “partnerships” between producers, consumers, traders and businesses (FLO, 2017a). The Fairtrade system includes Fairtrade International (FLO)*, nine Fairtrade Marketing organizations and FLOCERT, the independent certification subsidiary of FLO. FLO itself is an association of 20 national Fairtrade organizations and three producer networks (FLO, 2017e). An overview of the Fairtrade system is shown in Figure 5.2. According to FLO (2017e), FLO’s role includes setting standards, minimum prices and premiums. It is also responsible for impact measurement and developing strategies for improving effectiveness. Producer networks support producers by offering training workshops, financial support and advice. National Fairtrade organizations license the usage by firms of the Fairtrade marks and promote the system within their countries. The Fairtrade Marketing organizations carry out promotion of Fairtrade in new markets. The following section describes how the standards work in practice. Fairtrade standards aim to “empower producers” and “tackle poverty” in developing countries (FLO, 2017d). According to FLO (2017b), its key objectives are to:

- “ensure that producers receive prices that cover their average costs of sustainable

*FLO stands for Fairtrade Labelling Organizations International.

production;

- provide an additional Fairtrade Premium which can be invested in projects that enhance social, economic and environmental development;
- enable pre-financing for producers who require it;
- facilitate long-term trading partnerships and enable greater producer control over the trading process;
- set clear core and development criteria to ensure that the conditions of production and trade of all Fairtrade certified products are socially, economically fair and environmentally responsible.”

Standards have both “core” requirements which must be met by producers in order to be certified and “development” requirements that target a permanent improvement process (FLO, 2017b). These requirements can be divided into social, economic and environmental criteria. For small producers, for instance, social criteria require an organizational structure where all members of it have access to “(...) democratic decision-making processes” or for hired labor “(...) training opportunities, non-discriminatory employment practices, no child labour, no forced labour” and “(...) freedom of association of the workforce” (FLO, 2017b). For instance, economic criteria require that buyers pay the Fairtrade minimum price and a

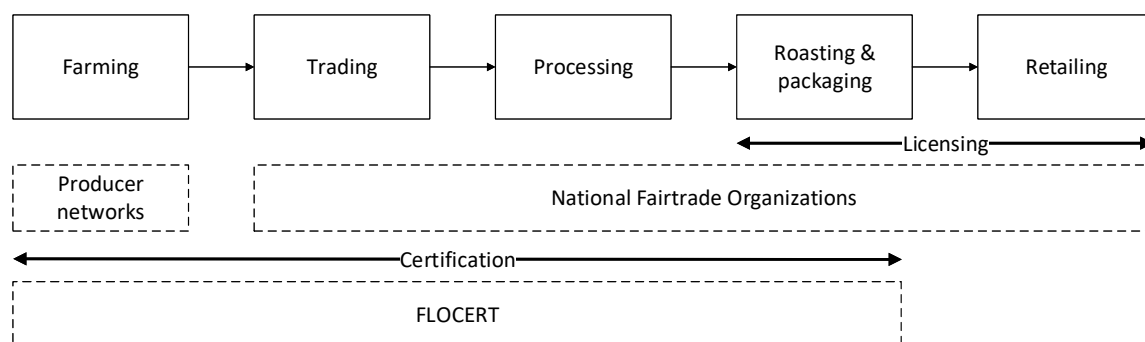


Figure 5.2: Sustainable coffee value chain in the example of Fairtrade

Source: Own diagram based on Gereffi et al. (2014) and Brown et al. (2007)

Fairtrade premium to producers. The minimum price should cover the costs of “sustainable production” and the premium aims to improve the situation of farmers, local communities and workers (FLO, 2017b). Environmental criteria require the minimization of agrochemical usage, maintenance of water resources and soil fertility (FLO, 2017b). There are Fairtrade standards for producers, traders, individual products (e.g. cocoa or coffee), climate and textile (FLO, 2015, 2017c).

5.2.2 ACTOR AF1: AN INTERNATIONAL INVESTOR INITIATIVE

AF1 is an international investor initiative (hereinafter *THE INITIATIVE*) representing a large network of investors; it is headquartered in a European country. Achieving a sustainable financial system for the benefit of investors, the environment and society was the motivation for establishing the organization.

ASSEMBLAGE OF ACTORS BUILDING AN ACTOR-NETWORK

THE INITIATIVE identified several actors that are important for attaining a sustainable financial system. Figure 5.3 shows the respective actors and associations between them. Coffee is not explicitly covered and thus not a focal actor for *THE INITIATIVE*. Nevertheless, some of the sustainability issues in the coffee sector are covered by *THE INITIATIVE*'s topic-based approach in addressing sustainability issues. *THE INITIATIVE* has several strategies aimed

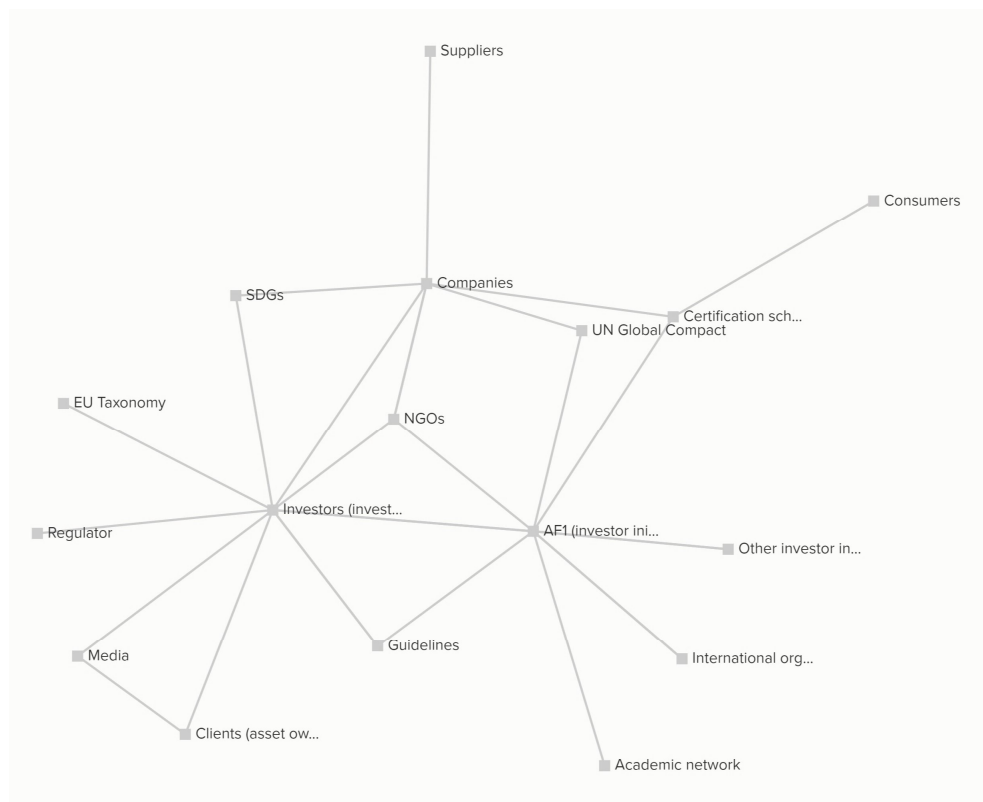


Figure 5.3: Actor-network by *THE INITIATIVE* (AF1)

Source: Own diagram based on kumu.io

at gaining investors for the sustainable cause. This actor interviewed explained, that one strategy is to help investors in implementing the initiative's sustainability guidelines: "(...) it's our role to help them and guide them through that journey of implementing those [guidelines] into the long-term decision-making processes that they have" (AF1, 2754:2922). The organization added: "And we have a role to transfer knowledge and share good practice and

learnings between the [members] as much as sort of moving the [members] towards that leading level as well” (AF1, 4842:5021). This description of the role of investor initiatives is also underpinned by literature about PRI. For instance, Weber (2018) highlights that PRI’s roles include supporting its members in embedding sustainability criteria in their decision-making processes and in fostering knowledge-sharing. Similar definitions of PRI’s role are found in Majoch et al. (2017) and Richardson (2007). Furthermore, *THE INITIATIVE* has a coordinative and mobilizing function when it comes to engagement with investee companies. This mobilizing function in the course of engagements is also supported by Gond and Piani (2012) and Sievänen et al. (2013). In an engagement process, the organization will first set up an advisory committee including a small group of investors to discuss the topic of engagement. The goal is to understand the investors’ views and what direction should be taken to address the sustainability challenge. Afterwards, the group will commission a piece of research to obtain a deeper understanding of the topic and the companies that need to be targeted. This paper will serve as the basis for the engagement process. Finally, more investors are mobilized to support the engagement. Participating investors are divided into lead investors and supporting investors. Lead investors are the key driving force: “Lead investors being the ones that will be the key contact for certain companies and (...) they can really push forward on those questions” (AF1, 17922:18184). Supporting investors join the engagement initiative and may provide input to the agenda, but they do not actively engage with the companies. In this process, the lead investors together with *THE INITIATIVE* become the spokesmen of a larger group of investors and speak with the companies on their behalf. According to *THE INITIATIVE*, more and more asset owners require their investment managers to adopt a sustainable investment approach and join an investor initiative: “I hear that a lot of (...) asset owners and clients are actually making it [being a member of the initiative] part of their requirements (...)” (AF1, 5050:5359). This dynamic can be seen in the increasing number of asset owners joining investor initiatives like PRI (PRI, 2020a). In such manner, they get mandated investment managers enrolled in the sustainability network. Investee companies are those actors that implement the criteria defined in the investors’ sustainability standards. Investors also try to influence the companies to change their business activities towards defined sustainability targets. The impact of investor engagement on companies is also supported by other studies (Gond and Piani, 2012; Dyck et al., 2019; Dimson et al., 2015). *THE INITIATIVE* commented that companies ideally include these sustainability criteria in their policies and guidelines and pass them along their supply chains:

“The idea is that you change the company at that level and then those ideas should trickle down to the company and then for something like supply chains, that company then should be implementing policies and strategies around sustainability through the supply chains, so engaging with the suppliers” (AF1, 7104:7402).

THE INITIATIVE stated that the role of the media is to create awareness that may translate into a change in investment behavior. As the actor commented: “(...) a perfect example is around plastic. There has been much media attention that the investors have been very, very responsive on” (AF1, 12698:12852). This particular role of media in mobilizing investors for sustainability topics is a rather neglected research field and the statement cannot be verified easily. But, the existence of investors adapting a sustainability approach to avoid negative media publicity can be underpinned by literature (Jansson and Biel, 2011; Borghesi et al., 2014). Furthermore, the role of media in creating awareness for sustainability among consumers has been researched (Michaelis, 2003; Strähle and Gräff, 2007). *THE INITIATIVE* commented that NGOs play a comparable role. If they address similar sustainability challenges like sustainable investors do, this can trigger other actors to look at these issues more closely and try to solve them. This is particularly true if NGOs put public pressure on certain institutions. The important role of NGOs in exposing shortcomings and their potential to influence companies is also supported by other studies (Collingwood, 2006; Spar and La Mure, 2003). Moreover, *THE INITIATIVE* may “(...) learn from what it sees as a risk and whether that then translates into an investment risk” (AF1, 25312:25768). The actor explained that they have good relationships with several NGOs and want to benefit from their proximity to companies and their local practices. According to *THE INITIATIVE*, other investor networks enable access to specific investor groups and company networks. This complementary access enables more investors and companies to be translated. To ensure alignment with other guidelines, leverage of the respective expertise and networks *THE INITIATIVE* collaborates with international organizations like the Organisation for Economic Co-operation and Development (OECD). This practice is confirmed in the literature. For instance, Sievänen et al. (2013) demonstrate using the example of PRI that investor initiatives collaborate with other initiatives and organizations. This collaboration supports the network-building process. The actor appreciates the work of the United Nations (UN) and emphasized the role of the *SDGs* because they provide a global framework among heterogeneous actors for global sustainability goals and can be used as a reference point to show how actors contribute to achieving these goals (see Section 5.2.2 for a short introduction to the Sustainable Development Goals (SDGs)). This finding is underpinned by literature. Schramade (2017, p. 88) argues that the *SDGs* provide a framework and common language to align investments. Setó-Pamies and Papaoikonomou (2020) argue that the *SDGs* provide a common language among heterogeneous actors and a common framework for understanding sustainable development. Furthermore, a collaboration is underway with the sustainability initiative UN Global Compact (UNGC): “(...) we will work with them to bring the companies into the conversation and then we can coordinate and learn from them as well” (AF1, 24771:25172). For research projects, the organization teams up with academic institutions. According to *THE INITIATIVE*, certification schemes translate

the processes involved to produce sustainably sourced commodities to end consumers. It thus provides confidence in consumers that the production or sourcing upholds certain sustainability standards. This role of certification is also shown by Van Loo et al. (2015) and De Boer (2003). When companies are certified according to a standard, *THE INITIATIVE* wants to understand whether the standards address specific sustainability issues enough or whether the companies need additional elements in their policies or practices. Regulation is seen as a driver towards sustainability: “(...) regulators are important to get investors moving” (AF1, 10037:10084). This statement is also in line with Eurosif (2018) and SSF (2019) that find that regulation is an important driver of growth in sustainable investments. Binding regulations directly impact the behavior of investors and thus moves them towards sustainability. *THE INITIATIVE* remarked that with the European Union (EU) taxonomy, a tool for classifying business activities, the European Union is trying to define sustainable business activities. This is consistent with PRI (2020b) which shows that the EU taxonomy will classify business activities that can be used by investors for their processes. In doing so, they address the lack of a common definition of what “sustainable” means.

CHALLENGES IN THE TRANSLATION PROCESS

The previous section has described the role of *THE INITIATIVE* and how the organization together with associated actors translates to a sustainability network. While these translations appear straightforward, *THE INITIATIVE* named several challenges for the translation process. For instance, the analysis has shown that actors do not necessarily cover the full commodity spectrum. *THE INITIATIVE* does not cover coffee and therefore its translation to the sustainable coffee network is not guaranteed. Another challenge is the lack of a generally agreed definition of what “sustainable” investment means: “And it’s also sort of identifying (...) at this stage what we mean by sustainable investment, but (...) you’re going to have to define that” (AF1, 8207:8361). This concern is also shared by OECD (2012) and Cerin and Scholtens (2011) and poses the risk that actors do not translate to the same network. Furthermore, commodity investments are not approached holistically by *THE INITIATIVE* when it comes to sustainability approaches: “So we focus more on listed equity” (AF1, 14123:14197). Other financial instruments like derivatives are not covered and there is no differentiation among investment strategies from an ESG point of view. Moreover, sustainable investment standards are often limited to commodity- or issue-specific concerns that the investment manager wants to address. *THE INITIATIVE* remarked that there is usually no broad alignment with physical sustainability standards and certification schemes. This hinders physical and financial actors from assembling to the network. According to *THE INITIATIVE*, the reasons for this lack of connection can be attributed to complexity and numerous sustainability standards. While engagement is aimed at getting investee compa-

nies enrolled in the sustainability network, *THE INITIATIVE* acknowledged that the dialogue with companies may simply not work because companies are not interested, or they do not believe that investors have the respective competence. Challenges in the engagement process are also found by other authors. For instance, Ivanova (2017) found that one challenge is a lack of investor experience in activism. Clark et al. (2015, p. 49) emphasize “(...) the importance of global institutional investors’ understanding of local firms and institutions for efficient engagement”.

KEY FACTORS FOR DESIGNING STANDARDS

THE INITIATIVE considers impact measurement one of the key factors for designing standards for sustainable investment. The organization emphasized that we are in the transition to a 1.5-degree world and an “(...) investor wants to ensure that his investments are relevant within those different scenarios as well” (AF1, 33817:34146). Impact measurement is also recommended in the development of physical sustainability standards (ISEAL, 2014). Furthermore, the standard for sustainable investment should be in the form of a defined set of criteria that can be implemented by the affected actors. Giving guidance on the implementation of the standard is also recommended by ISEAL (2014). Policy makers, asset owners, investment managers and investee companies should be involved in drafting standards. Policy makers may “(...) help enforce some of those policy and regulation” (AF1, 34501:34549). Asset owners and investment managers help to identify whether the investment standards can be implemented in practice. The underlying investee companies are relevant because they are the actors that ultimately implement the standard criteria in practice and have the “(...) on the ground experience and knowledge” (AF1, 35850:35905). While this statement about involving multiple actors in designing financial sustainability standards is not underpinned by literature, the practice is a common element in designing physical sustainability standards (ISEAL, 2014).

EXCURSUS: THE ROLE OF THE SUSTAINABLE DEVELOPMENT GOALS IN SUSTAINABLE INVESTMENT

In 2015, the UN launched the Sustainable Development Goals (SDGs) in replacement of the Millennium Development Goals (United Nations, 2015). Some 17 goals and 169 targets were defined to guide the path of sustainable development until 2030 (see Graph A.1 in the appendix). The goals are manifold and target social, economic and ecological aspects of sustainable development (Barbier and Burgess, 2017). Not only is the public sector seen as part of the solution to achieve the goals, but the global community

calls for the support of the private sector with companies and investors (PRI, 2017). According to the United Nations Conference on Trade and Development (UNCTAD), total investments ranging from USD 5 to USD 7 trillion per annum will be needed to meet the ambitious agenda by 2030 (UNCTAD, 2014). Ugarte et al. (2017, p. 4) stress that the “SDGs are quickly becoming a universal language for governments, businesses and NGOs to engage each other around shared sustainability aims, commitments, outcomes and impacts”. By aligning investments, practices, products and services to the SDGs companies contribute to achievement of the Agenda 2030 (EY and UNGC, 2016). As such, the global goals find their way into local practices. The SDGs play an increasingly important role for investors as well. Investors want to understand how they contribute with their investment decisions to the sustainability agenda 2030. The SDGs also show that there are many different social and environmental challenges that may materialize as financial risks (PRI, 2017). For instance, external costs like environmental pollution may be internalized at some point, which could result in a repricing of the affected assets. Selecting those companies that manage social and environmental factors can be an effective way of mitigating risks. The SDGs can also be useful for identifying attractive investment opportunities. According to PRI (2017, p. 7), “(...) achieving the SDGs will be a key driver of global economic growth”, which in turn will be a key driver of financial returns in the long run. Furthermore, the SDGs can help in communicating the link between investments and impact generated by them (GIIN, 2016).

5.2.3 ACTOR AF2: A SUSTAINABILITY RATING AGENCY

AF2 is a sustainability rating agency (hereinafter *THE RATING AGENCY*). It analyzes the ESG performance of companies and countries and has its headquarters in the European Union. These analyses in the form of ratings and other services are mainly offered to financial institutions which use the information for their sustainable investment approaches.

ASSEMBLAGE OF ACTORS BUILDING AN ACTOR-NETWORK

Companies usually face several social and environmental challenges and *THE RATING AGENCY* evaluates how the companies address them. This actor mentioned several sustainability challenges in the coffee sector. Ecological challenges include issues of water, deforestation, biodiversity and the usage of pesticides. The social issues include labor rights, gender issues, child labor and the definition of a living wage. These issues raised by the actor are also consistent with those named by other authors (Sjoerd Panhuysen and Pierrot, 2018; Rabobank, 2018). *THE RATING AGENCY* suggested that sustainable investing could be a solution to address these challenges. While there is no literature for this partic-

ular case of coffee investments the positive impact of sustainable investment has empirical support (Dyck et al., 2019; Dimson et al., 2015). The actor described the impact chain of sustainable investments as follows: Financial institutions define sustainability standards and investee companies and borrowers adopt these standards to attract money from them. As *THE RATING AGENCY* commented: “(...) then it’s really active promotion or active driving of these sustainability criteria, also in the financed companies or investee companies” (AF2, 47511:47695). *THE RATING AGENCY* identified several actors that are important for the sustainable cause. Figure 5.4 shows the respective actors and associations between them. The actor stands between the underlying investee companies and sustainable

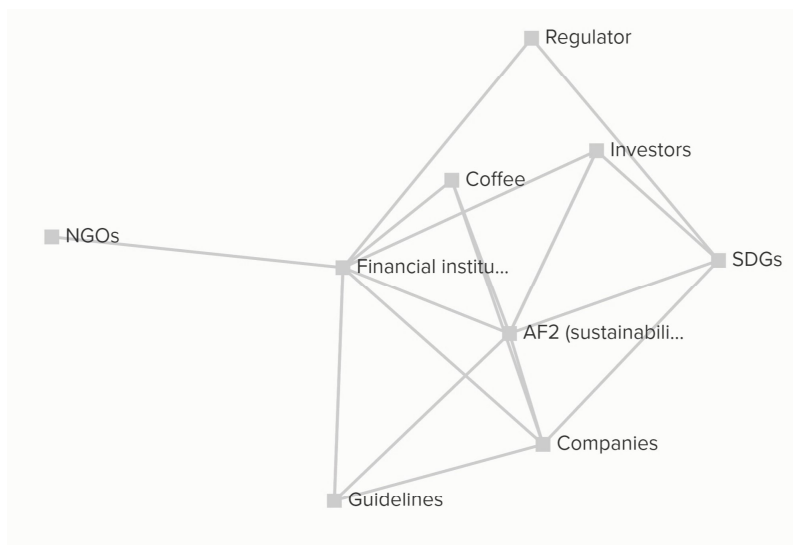


Figure 5.4: Actor-network by *THE RATING AGENCY* (AF2)

Source: Own diagram based on kumu.io

investors and thus plays a relevant role in the translation process. The rating agency evaluates how companies deal with sustainability topics and how they integrate sustainability criteria into their guidelines. The described practice of sustainability rating agencies is consistent with other studies like Scalet and Kelly (2010) or Escrig-Olmedo et al. (2010). For instance, within the financial sector, *THE RATING AGENCY* analyzes companies mainly in two dimensions lending and investment business. The analysis includes general questions about social and environmental aspects and sector-specific questions for those companies exposed to higher risks (e.g. agriculture). In the process of rating a company, *THE RATING AGENCY* asks whether companies adopt existing standards or whether they have defined proprietary ones. The analysis of the applied standards includes topics covered and how rigorously the standards have been formulated (binding or not binding): “And, exactly, so it is really the combination of what standards one has and how widely they are applied” (AF2, 16384:16506). According to *THE RATING AGENCY*, large development banks are more advanced in this area than commercial banks. If borrowers do not fulfill all a standard’s

criteria, the development banks define an action plan to bring the borrowers to the point where they fulfill the criteria. For example, this practice is carried out by the International Finance Corporation (IFC) (IFC, 2012). The actor acknowledged that for commercial banks, sustainability criteria play a rather minor role: “(...) in the vast majority of cases, sustainability criteria are not as relevant or are not observed” (AF2, 19046:19310). A study about sustainability in Swiss retail banking conducted by the World Wildlife Fund (WWF) yielded the same conclusion: “The Swiss retail banks are still not very advanced overall when it comes to systematically incorporating environmental considerations when granting loans and financing” (Schwegler and Amstutz, 2017, p. 7). *THE RATING AGENCY* explained that it is difficult to verify whether financial institutions implement the guidelines in practice because it does not make on-site visits like audit companies do. The actor commented: “(...) there we just have to rely on their own documents” (AF2, 21778:22044). Public controversies that indicate whether or not implementation of the guidelines is flawed and could reveal weak spots act as a counterbalance. Regulation plays an important role in the interestment and enrollment of companies for the sustainable cause: “One can indeed observe that there is a strong correlation between the regulatory framework and [sustainability – author’s note] performance” (AF2, 25489:25625). Moreover, managing reputational risk is one of the sustainability drivers. *THE RATING AGENCY* commented that this is usually a reaction to external pressure from organizations like NGOs. Both these sustainability drivers: external pressure and regulation are supported by literature (Lozano, 2015; Rego et al., 2017). According to *THE RATING AGENCY*, the SDGs have the potential to mobilize actors for the sustainable cause. The SDGs provide a common language, common goals and common topics. This finding is corroborated by other authors. For instance, Schramade (2017) and Setó-Pamies and Papaoikonomou (2020) emphasize the important role of the SDGs in providing a common framework and common language for sustainability. This common framework and common language serve as reference points “(...) the different participants can use as a guide” (AF2, 44638:44776). As such, they support the process of mobilization of different actors.

CHALLENGES IN THE TRANSLATION PROCESS

THE RATING AGENCY stressed that there are several challenges for the mobilization of actors for the sustainable cause. As mentioned before, sustainability criteria are not normally considered that relevant for financial institutions. But the actor emphasized that with their financing and investing activity, financial institutions are exposed to various stages of the supply chain. They could therefore influence the companies along the supply chain with respect to ESG topics. The modest coverage of financial institutions’ exposure to supply chains hampers the translation process from sustainable investors and financiers to the un-

derlying practices of the companies along the supply chain. *THE RATING AGENCY* also acknowledged that the role of NGOs as watchdogs has some constraints. NGOs usually focus on development banks and larger international banks. They are selective in deciding their focus and “(...) smaller banks or rather unknown banks (...) are less in the focus” (AF2, 28373:28483). This can be an obstacle in mobilization of smaller and lesser known financial institutions. While the influence of NGOs is confirmed by studies like that of Guay et al. (2004), there is no particular literature supporting a bias towards larger institutions.

KEY FACTORS FOR DESIGNING STANDARDS

THE RATING AGENCY identified several aspects that are important for designing standards for sustainable investment. Companies, NGOs and affected stakeholders should be involved in the development of standards. This finding is consistent with good practices in the development of physical sustainability standards. For instance, ISEAL (2014, p. 9) calls for engagement in the development process with actors that “likely have an interest” in the sustainability standard or are “likely to be affected” by implementation. The perspective of the regulator is useful, but *THE RATING AGENCY* admitted that “(...) how much they can contribute in terms of experience is then, of course, another question” (AF2, 37471:37557). *THE RATING AGENCY* is skeptical about the harmonization of sustainability standards. Harmonized standards are unlikely to cover the different “wishes and needs” of clients (AF2, 40551:40573). There is a risk that harmonized standard would cover only a limited number of topics with limited depth. This finding is also in line with other studies. For instance, Sandberg et al. (2009) noted that standardization of sustainable investment is difficult to achieve due to cultural differences and different interests among involved actors. *THE RATING AGENCY* stressed that effective standards are not only characterized by the content but also by binding formulation and binding implementation: “(...) the range of topics, the binding formulation and the binding implementation” (AF2, 34429:34508). According to the actor, certification can be a useful tool. One should also evaluate the criteria and rigor of certification in detail, similar to the manner in which one applies standards. This agrees with Jahn et al. (2005), who stress the importance of credible certification systems that are needed to build trust. Also, ISEAL (2018) highlights the need for credible assurance mechanisms.

5.2.4 ACTOR AF3: A SWISS ASSOCIATION FOR SUSTAINABLE FINANCE

AF3 is an association for sustainable finance (hereinafter *THE INVESTMENT ASSOCIATION*) whose goal is to foster sustainable finance in Switzerland. Its members include banks, asset management companies and asset owners (e.g. pension funds). *THE INVESTMENT ASSOCIATION* also has partnerships with academic institutions and other as-

sociations.

ASSEMBLAGE OF ACTORS BUILDING AN ACTOR-NETWORK

The purpose of the association is the “(...) promotion of sustainability in the financial business” (AF3, 408:453). The Swiss financial center should be a leading actor in sustainable finance and contribute to a sustainable economy. *THE INVESTMENT ASSOCIATION* has identified several other actors essential to achieving its mission. Figure 5.5 shows the respective actors and associations between them. *THE INVESTMENT ASSOCIATION* has

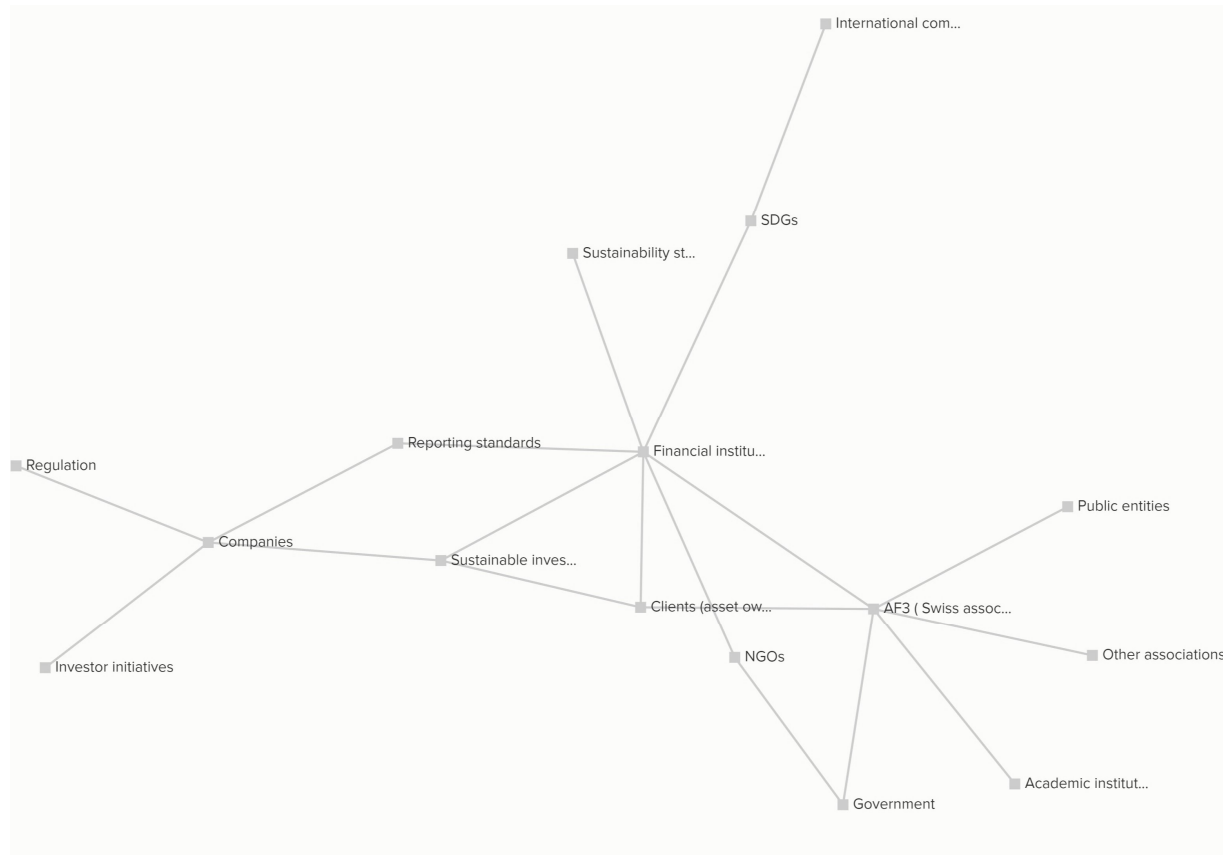


Figure 5.5: Actor-network by *THE INVESTMENT ASSOCIATION* (AF3)

Source: Own diagram based on kumu.io

several strategies to interest and enroll other actors in the sustainable Swiss financial center. One strategy is to represent the members' interests in political dialogue. Another strategy is to provide information on best practices and create tools to support members. For instance, the association provides a handbook on sustainable investments which supports institutional investors by giving them an overview of the different sustainable investment approaches and offering practical tips for implementing a sustainable investment policy. *THE INVESTMENT ASSOCIATION* sees two main reasons why its members from investment management offer sustainable investment solutions and thus translate to the sustainability network. The demand of clients is one of the drivers to achieving this end. The actor noted

that investment managers want to be prepared to meet client demand for sustainable investment. This finding is similar to those of Schueth (2003), who found that the majority of investment management firms in the USA introduced sustainable investment solutions to meet the demand of clients. According to *THE INVESTMENT ASSOCIATION*, asset managers have additional motivations for adopting a sustainability approach. One is an ethical motivation, enabling the investor to align its investments with certain values or norms. Another motivation is financial in order to satisfy investors aiming at improving the risk-return profile of their investments. The latter two motives for adopting a sustainability approach are also backed up by other studies (Jansson and Biel, 2011; Von Wallis and Klein, 2015). A third motivation is the desire to make a long-term contribution to sustainable development: “A third key objective is the long-term contribution to sustainable development” (AF3, 5674:5942). García-Sánchez et al. (2020) support this finding, noting that institutional investors are increasingly interested in how companies align their sustainability efforts with the SDGs. *THE INVESTMENT ASSOCIATION* assumes that most sustainable investment products aim at having an impact: “Well, I believe that most sustainable investment products also claim to contribute in some way to a change in some chain of effects” (AF3, 8339:8513). It remarked that according to academic studies, engagement approaches indicate a positive impact in the area of liquid assets. This is in line with studies like those of Dyck et al. (2019) and Dimson et al. (2015). AF3 stated that there is little change when an investor excludes certain controversial companies from the portfolio. The limited effect of applying exclusion criteria is also supported by Kölbel et al. (2020) and Gond and Piani (2012). Exclusion criteria are more appropriate for certain controversial activities in which the investor does not want to participate:

“Yes, I basically believe these are/ I believe that you should practice exclusion if you simply do not want to participate in something. For me this is a main reason for exclusion. It does not change much. I really believe that processes that now have a greater impact on dialogue with businesses are more effective when it is about making the whole economy more sustainable” (AF3, 8999:9380).

While there are no established standards for sustainable investments, standards for sustainability reporting (e.g. climate reporting) are very important. A kind of harmonization in this area is favorable: “And especially in the climate sector, TCFD certainly plays an important role there now in bringing about a degree of harmonization” (AF3, 14420:14535). *THE INVESTMENT ASSOCIATION* is skeptical about the harmonization of standards for sustainable investment but sees an advantage for retail investors. Similar to the case of labels in the food sector, the retail investor could easily identify a sustainable product. But the association remarked that the definition of sustainability approaches is driven by individual values, with which Schueth (2003) agrees. NGOs create awareness for sustainability and put pressure on financial institutions by “(...) putting their finger right on the sore spots” (AF3,

20178:20308). This statement is supported by authors like Spar and La Mure (2003) and Collingwood (2006), who explore the influence of NGOs on companies. According to *THE INVESTMENT ASSOCIATION*, NGOs have good ideas, although some are too restrictive and unrealistic. The actor noted that there are global investor initiatives that have the power to trigger change and support the translation process: “And I think that at the moment, if you look at it more globally, there are already very exciting initiatives by investors that are actually making things happen with their combined power” (AF3, 21748:21913). The association highlights the important role of the PRI Collaboration Platform that provides access to many different initiatives. This is consistent with Gond and Piani (2012), who found that the platform plays an important role in investors’ activism in sustainability issues. The actor added that in Switzerland, the Ethos Engagement Pool also plays an important role. *THE INVESTMENT ASSOCIATION* explained that the SDGs can play a key role in getting other actors interested and enrolled in the sustainable cause. By adopting the SDGs, the international community agreed on the definition of sustainable development. It is a global framework and used by many investors as a communication tool and instrument for aligning investments: “I think this is an important framework. A lot of investors are now using it as, well, almost more as a communication tool. But maybe even as an instrument for aligning investments” (AF3, 29085:29312). This role of the SDGs is also supported by other studies (Bull and McNeill, 2019; Filho et al., 2018; García-Sánchez et al., 2020; Chew and Childe, 2019).

CHALLENGES IN THE TRANSLATION PROCESS

THE INVESTMENT ASSOCIATION explained that sustainable investments are increasing from year to year, a fact corroborated by SSF (2019) and Eurosif (2018). As a result, the sustainability network is growing. However, the association highlighted the fact that growth of the network takes time and is dependent on know-how and past practices: “Yes, such processes always take time. We always have a path dependence, a path you have come down, where the know-how, that is, a practice, as it has been done so far” (AF3, 4932:5102). While an engagement approach is more effective to interest and enroll companies in sustainability, it is anything but easy to implement: “Although, of course, it also requires a lot, and, yeah, is maybe for smaller ones more difficult to implement, or then only in partnership with whatever organizations that take that over” (AF3, 9739:9901). Teaming up with others can thus aid in implementing engagement. Another challenge is that there is no established standard for sustainable investments. This finding is backed up by studies like Sandberg et al. (2009). For example, at EU level, there is the taxonomy to classify sustainable activities (PRI, 2020b); but this is not a standard. It is, instead, a common language for classifying sustainable activities: “This is a language, a way of talking about at what point

an economic activity is somehow beneficial” (AF3, 10614:10738). The concepts are currently being developed, with no present harmonization of taxonomies of different countries or regions. While *THE INVESTMENT ASSOCIATION* acknowledged the important role of reporting standards, it stated that there is still room for improvement with respect to data quality: “Ultimately, there is still a big lack of comparable data” (AF3, 14785:15054). The issue of questioning data quality has also been raised by Merker (2018) and Drempetic et al. (2019). *THE INVESTMENT ASSOCIATION* remarked that sustainability issues along the supply chain, like those of coffee, are covered in company ratings. As a result, they are addressed to some extent by sustainability approaches for indirect investments. But the association admitted that this does not apply to direct commodity investments like derivatives or physical positions.

KEY FACTORS FOR DESIGNING STANDARDS

THE INVESTMENT ASSOCIATION favors guidelines or standards that are process-related and not based on specific criteria of the underlying good. Standards should cover the whole value chain and not just apply to one aspect of it. This would take account of the complexity of value chains. The association stresses that there should be a trade-off between benefit and cost. This is consistent with ISEAL (2014), which recommends minimizing costs and burdensome requirements. Too costly solutions are a handicap to sustainable products: “They must not be too complex, not too expensive, otherwise sustainable products will ultimately be disadvantaged if the process becomes too expensive and these products then also have either lower returns or higher costs for the end customer” (AF3, 26471:26715). This is why the actor is skeptical about certifying a standard for sustainable investment. The association agrees that certification has benefits but sees the disadvantages of additional costs that must be borne by the asset manager or the investor. Although no literature is available on this particular case of certifying an investment standard, there are parallels to studies in the physical market concerned with the costs associated with certification (Davi-ron and Vagneron, 2011; Bitzer et al., 2008). Moreover, sustainability should be approached holistically: “And now you can only talk about climate, but if you don’t tackle the social issues in the end, then no climate measures will be implemented either” (AF3, 26919:27086). According to *THE INVESTMENT ASSOCIATION*, approaches based on dialogue with companies are more effective in rendering the whole economy more sustainable. This statement is supported by literature that highlights the benefits of engagement (Dyck et al., 2019; Dimson et al., 2015). The association is against the harmonization of sustainability approaches or standards in the area of investments:

“I mean, in the normal investment process there is not one rule when a company is eligible for investment either. That is what makes the market. And, on the contrary, I find it dangerous to pre-determine such decisions too much” (AF3, 12814:13045).

The actor is also concerned with potential market distortion because of a lack of competition among standards. In drafting an investment standard, whether or not the standard criteria address an assessment of sustainability of the portfolio itself or the impact of the portfolio must be defined. The association remarked that especially private investors normally do not wish to be invested in unsustainable companies “(...) but this does not necessarily have the strongest effect in the world” (16922:17119). *THE INVESTMENT ASSOCIATION* is, therefore, also skeptical about calls for divestment made by NGOs. This skepticism about the limited impact of exclusion approaches is shared in studies (Kölbel et al., 2020; Gond and Piani, 2012). Standards drafts should involve actors along the value chain. Those that supply, purchase and consume goods. The drafting process should also include intermediaries like financial institutions and other actors like NGOs. This appeal is reflected in the best practices of ISEAL (2014) in developing physical sustainability standards that recommend engaging with affected actors and those likely to be interested in the standards development process.

5.2.5 ACTOR AP1: A COFFEE INDUSTRY ASSOCIATION

AP1 is a Swiss coffee industry association (hereinafter *THE COFFEE ASSOCIATION*). Its members are mainly Swiss-based trading companies that represent around 50 percent of global coffee trading. The purpose of the association is to represent the interests of its members and to collaborate with other associations.

ASSEMBLAGE OF ACTORS BUILDING AN ACTOR-NETWORK

THE COFFEE ASSOCIATION mentioned several sustainability challenges in the coffee sector. These include low coffee prices, deforestation and climate change. These issues are also consistent with those named by other authors, Sjoerd Panhuysen and Pierrot (2018) and Rabobank (2018). The association explained that low market prices cause a price crisis in the coffee market. Agricultural commodities are cyclical in nature and farmers typically react to higher margins by ramping up supply, causing prices to decline. Markets are currently oversupplied and thus prices are low. Deforestation is still a challenge, with *THE COFFEE ASSOCIATION* acknowledging that the process of deforestation is very advanced. Deforestation is usually driven by other challenges farmers face. Often the decision to deforest is driven by social issues like farmers not earning a living wage. Thus, typically, ecological and social challenges are linked. *THE COFFEE ASSOCIATION* identified several actors key to a sustainable coffee market. Figure 5.6 shows the respective actors and associations between them. *THE COFFEE ASSOCIATION* explained that there are several motivation factors behind why trading companies trade sustainably sourced coffee and adopt sustainable business practices. The main motivation is the demand of roasters

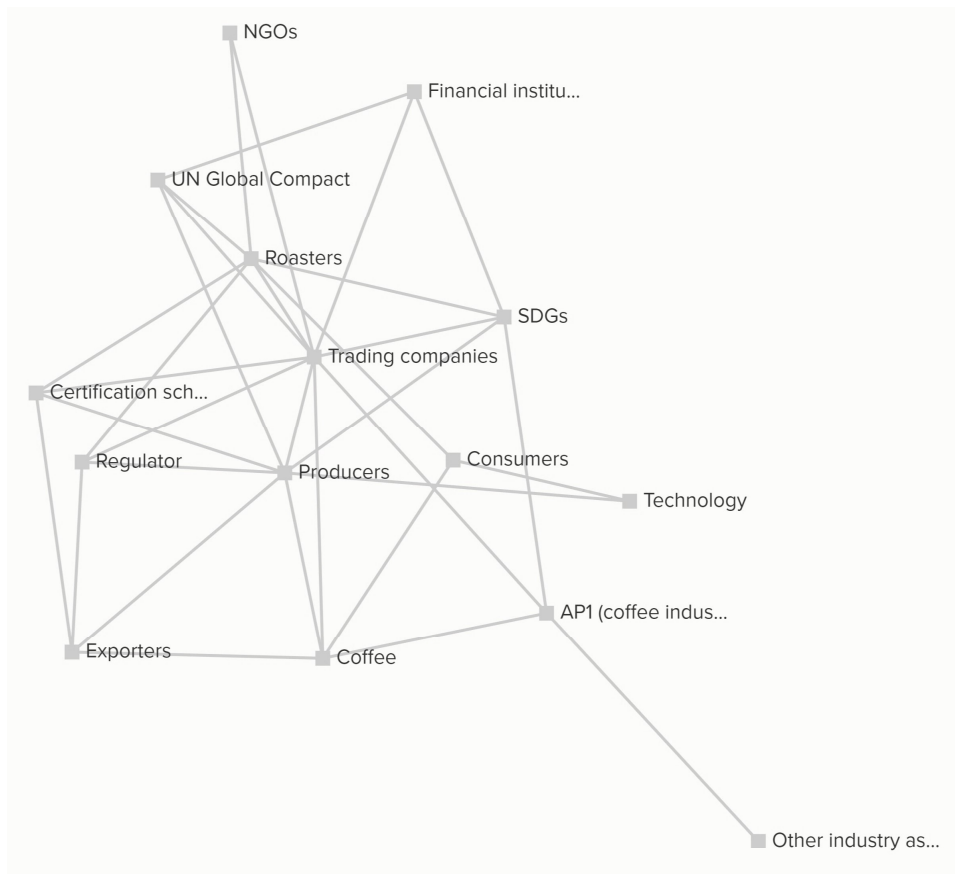


Figure 5.6: Actor-network by *THE COFFEE ASSOCIATION* (AP1)

Source: Own diagram based on kumu.io

for sustainably sourced coffee: “(...) the trader actually only reacts to the demand from the roaster” (AP1, 32236:32319). Over time, traders have also realized that there are additional benefits of sustainable sourcing like being closer to the producers and controlling the quality: “Whereby the trader has now learned over time: ‘Aha, if we make a commitment to sustainability now, we can build a supply chain; we are closer to the producer. We basically control, let’s say, not only the flow, but also the quality and so on’ ” (AP1, 32442:32813). *THE COFFEE ASSOCIATION* explained that coffee traders are interested in long-term partnerships with coffee producers to secure their future supply. They thus have an economic interest in sustainability as well. Trading coffee is the business purpose of a coffee trader “(...) and we cannot trade without coffee” (AP1, 12052:12091). *THE COFFEE ASSOCIATION* commented: “(...) so our interest is very clear – what is happening down there in the different cultivation countries is very important to us and our members” (AP1, 12142:12284). These motivations are also found in other studies. For instance, Millard (2017) highlighted that coffee companies reacted to consumer demand and “(...) came to realize that the social and environmental situation where they buy their coffee is a key factor determining business performance”. The association emphasized the role of guidelines like the UNGC that link the financial industry with physical players. This finding is

supported by literature. For instance, Rasche et al. (2013, p. 7) describes the role of the UNGC as a platform for companies and other actors to “(...) form partnerships and initiate collective action (...)”. Ruggie (2001) described the UNGC as a network of different types of actors. The SDGs also play an important role: “The SDGs provide the entire world with a specific framework for this whole sustainability debate” (AP1, 20009:20163). This finding is in line with other studies (Schramade, 2017; Bull and McNeill, 2019). *THE COFFEE ASSOCIATION* emphasized that financial institutions have an important role in getting trading companies and actors further down the supply chain mobilized for sustainability. Trading companies are those actors that pass the sustainability efforts down the supply chain on behalf of financial institutions: “(...) the banks then finance the trading. And then trading, basically, implements the sustainability projects. I [as a bank – author’s note] have a contact person in the first world (...) and I don’t then have to go to any production countries” (AP1, 67297:67764). Certification schemes are important because “(...) certification should be the independent control of the supply chain” (AP1, 46918:47112). This is also supported by authors like Jahn et al. (2005). According to *THE COFFEE ASSOCIATION*, technology plays an important role in interestment und enrollment because it has the potential to link consumers with producers. Technology is connected with the whole supply chain and may enable transparency. Transparency is important to getting other actors interested and enrolled in the sustainable cause. This finding is consistent with one by El Bilali and Allahyari (2018, p. 459), who determined that technology shortens the “(...) distance between food chain actors (...)” and favors transparency. *THE COFFEE ASSOCIATION* stressed that regulation plays an important role in growing the network and gaining ongoing support:

“Not that I am now a fan of regulation, but maybe when it comes to sustainability the state should say, we in Europe should say across the board, sustainability, that is the standard, everyone has to comply. Then we have 100 percent, then we have more demand, then we have a different incentive and then suddenly the economy works very differently” (AP1, 27703:28153).

Other authors also find regulation a driver for companies to adopt sustainable business practices (Lozano, 2015; Rego et al., 2017).

CHALLENGES IN THE TRANSLATION PROCESS

THE COFFEE ASSOCIATION remarked that the translation process can fail for several reasons. For instance, producers should be in the focus of the discussion about sustainability but are often not included in the discussions about standards: “And I even find it unfair that these countries are not included in the discussion, or let us say, in many discussions (...) And it is people who have not necessarily ever even seen a coffee farmer or a cocoa plantation that are discussing this” (AP1, 13418:13924). This finding is supported by literature. Bennett (2017) found that many sustainability standards do not include producers like

farmers in their governance structures, thus marginalizing them. Strambach and Surmeier (2018) concluded that sustainability standards are normally created in developed countries with limited inclusion of actors from developing countries. Having producers included in the development of such standards helps in understanding local practices, which is crucial for generating practical solutions. The actor acknowledged that financial institutions too are often excluded from the development of standards. *THE COFFEE ASSOCIATION* explained, in reference to the example of the development of a coffee standard, that “(...) the banks were not, they were not involved at all. There were no funds there either” (AP1, 86630:86726). The association also suggests that myopia hinders addressing the sustainability issues that are usually long-term in nature. This criticism is also found in other studies like the one by Bansal and DesJardine (2014), who found that short-termism is a barrier for implementing sustainable business practices in companies. Small producers in emerging markets can fail to be enrolled due to high costs. Local farmers have relatively high costs to join certain certification systems: “So just for a certification from UTZ, Rainforest, you as a farmer have to plunk between 10,000 and 15,000 dollars down on the table” (AP1, 55796:55928). Other studies confirm the issue of high costs for certification with the potential to marginalize small producers (Daviron and Vagneron, 2011; Bitzer et al., 2008).

KEY FACTORS FOR DESIGNING STANDARDS

THE COFFEE ASSOCIATION finds several aspects important in designing sustainability standards. An impact assessment is important to show the bottom line of sustainability efforts. According to the actor, certification is an important element in controlling the actors upholding the sustainability standards in commodity sourcing. During the interview, the actor stressed several times that producers (farmers and cooperatives) should be included in the discussions about sustainability standards. Like roasters, exporters and others, they too should consequently be part of the development process of standards. Furthermore, the standard should build on data collection and the use of this data for continuous improvement and measurement. All these findings are consistent with the recommendations for developing credible sustainability standards of ISEAL (2014). *THE COFFEE ASSOCIATION* does not favor the merger of sustainability initiatives because competition fosters innovation and further development. This claim is also underpinned by Reinecke et al. (2012). The actor stressed, however, that certification costs should be kept low by means of their mutual recognition. This addresses the issue of additional costs due to multiple certification (Reinecke et al., 2012; Dragusanu et al., 2014).

5.2.6 ACTOR AP2: A COMMODITY EXPERT ASSOCIATION

AP2 is a center of competence for commodity-related topics and is headquartered in Switzerland (hereinafter *THE EXPERT ASSOCIATION*). It provides a platform for commodity experts along the supply chain. The association has individual and corporate members from different areas along the commodity value chain.

ASSEMBLAGE OF ACTORS BUILDING AN ACTOR-NETWORK

THE EXPERT ASSOCIATION explained that there is a general trend towards sustainable investing but standards for commodity investments are “(...) very poorly developed” (AP2, 2529:2551). While social and environmental issues are addressed in sustainability approaches for indirect commodity investments (e.g. equity investments) this is normally not the case for direct commodity investments: “When it then comes to building up physical exposure somewhere, via futures contracts, there are practically no standards” (AP2, 15908:16032). Furthermore, physical and financial standards are not intertwined. Standards are mainly developed on the physical side, but it can be observed that the value chain “(...) diffuses very weakly into the investment world” (AP2, 2158:2203). This argument is validated by literature. Although there are standards for illiquid investments, like in farmland, holistic standards for sustainable investment in liquid commodities have been neglected so far (PRI, 2015; PRI, 2012). This gap was also addressed by Tobler et al. (2017). *THE EXPERT ASSOCIATION* identified several actors that are important in building the sustainability network: Financial institutions, companies, clients (asset owners), guidelines and standards, NGOs and the regulator. Figure 5.7 shows the respective actors and associations between them. *THE EXPERT ASSOCIATION* has several strategies to interest and ultimately enroll other actors. It consolidates know-how from different heterogeneous actors, which is used for communication purposes. “(...) Communication with the public is important” (1171:1218) as *THE EXPERT ASSOCIATION* commented. This finding cites similarities to the role of media in fostering sustainability (Jansson and Biel, 2011; Borghesi et al., 2014). Leveraging expertise of physical and financial actors in interdisciplinary projects and fostering learning among its members are other strategies. According to *THE EXPERT ASSOCIATION*, investors may be interested in adopting a sustainability approach because they want to assume responsibility. This statement is supported by literature. Jansson and Biel (2011) and Von Wallis and Klein (2015) found that investors adopt sustainability approaches due to ethical motivations. The association noted that investors increasingly recognize that considering sustainability criteria has a positive effect on the risk-return profile of an investment; this was also found by Jansson and Biel (2011) and Von Wallis and Klein (2015). The actor explained that regulation is a driver to adopt a sustainability approach. Eurosif (2018) and SSF (2019) support this remark by demonstrating that one of the drivers



Figure 5.7: Actor-network by *THE EXPERT ASSOCIATION* (AP2)

Source: Own diagram based on kumu.io

of sustainable investing is the regulator. *THE EXPERT ASSOCIATION* mentioned that investment managers sometimes offer sustainable solutions because of business interests. This is similar to the conclusions of authors like Schueth (2003), who found that US investment managers introduce a sustainable investment offering to serve clients. Companies are interested in adopting sustainable business practices because they realize that being transparent on sustainability metrics “(...) makes access to the capital market a bit easier” (AP2, 6598:6817) and “(...) the cost of capital may be lower in some instances” (AP2, 6820:6885). These findings are sustained by literature. For instance, Heinkel et al. (2001) theoretically demonstrate how less sustainable companies exhibit a higher cost of capital, while Hong and Kacperczyk (2009) showed that companies from controversial business areas have a higher cost of capital. *THE EXPERT ASSOCIATION* stressed that investments can influence companies via several approaches. One approach is the application of exclusion criteria, whereby you reward companies that adhere to higher sustainability standards by granting them cheaper or easier access to financing. Other, excluded, companies will have higher financing costs and thus a lower valuation. The association prefers the engagement approach, where the investor engages in dialogue with investee companies to improve their business practices with respect to social and environmental aspects:

“Better, I think, however is perhaps still an engagement approach, where you then try together with the companies to use the standards that exist with the companies, try to be in contact with the companies and point out that, as an investor, compliance with these standards is important to you. And in this way you try to establish a partnership exchange with companies, to bring these standards into the companies and to develop them further” (AP2, 11598:12028).

This finding is consistent with that of several studies. While the impact of exclusion criteria on companies is questionable, the impact of engagement approaches finds support (Kölbel et al., 2020; Gond and Piani, 2012; Dyck et al., 2019; Dimson et al., 2015). Regulation is directly linked to companies and financial institutions. It sets standards and requirements and thus has an impact on companies. This is consistent with other studies. Rego et al. (2017) and Lozano (2015) find that regulation is an important driver of sustainability. NGOs point out shortcomings with campaigns and protests and thus put pressure on companies. The ability of NGOs to influence companies was also found by Spar and La Mure (2003) and Collingwood (2006). Furthermore, NGOs may also provide valuable inputs in projects as they have established persons in the respective countries and on-the-ground experience.

CHALLENGES IN THE TRANSLATION PROCESS

THE EXPERT ASSOCIATION stressed that standards for sustainable investment in commodities are weakly developed. There is normally no sustainability standard for direct commodity investments and, if so, no link to physical standards. This represents an obstacle for financial players to translate to the same sustainability network as physical players. The actor noted that commodity investments typically represent a small share in portfolios and that “(...) the large allocations are sometimes in the focus: equities, bonds, real estate” (AP2, 4986:5057). Commodity investments receive small allocations because they face a challenging market environment. Following the boom years, supply was significantly expanded – this led to oversupply and lower prices: “The prices have dropped. And between 2011 and 2016 there was a bear market in commodities. Even now performance is – prices remain relatively low” (AP2, 4314:4473). As a result, investors “(...) have tended to withdraw from these areas or reduce allocations” (AP2, 4598:4682). Therefore, relatively poor performance caused subdued interest in the asset class and also in developing sustainability standards. The decreasing interest in the asset class has also been noted by other authors. For instance, FT (2015) reported that commodity assets fell significantly due to deteriorating fundamentals. While commodity investments have recently rebounded somewhat, they remain well below the levels seen in 2011/12 (Barclays, 2019). Commodity investments are not only made within the asset class but are also part of the investment universe of multi-asset strategies. *THE EXPERT ASSOCIATION* acknowledged that investors usually do not analyze the holdings of such strategies in detail. In contrast to equity and bond investments there are also no sustainability scorings for individual commodities. A general challenge

is that some investors fear a smaller return on their sustainable investments compared to conventional investments: “Yes, the obstacles are certainly that many investors have the impression that with sustainable investing there’s a loss of return, that they have to take a loss of return” (AP2, 8163:8521). This challenge is also shared by SSF (2019), which found that performance concerns are still a key barrier to sustainable investment. Skepticism is also the result of a lack of understanding the impact that the sustainability approach of a certain asset manager generates. Asset managers tend to focus too much “(...) on the process, but too little on the real impact on the portfolio” (AP2, 9367:9721). While companies can be influenced by investors through engagement, there is no guarantee that companies enter the engagement process and that they can be enrolled. Challenges in engagement were also found by Ivanova (2017) and Clark et al. (2015). *THE EXPERT ASSOCIATION* remarked that the investor might be simply too small to merit a hearing from larger companies. Companies tend to focus on the larger shareholders and not necessarily on the normative aspects:

“Which is a little bit the risk of different standards, that the companies of course then simply align themselves with the one that is the largest shareholder and want to please it, and not necessarily in the sense of an absolute, their own normative policy, which they make, but ones aligned with the main investors” (AP2, 32877:33257).

A specific barrier to interesting direct commodity investors is the relevance of sustainability to performance. The performance of coffee futures investments is driven by supply and demand and not by sustainability per se. This contrasts to the relevance for other investments, like commodity-related debt investments: “And for future-based investors (...) this is less of an issue, because, yeah, the main driver for performance there is now not, as with credit, the borrower and their standards, but supply and demand” (AP2, 20440:20863).

KEY FACTORS FOR DESIGNING STANDARDS

According to *THE EXPERT ASSOCIATION*, physical standards should be clearly formulated and auditable: “So it must be auditable somewhere, that an audit company can go on site and also check this, so that it is really clear somewhere on a checklist, these standards, somewhere cyanide, there are four or five points, how it is handled (...)” (AP2, 24119:24471). This follows best practices for developing physical sustainability standards (ISEAL, 2014). Furthermore, the actor stressed that having audited and certified standards adds to credibility of the standard system and is thus important. This is confirmed by ISEAL (2018), which recommends that credible sustainability standards have effective assurance mechanisms in place. The actor acknowledged that the certification of investment standards can be tricky because each asset manager usually has its own standard to differentiate itself from competitors: “[Certification – author’s note] could be done, but at the moment it’s a little like every

asset manager has his own process (...), his own methodology and wants to differentiate himself somewhere in the market (...)" (AP2, 28680:29129). *THE EXPERT ASSOCIATION* compared this situation to physical standards in the food sector: "This is the same as the label jungle on the food side" (AP2, 30078:30140). Sandberg et al. (2009) found that asset managers define their own standards, which lends support to the association's statement. The existence of multiple standards for differentiation among competitors can be seen in the market for physical commodities (Reinecke et al., 2012). There are benefits of standard multiplicity. *THE EXPERT ASSOCIATION* stressed that competition among standards has a positive impact on quality: "Competition is always better when different asset managers try to find good solutions and the better standard or best methodology then prevails" (AP2, 31096:31260). This finding is corroborated by Reinecke et al. (2012). The practices of benchmarking and stating an ambition level in absolute terms should be implemented. Benchmarking allows for a relative comparison. The focus lies on measuring progress in sustainability metrics. While the actor acknowledged the important role of PRI, it criticized that the principles are not clearly defined and tracked. Consistent with ISEAL (2014)'s best practices for developing physical standards, *THE EXPERT ASSOCIATION* suggested involving different affected actors in the development process, including companies along the supply chain, larger investors, academia, technology (for traceability) and physical standard bodies. *THE EXPERT ASSOCIATION* emphasized the role of companies along the supply chain because they are close to the issues on the ground. The association is skeptical about including the regulator in the development process. Other actors are dependent on the regulator (e.g. through licenses) and may not be as transparent as without regulator presence: "Then I don't know whether an open, self-critical process is really set in motion when regulators sit around the table" (AP2, 41348:41466).

5.2.7 ACTOR SI1: A SUSTAINABILITY STANDARD

SI1 is a sustainability standard organization based in Switzerland (hereinafter *STANDARD A*). It is part of an international umbrella organization that has its headquarters in the European Union. The goal of the sustainability organization is to establish sustainable business practices along the supply chain.

ASSEMBLAGE OF ACTORS BUILDING AN ACTOR-NETWORK

STANDARD A identified several sustainability issues in the coffee market. These include low prices, climate change, low productivity and lack of access to financing. In addition, insufficient coffee quality and know-how are sometimes prevalent. The same challenges were also noted by Sjoerd Panhuysen and Pierrot (2018). *STANDARD A* aims at addressing these sustainability issues and has several strategies to mobilize actors for the sus-

tainable cause. According to the organization, several actors are important for creating a sustainability network. Figure 5.8 shows the respective actors and associations between them. *STANDARD A* explained that one of its strategies is to inform and sensitize actors

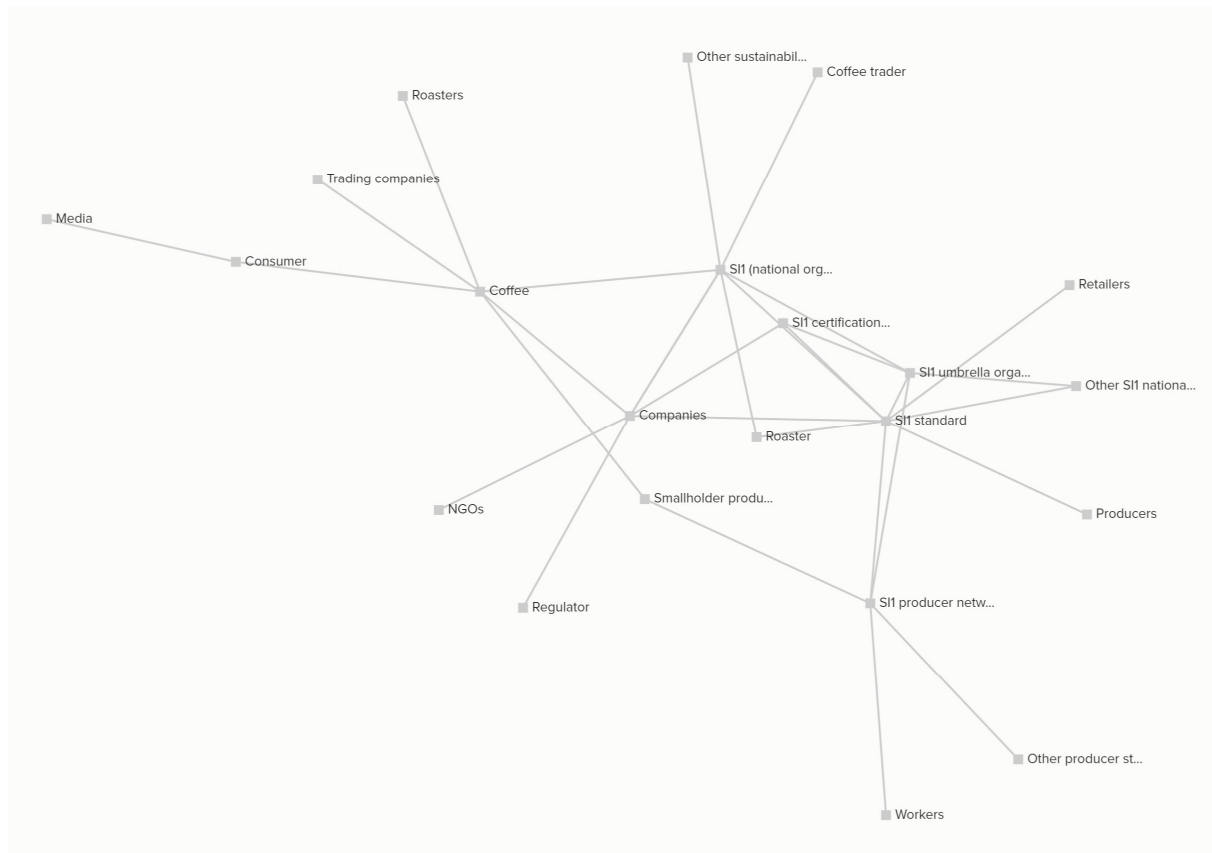


Figure 5.8: Actor-network by *STANDARD A* (SI1)

Source: Own display based on kumu.io

about sustainable business practices in trading. Another is supporting its partners, by connecting coffee traders with suppliers: “So, for example a trader, a coffee trader, contacts me and asks: ‘I need Bio [standard] or only [standard] Monsooned Malabar from India. Have you got that? And, if so, can you please send me the contact details?’ ” (SI1, 2201:2411). *STANDARD A* also helps its partners in communication. The organization stressed that communication and marketing are important tools in getting actors interested and enrolled in sustainably sourced coffee. This is especially so because sustainable coffee is more expensive than the conventional commodity. Some roasters and retailers decide to process or distribute sustainable coffee because they can use the sustainability label for communication purposes. The importance of labels to get consumers interested is also found in literature. Van Loo et al. (2015) and De Boer (2003) showed how labels help consumers in assessing sustainability aspects of products and can thus mobilize actors for the sustainable cause. Consumers are, as *STANDARD A* stressed, the dominant driver behind sustainability. This finding is consistent with the study of Millard (2017), who found that

growing demand from consumers after the turn of the century has become an important driver for sustainability in the coffee market. Some roasters also want to make a contribution to sustainable production. *STANDARD A* explained that it collaborates with other sustainability standards. Its intention is not to align the standard criteria but to leverage the respective complementary expertise. By pointing out shortcomings in the market, NGOs have an important role in getting actors interested in sustainability. Some of them have “(...) the task of pointing out failings and in some cases more or less pillorying companies” (SI1, 38585:38929). Media plays a similar role and is able to mobilize actors for sustainability topics. *STANDARD A* commented: “And the media also have a lot of power. On the one hand, they can point out and also encourage people to think about certain sustainability problems and, depending on the situation, also show solutions” (SI1, 40052:40259). These roles of NGOs and the media are also supported by literature. For instance, Spar and La Mure (2003) argued that NGOs use consumers and public pressure to influence companies. Borghesi et al. (2014) argue that managers conduct corporate social responsibility activities to avoid negative media publicity and protests from consumers.

CHALLENGES IN THE TRANSLATION PROCESS

The previous section has shown the role of *STANDARD A* and how the organization together with associated actors translates to a sustainability network. While these translations appear straightforward, the organization listed several challenges in the translation process. *STANDARD A* argued that one such challenge is the lack of having a generally agreed definition of sustainability: “Because, or, the question is, what does sustainable mean or how do you define sustainable coffee? Yes. So basically you can say that there is no answer” (SI1, 13410:13566). This challenge was also noted by others (OECD, 2012; Cerin and Scholtens, 2011). The organization concluded that higher costs of sustainably sourced coffee also constitute a challenge to getting actors enrolled in the network. *STANDARD A* acknowledged that there are no established links between its sustainability standard for coffee and financiers: “Yes, so far, not actually, I really must say. We have actually had very little to do with banks and so on until now” (SI1, 21445:21574). However, the actor highlighted the important role of financial institutions: “I think this is a huge lever in any case. There is a lot of potential and power and possibilities, at any rate” (SI1, 22551:22680). According to *STANDARD A*, financial institutions could play an important role in getting actors mobilized for sustainable coffee. Although the media has the potential to mobilize actors for the sustainable cause, it may also loosen the links of actors in the actor-network: “On the other hand, there are of course cases too where they somehow show that something is not working and the consumer then has the feeling that it’s useless anyway” (SI1, 40261:40435).

KEY FACTORS FOR DESIGNING STANDARDS

STANDARD A highlighted several factors that are important in designing sustainability standards. According to the actor, a standard should address prevalent market issues. That is, a standard generates positive impact and makes a change. The actor brought up the example of pesticides: “For example, there is a list of banned substances (...) Then there is the part that is allowed, that must be safely stored. Protective clothing must be worn when they are used” (SI1, 41438:42487). This is consistent with industry best practices for developing sustainability standards: ISEAL (2014) calls for the standard to be relevant by addressing the most significant sustainability challenges in the sector. *STANDARD A* argued that standards should set positive incentives and reduce or eliminate external costs: “And then tries to reduce the external costs of these problems. So this is actually an effective standard, or one that works, that manages to reduce, or in the best case eliminate, external costs” (SI1, 42210:42486). Having a financial incentive is important in order for the actors to see the benefit of adopting the standard. Furthermore, the standard should be designed in such a way that it becomes more restrictive over time. That is, beginning with a lower hurdle and then raising this hurdle over time, as *STANDARD A* suggested. This finding is in line with that of ISEAL (2014), which recommends that standards should lower barriers to implementation. *STANDARD A* highlighted that those actors that ultimately implement the standards in practice should be included in drafting such standards. Therefore, the sustainability standard should be defined from the bottom up. Producers, traders, retailers, financiers, consumers and policy makers should be included in the drafting process. This mindset of including different actors in the development process is also shared by ISEAL (2014). According to *STANDARD A*, it is important that a standard is not just well designed, but that there is also verification or certification in place: “And what is still very important to say, standard is one thing. The other is verification or certification, the review” (SI1, 14733:15073). *STANDARD A* stressed that important aspects of the review include whether there is an external audit and whether there are consequences in case of violations of the standard criteria. The role of certification is not just to verify compliance but also to expose any gaps that need to be addressed. The possibility of sanctions, which may include suspension of certification or decertification, is crucial for the standard’s credibility. The importance of certification for credible standards is also stressed by Jahn et al. (2005) and ISEAL (2018). The ideal situation would be to have specific standards for the respective situations and regions, as *STANDARD A* remarked. This idea is supported by ISEAL (2014, p. 8), which calls for standards that are “fit for purpose” and are adapted “to local conditions”. The actor argued that the multiplicity of sustainability standards has positive effects for farmers. It allows them to diversify their sales:

“Because they can rarely sell the whole harvest for example of [name of sustainability standard],

then they try for example Bio [name of sustainability standard], then [name of sustainability standard], then even [another standard]. And only at the end, if it is not possible at all, then really only conventional. So I see it more as an opportunity for many to just simply diversify their offering” (SI1, 30830:31147).

This argument is underpinned by Manning et al. (2012), who demonstrated that multiple standards allow different producer preferences to be addressed. *STANDARD A* is skeptical about harmonization of standards. The difficulty is finding a consensus. One risk is that the harmonized standard is too laxly defined and not credible. Or, it is too restrictive, with the barriers and costs of implementation both too high. The diversity of standards helps to address different consumer needs. While there is no literature that supports the benefit with respect to diversification of sales, the latter benefit is supported by Reinecke et al. (2012). The organization stressed that additional costs generated by multiple certification are limited in practice, due to recognition of audits.

5.2.8 ACTOR SI2: A SUSTAINABILITY STANDARD

The sustainability standard organization SI2 is an international non-profit organization with the goal of fostering responsible business (hereinafter *STANDARD B*). The organization focuses on several commodities including cocoa, coffee and palm oil.

ASSEMBLAGE OF ACTORS BUILDING AN ACTOR-NETWORK

Actor *STANDARD B* identified multiple social and environmental challenges in the coffee market. These include food insecurity in producing countries, discrimination of women, forced and bonded labor, child labor, deforestation, degradation of soil and water, agro-chemical use, price volatility, low productivity, no access to credit, no living wage and low coffee prices. *STANDARD B* also highlighted the power asymmetry between buyers and producers: “Value aggregation taking place outside of producing countries. Only about 10% of value of product flows back to producers. Power lies with buyers, not with producers” (SI2, 6364:6866). These sustainability issues are consistent with those named by other authors like Sjoerd Panhuysen and Pierrot (2018) and Rabobank (2018). There is also a consolidation among roasters leaving the market with fewer roasters having large market shares and the power to “(...) dictate their rules” (SI2, 6867:6986). This also affects traders, which have to deliver on these large roasters’ terms: “An example of unsustainable practices here is the demand of some multinationals for payment terms of 320 days” (SI2, 6987:7189). The actor identified several other actors that are important to the sustainability network. Figure 5.9 shows the respective actors and associations between them. *STANDARD B* argued that with its credible standard, traceability system and assurance mechanisms, it tackles the social and environmental issues and gets different actors enrolled in sustainability.

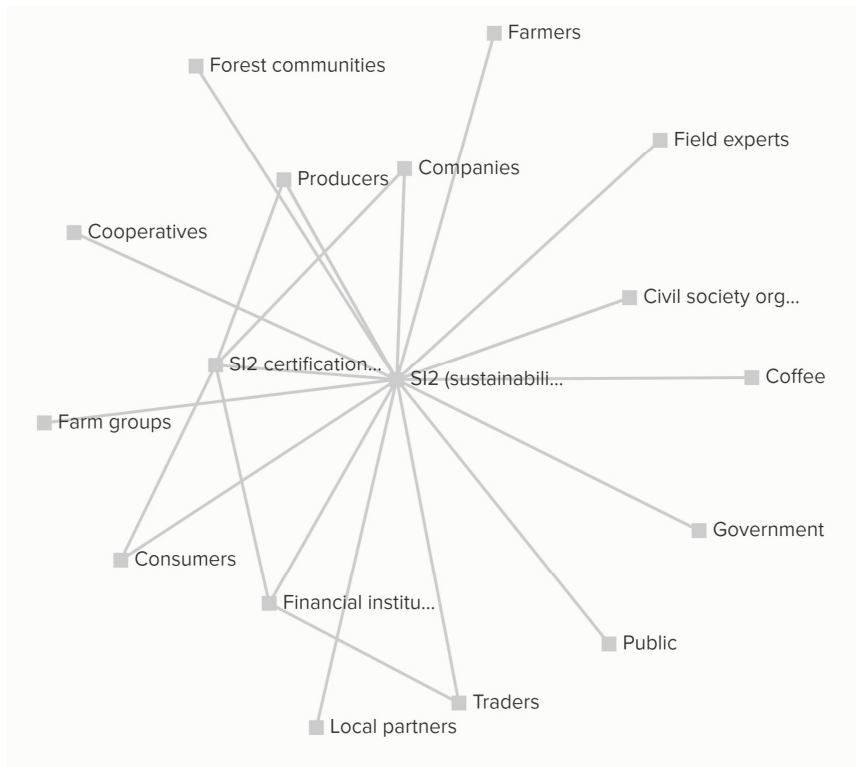


Figure 5.9: Actor-network by *STANDARD B* (SI2)

Source: Own diagram based on kumu.io

STANDARD B's certification system is based on the principle of continuous data-driven improvement instead of binary 'pass or fail' logic. Furthermore, a risk-based approach applies instead of a zero tolerance principle: "Risk-based approach, assess and address instead of pass and fail, adaptations to local context/crop specific, continuous improvement" (SI2, 1466:1867). The actor explained that it engages with farmers, farm groups, cooperatives and field experts to implement sustainable business practices. Civil society organizations, producers and governments are engaged to generate systemic change. Companies are encouraged to increase their sustainability efforts and assess the sustainability risks they face. Consumers and the public are encouraged to demand better company sustainability performance. Furthermore, by teaming up with civil society organizations and the finance sector, governments and company policies and practices are influenced. *STANDARD B* sees a trend of financial institutions introducing conditional finance to traders, i.e. they grant favorable conditions if traders uphold sustainability criteria. The actor mentioned the example of Rabobank granting a USD 450m sustainability-linked credit facility to the trader Mercon Coffee Group (Bloomberg, 2019). This trend towards increasingly considering sustainability criteria in assessing loans was also found by Tayleur et al. (2017). *STANDARD B* stressed that the decision to offer favorable conditions to sustainable trade is business-driven:

"And here's the thing that will happen: Now traders get favorable conditions (e.g. pay less interest) if they prove they trade more sustainable. In time this will flip: banks will only provide

loans if traders trade more sustainable, else they'll have to pay higher interest rates, or do not receive the loans anymore. And this is not so much because banks care about the planet, but because it makes business sense: banks and companies are confronted with higher levels of risks that impact their business: reputational damage if associated with deforestation, legislative risk if fined by US government for forced labor violations, etc." (SI2, 10113:10749).

As a result, banks must not necessarily implement sustainability criteria due to normative aspects, they may translate to the sustainability network to avoid risks that can materialize in financial losses. While this particular case cannot be verified by literature, the fact that sustainability is becoming increasingly important for business strategy can be demonstrated. For instance, Berns et al. (2009) found that executives see that sustainability has beneficial effects on growth and risk reduction. Moreover, Jansson and Biel (2011) found that institutional investors also decide to adopt sustainability standards to reduce financial risks. *STANDARD B*'s goal is for communities, producers, and workers to implement sustainable business practices and for companies to increase investment in sustainable production. Another example are governments that establish and enforce regulations fostering sustainable production. Ultimately, the actor targets impact like improved livelihoods of producers, workers, and communities, or scaling up sustainability in production landscapes. Although there are studies supporting this finding that sustainability standards can create positive social impacts (Mitiku et al., 2017; Akoyi and Maertens, 2018), there are also critical voices claiming that some standards do not generate the desired effects (Chiputwa et al., 2015). *STANDARD B* explained that there are a number of other strategies it can undertake to mobilize additional actors for the sustainability network. *STANDARD B* categorizes them in business-to-consumer and business-to-business actions. The actions in the field of business-to-consumer include communication efforts, like the promotion of consumer-friendly seals or campaigns to increase name awareness. This finding is supported by literature. Van Loo et al. (2015) and De Boer (2003) highlight the importance of labels in getting consumers interested in sustainable products. In the field of business to business, there is "[p]artnering with companies which are not yet willing or able to commit to 100% sustainable sourcing" (SI2, 4120:4215). According to the actor, companies are the most influential decision makers when it comes to sustainability. They can be mobilized by being consulted on sustainability in general, or by step-up plans or tailored programs.

CHALLENGES IN THE TRANSLATION PROCESS

STANDARD B acknowledged that there are a number of reasons why it is not possible to interest and enroll some actors in the sustainability network. Some do not translate due to higher costs of sustainably sourced commodities. This is consistent with what has been cited by Daviron and Vagneron (2011) and Bitzer et al. (2008), who argued that high certification costs are a barrier to getting small farmers enrolled for the sustainable cause.

Others do not see a measurable impact and thus no benefit in sustainably sourced coffee. This skepticism is also shared in some other studies. For instance, Chiputwa et al. (2015) analyzed the impact of three sustainability standards on the livelihoods of smallholder coffee farmers in Uganda and found that two out of three standards do not deliver a significant impact. Another obstacle is the demand from clients. Some actors see little demand from their clients for sustainable coffee. Another reason is that “(...) many traders/ supply chain actors are purely focused on financial metrics/margin, so the internalization of external environmental and social cost is often not taking place sufficiently” (SI2, e-mail).

KEY FACTORS FOR DESIGNING STANDARDS

According to *STANDARD B*, standards should be clearly defined and auditable. The auditee and auditor should clearly understand what is expected from them in the audit process. This is consistent with the best practices for credible standards of ISEAL (2014, p. 9), which recommends that “[t]here are tools in place to support clear understanding of the requirements and how to meet them, including guidance documents and translations of the standard where appropriate”. Furthermore, there should be effective sanction mechanisms in place and a system to support and monitor implementation. This is also supported by ISEAL (2018), which recommends having credible assurance mechanisms in place. The standard system should have a review process for the standard itself. The standard “(...) should be checked and updated regularly to reflect the actual situation and the purpose of the standard” (SI2, 11045:11174).

5.2.9 ACTOR PT1: A PHYSICAL COFFEE TRADER AND ROASTER

PT1 is a coffee trader and roaster based in Switzerland (hereinafter *THE TRADER*). The coffee trading unit mainly operates in Europe but also has exposure to other regions. The company is owned and managed by the founding family and has its roots in a general store.

ASSEMBLAGE OF ACTORS BUILDING AN ACTOR-NETWORK

THE TRADER explained that the coffee market faces several sustainability challenges. One important challenge is climate change. If global temperatures continue to rise, Africa will no longer be a coffee supplier in the future: “(...) if this continues with global warming, we will have seen the third continent, namely the one right in the middle of the world coffee market, one can forget it as a producer, and that is Africa. You can forget it” (PT1, 11551:11838). Generally, *THE TRADER* is skeptical about the long-term outlook of coffee supply. The world population is increasing and, due to climate change, the cultivation area decreasing. This may lead to social issues: “The human population is increasing. As a result of global warming, production areas are becoming smaller and smaller. It has got to be settled.

There is a possibility to regain enough fuel for, for waging war. Land is possession” (PT1, 11841:12413). The actor predicted that in 40 years there will only be two suppliers of coffee: Brazil and Vietnam. And as a result, less variety. The importance of the adverse effects on coffee due to climate change has also been raised by Sjoerd Panhuysen and Pierrot (2018). The trading company identified several actors that are important for establishing sustainable business practices along the supply chain and that address prevalent social and environmental issues. Figure 5.10 shows the respective actors and associations between them. *THE TRADER* remarked that the demand of clients, and roasters is one of the main rea-

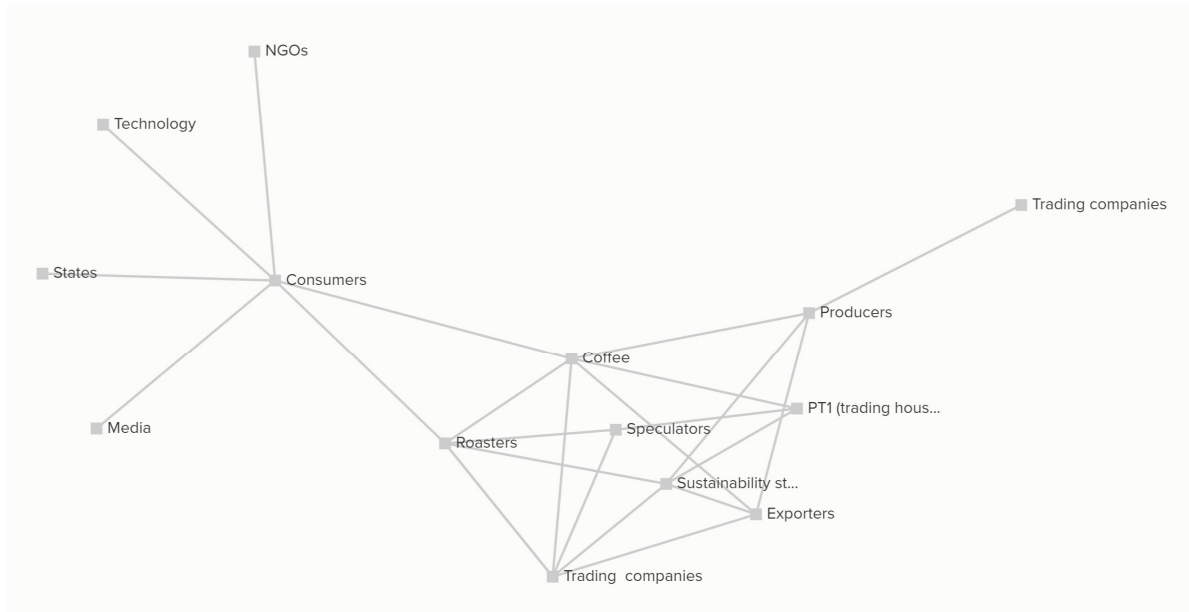


Figure 5.10: Actor-network by *THE TRADER* (PT1)

Source: Own diagram based on kumu.io

sons its trading and roasting unit is enrolled in the sustainability network. Moreover, as a family-owned company, it wants to assume responsibility. That is why the company was one of the early licensees of Max Havelaar in Switzerland. *THE TRADER* stressed that trading companies are not at the forefront to getting other actors interested in sustainability: “There can be no trade without roasters. And the roaster cannot do anything without its consumers” (PT1, 25089:25384). Consumers are the ones that mobilize other actors for the sustainability network. To satisfy the consumers’ demand, roasters purchase sustainable coffee from trading companies. These companies in turn, purchase from exporters and producers of sustainably sourced coffee. This passes sustainable business practices along the supply chain. This finding agrees with that of Millard (2017), who stressed that the consumer is a key driver of sustainable coffee production. *THE TRADER* acknowledged that trading companies can influence to some extent sustainability topics along the value chain by selecting suppliers that uphold sustainability criteria: “But the trader can indeed do something, the trader can say, with these, with these and with these in these countries, I like doing

business” (PT1, 17007:17540). In order to do business with trading companies, suppliers must uphold certain sustainability criteria, which interests and enrolls them in the sustainable cause. Furthermore, *THE TRADER* explained that it undertakes sustainability projects in local markets, like in a project to recycle coffee pulp. The actor argued that NGOs play an important role in the translation process. These organizations inform people, pointing out shortcomings and thus mobilizing consumers for sustainably sourced coffee. The actor added: “For people to understand, for people to say: ‘O yeah, Greta, I’m prepared to pay a bit more’, and not only the 10 percent of the ideological consumers we have in Switzerland” (PT1, 24434:24630). But *THE TRADER* stated it was against populist campaigns: “(...) that drawing of a fat gentleman in a leather armchair with a fat cigar and glass of whisky and so on, so that has got to go (...)” (PT1, 24155:24432). The role of NGOs in creating awareness is underpinned by literature. As an example, Spar and La Mure (2003) showed that NGOs use consumers and public pressure to influence companies. The media and educational work of governments play a similar role according to *THE TRADER*. The finding regarding the media is supported by studies. For instance, Borghesi et al. (2014) demonstrated that managers conduct corporate social responsibility activities to avoid negative media publicity. Technology supports informational and educational efforts: “So the technologies are there. So you no longer have to travel there to convince yourself that there is still work to be done, right?” (PT1, 29672:29799). It provides access to information about conditions in local markets.

CHALLENGES IN THE TRANSLATION PROCESS

THE TRADER noted that mobilizing actors for the sustainable cause can be challenging. Higher prices for sustainable products can be an obstacle to enrolling consumers in sustainability. Sustainably sourced and certified coffee costs significantly more than conventional coffee and not all consumers are willing and able to pay higher prices. While there is no empirical support for this particular case, similar findings are available on other markets. For instance, higher prices for sustainably produced clothes becoming an obstacle in consumers’ purchasing behavior can be observed in the fashion industry (Joergens, 2006; Yang et al., 2017). Furthermore, according to *THE TRADER*, sustainability standards do not necessarily benefit producers by the desired amount. The actor argued that costs at the level of certification schemes are a major obstacle: “The main reasons are the cost factors where this has occurred (...) And now you have to certify, certify credibly, and that costs” (PT1, 8602:9204). *THE TRADER* pled for leaner organizations, which frees up money for producers: “So, please go back to the way we did it before. It grew, of course, there was also a need then too. But it was much leaner. With the money where we can save, you can send something down to the south” (PT1, 9564:9802). Potential problems associated

with significant costs of certification have also been addressed by Daviron and Vagneron (2011) and Bitzer et al. (2008). These experts argued that high costs have the potential to marginalize small producers. According to *THE TRADER*, not being able to mobilize foreign political systems is also a challenge for the sustainable cause.

KEY FACTORS FOR DESIGNING STANDARDS

THE TRADER does not see itself in a position to give recommendations on designing a sustainability standard. However, the actor raised several key points of criticism of current sustainability standards and certification schemes. This information may be valuable in considering key aspects of a standard.

5.2.10 ACTOR IN4: AN ASSET MANAGEMENT COMPANY FOCUSING ON SUSTAINABLE INVESTMENT

IN4 is an investment management company that belongs to the sustainability pioneers in Switzerland (hereinafter *SUSTAINABLE INVESTMENT A*). The company offers sustainable investment solutions only, and primarily serves Swiss private clients, foundations, family offices and pension funds.

ASSEMBLAGE OF ACTORS BUILDING AN ACTOR-NETWORK

The company offers sustainable investment solutions because it aims at making a contribution to a sustainable financial system. *SUSTAINABLE INVESTMENT A* stressed that money has sizeable leverage and can trigger change: “And then I decided to start [company name] because I saw how money makes the world go round” (IN4, 1148:1265). The company argued that sustainability is not just a trend but a necessity that will become mainstream: “Nowadays you still often hear this. ‘Oh, I gotta have something there now too, sustainability is a trend.’ No, I say. Sustainability is a necessity. Sustainability is becoming mainstream. And I am looking forward to it” (IN4, 9830:10152). This finding can be supported by literature. SSF (2019) shows that assets under sustainable investment management have increased substantially and are thus becoming more and more important. The company identified several actors that are key in driving growth of sustainable investments. Figure 5.11 shows the respective actors and associations between them. The strategy of *SUSTAINABLE INVESTMENT A* is to invest in sustainable companies on behalf of its clients. The vision of *SUSTAINABLE INVESTMENT A* is that all investors choose sustainable companies only. The company remarked that in order to attract capital from sustainable investors, companies must demonstrate that they act responsibly: “But in order for them to receive and reach the [capital – author’s note], they have to show that the commodities are extracted fairly, that the employees there are treated fairly, that, depending on

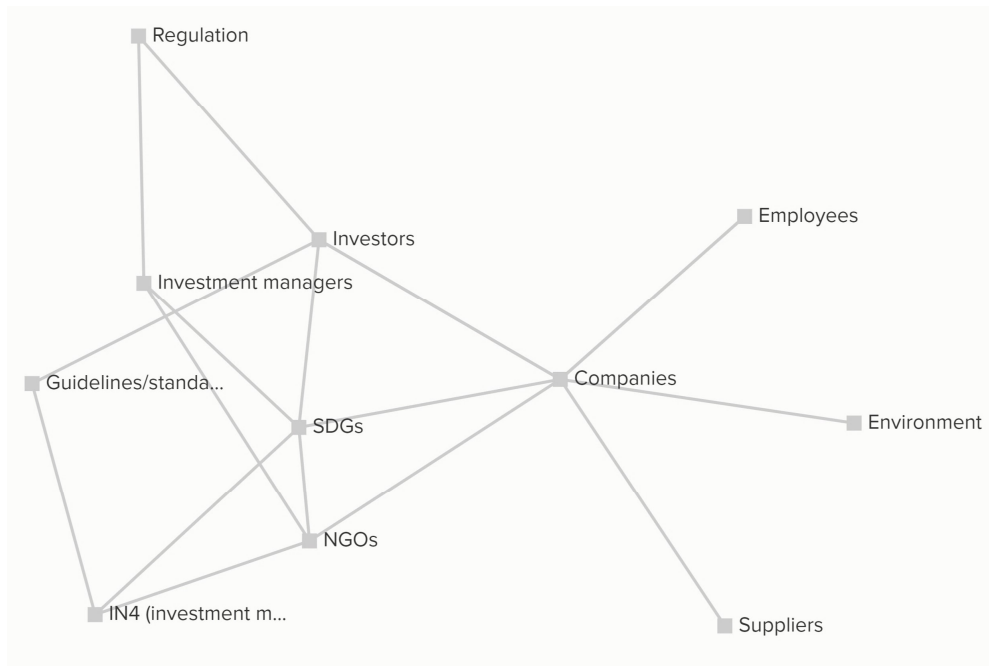


Figure 5.11: Actor-network by *SUSTAINABLE INVESTMENT A* (IN4)

Source: Own diagram based on kumu.io

the circumstances, regeneration is also practiced there” (IN4, 2738:3245). Upholding responsible business practices facilitates the companies’ access to capital. Another strategy is the divestment of certain companies like those operating in fossil fuels. *SUSTAINABLE INVESTMENT A* explained that the divestment of large investors leads to a lower valuation of the respective companies. As sustainable investments become more and more important, they will have a larger impact on price-building mechanisms. The positive effect of sustainable business practices on the valuation of a company is also confirmed in literature. Aktas et al. (2011) found in the context of mergers and acquisitions that the acquisition of sustainable targets has a positive impact on the valuation of the acquirer. Rivoli (2003) analyzed the impact of negative and positive screening on the decision of companies to pursue sustainable business practices. She concluded for the example of block sales of large investors that: “Firms have an incentive to avoid the price declines associated with block sales, and therefore an incentive to behave in such a way as to prevent divestment” (Rivoli, 2003, p. 282). The impact is not limited to financial capital but also human capital. *SUSTAINABLE INVESTMENT A* emphasized that the newer generation of employees appreciate employers that act responsibly. Therefore, in the long term, sustainable companies not only have easier access to financial capital but also human capital: “And then that means that sustainably managed companies, like Philips or SAP, Stora Enso etc., that they manage to achieve the best employees, the best brain capital and the others no longer (...)” (IN4, 4355:4822). The actor noted that the increase in sustainable investment is partly driven by people’s growing awareness that there are many important sustainability challenges. For

instance, people are aware of climate-related risks or water pollution, which has an impact on investment decisions. Another driver mentioned by the actor is investors' realization that the performance of sustainable investment solutions is not inferior to that resulting from conventional strategies. These motivations are supported by literature. For instance, Jansson and Biel (2011) and Von Wallis and Klein (2015) found that investors decide to adopt a sustainability approach for ethical and financial reasons. Financial institutions also become interested in launching sustainable products to serve client demand and exploit business opportunities. This finding is supported by Schueth (2003), who concluded by analyzing US investment managers, that the increase in sustainable investment offerings was mainly driven by consumers. *SUSTAINABLE INVESTMENT A* stressed that NGOs have an important role in getting actors interested and enrolled in the sustainability network. Companies have many sustainability policies and it is not easy for an asset management company to verify whether they are upheld in practice. *SUSTAINABLE INVESTMENT A* explained that NGOs provide useful information about the behavior of companies in practice, which can be used in analysis of a company. But the actor acknowledged that there are large differences in the quality of NGOs. The role of NGOs in putting pressure on companies and thus influencing them is also supported by literature (Spar and La Mure, 2003; Collingwood, 2006). According to *SUSTAINABLE INVESTMENT A*, the SDGs are important actors in the process of actors translating to the sustainability network. The company stressed that the SDGs provide a common language in order for different actors to understand each other: "Yeah. So, I think the SDGs help us to understand each other. When we have a meeting with representatives of NGOs, issuers, financial analysts, pension fund representatives, it was always difficult for us to understand each other. And that can be easier. And consumers understand this too" (IN4, 34311:34608). This role is also confirmed by other authors, who highlight that the SDGs provide a common framework with a common language for different types of actors around the world (Schramade, 2017; Setó-Pamies and Papaoikonomou, 2020). Such a common framework and language also allow companies to focus on certain goals for sustainable development and measure the achievements of their goals. *SUSTAINABLE INVESTMENT A* remarked that technology is an important actor because it supports transparency. Through technology, how products were produced and sourced can be easily demonstrated to consumers. This statement is corroborated by El Bilali and Allahyari (2018, p. 459), who find that technology shortens the "(...) distance between food chain actors" and favors transparency. Another driver is regulation, which is in line with results of Eurosif (2018) and SSF (2019), which find that regulation is an important driver for sustainable investments. Having a reporting duty, like in the EU action plan, triggers actions on the side of both asset managers and clients. *SUSTAINABLE INVESTMENT A* argued that asset managers have to deal with the regulatory requirements and build up knowledge. Education is another important driver for getting more actors mobilized for the sustainability

network. This statement is confirmed by Escrig-Olmedo et al. (2013), who analyzed individuals in Spain. They found that the awareness of sustainable investment is positively related to education. Schueth (2003) noted that in the United States better education tends to favor sustainable investments.

CHALLENGES IN THE TRANSLATION PROCESS

SUSTAINABLE INVESTMENT A explained that a lack of standards or labels for sustainable products is an obstacle to the network-building process. Clients can hardly compare sustainable investment products and their sustainability approaches. Greenwashing is thus a risk. Also, valuations can differ significantly among rating agencies. While there is no literature to support this particular statement, parallels to the physical market can be drawn. For instance, Delmas and Burbano (2011, p. 80) stress that labels “(...) play an important role in informing consumers about products that meet certain environmental standards” and mitigate greenwashing. Furthermore, *SUSTAINABLE INVESTMENT A* acknowledged that financial standards are usually not explicitly linked to physical sustainability standards. As a sustainable asset manager there is a thorough analysis of the investee companies but there is no explicit requirement to follow physical standards. This represents an obstacle to financial and physical actors assembling to the same sustainability network. There is no literature to support this particular finding; but combining insights from all interviews suggests that investment managers do not take physical sustainability standards into account or if they do, they usually do not require companies to follow specific standards.

KEY FACTORS FOR DESIGNING STANDARDS

SUSTAINABLE INVESTMENT A stressed that several factors are important for designing standards for sustainable investment. They should cover the whole value chain of a company and increase the company's transparency. The actor stated that the definition of the standard should depend on existing standards and initiatives like the Global Reporting Initiative (GRI), Task Force on Climate-related Financial Disclosures (TCFD), PRI, the UNGC, the SDGs and the ISO standards. Similar recommendations can be found in industry best practices for developing physical sustainability standards. ISEAL (2014) recommends aligning the standard with other standards and initiatives that have similar objectives.

Measurement of the standard's application in practice is key for *SUSTAINABLE INVESTMENT A*: “Measurability is complete-/ I prefer to have a single goal, but that it is measured and not just nice truisms” (IN4, 36406:36558). Auditing and certification have an important role in verifying the implementation of the standard in practice. As the actor commented: “Yeah. Because there is so much crappy stuff going on today, it really has to be checked too” (IN4, 36615:36705). The actor stressed that it is also crucial to analyze which audit

company has been mandated and whether this company is credible. These requirements are consistent with ISEAL (2014), which recommends that standard systems define performance levels and have monitoring in place to measure whether progress is made towards the defined sustainability goals. Furthermore, there should be credible assurance mechanisms in place (ISEAL, 2018). *SUSTAINABLE INVESTMENT A* explained that all actors that implement the standard should understand the criteria and that implementation should be at reasonable costs. *SUSTAINABLE INVESTMENT A* emphasized that the standard should be easy to understand for a broad audience: “And this comprehension is simply extremely important. (...) In the world of finance, many things have been made so complex for various reasons that nobody understands them anymore. Because then you could also (...) earn money through complexity in a way you could not have done otherwise” (IN4, 30556:30897). The actor added: “And therefore, it should be comprehensible to everyone, so that they can already convey this knowledge in school classes too, right? (I: Right.) So let’s say, the best would be that a kid in primary school from the fourth grade on understands” (IN4, 30937:31179). The standard should be capable of communication by means of pictures and storytelling. These inputs for developing a standard are similar to those of ISEAL (2014): The standard should be accessible for all involved actors, i.e., the actors should understand what is expected from them; the guidance should come in the appropriate form (appropriate documents and translations); and the standard systems should minimize costs. *SUSTAINABLE INVESTMENT A* would support the introduction of a harmonized sustainability standard in the financial industry. As an asset management company, it would use that standard and then define additional criteria on top. A harmonized standard would make it easier for clients to understand the sustainable products and address the problem of potential greenwashing. But *SUSTAINABLE INVESTMENT A* acknowledged that harmonizing a standard would be a challenging task. For defining the standard, the actor would include companies, financial institutions, the government, education institutes and NGOs. This finding of including various types of actors is supported by ISEAL (2014), which recommends engaging with various types of affected actors in developing a standard.

5.2.11 ACTOR IN1: AN ASSET MANAGER FOCUSING ON SUSTAINABLE INVESTMENT

IN1 is an investment management company that belongs to the pioneers in sustainable finance (hereinafter *SUSTAINABLE INVESTMENT B*). The company is based in Switzerland, while its parent company is headquartered in a European country. The company offers various types of investment solutions.

ASSEMBLAGE OF ACTORS BUILDING AN ACTOR-NETWORK

The company was originally established because the founders “(...) saw a need in the market to deliver solutions for clients that were sustainability focused” (IN1, 1513:1603). They were convinced that sustainability was a performance driver. *SUSTAINABLE INVESTMENT B* commented that the founders assumed that “(...) businesses that were sustainable would perform better over time and that this is probably underappreciated by the market” (IN1, 1766:2292). *SUSTAINABLE INVESTMENT B* explained that with their function of allocating capital, asset managers get companies interested and enrolled in the sustainability network. The actor identified several other actors that are important for the sustainability network. Figure 5.12 shows the respective actors and associations between them. Those

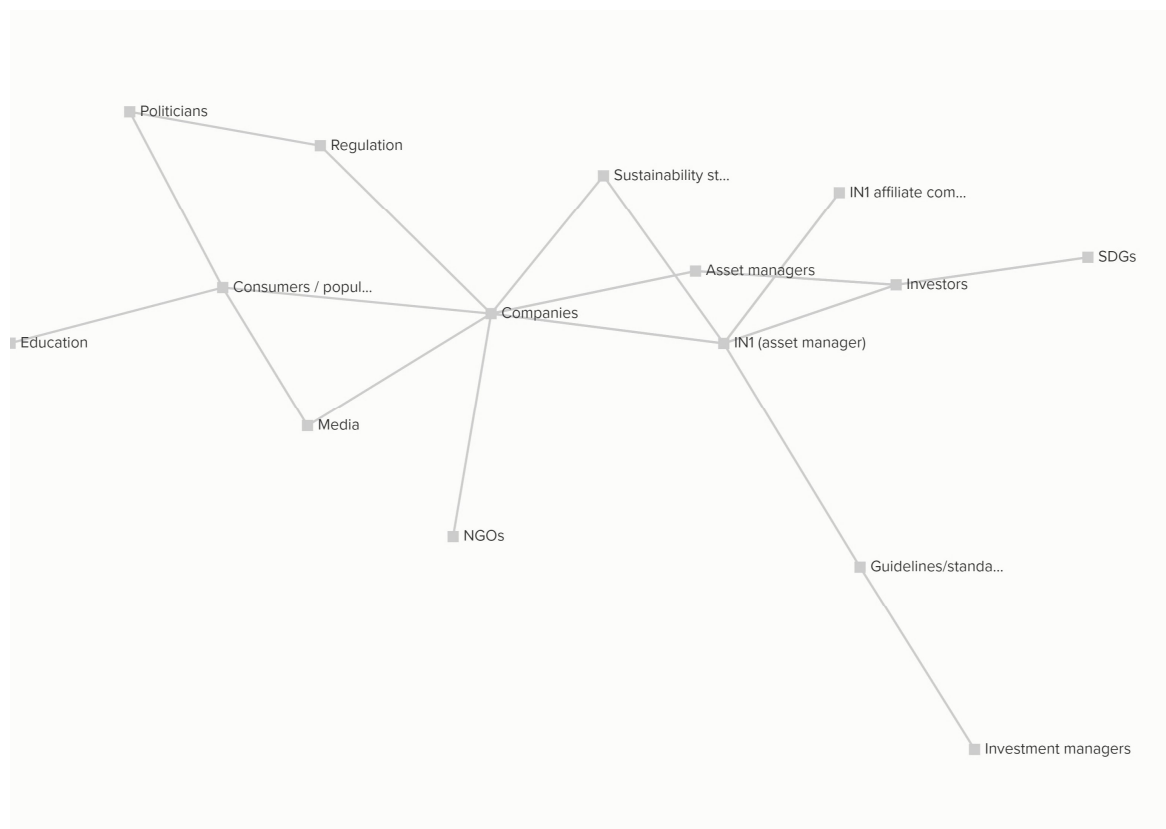


Figure 5.12: Actor-network by *SUSTAINABLE INVESTMENT B* (IN1)

Source: Own diagram based on kumu.io

companies that are willing to invest in sustainable business practices attract money from sustainable investors. As a result, these companies exhibit a lower cost of capital and thus a higher valuation. This finding is underpinned by literature. Hong and Kacperczyk (2009) found that companies involved in controversial business activities have a higher cost of capital. Similarly, Heinkel et al. (2001) found that companies with sustainable business practices tend to have a lower cost of capital. *SUSTAINABLE INVESTMENT B* acknowledged that this phenomenon requires a critical mass of sustainable investments in order to have an

impact. Another driver of translation is companies' realization that revenues from business areas not considered beneficial to society and the environment are at risk in the long term. *SUSTAINABLE INVESTMENT B* commented on the example of companies active in fossil fuels that are being divested by many investors. As a result, some of these companies are investing heavily in renewable energy. But the actor is rather skeptical about complete disengagement because then investors cannot exercise their voting rights and engage with the companies. This applies especially to those companies producing essential goods or those that have no substitutes, as the asset manager has to work together with the company to "raise the bar" over time (IN1, 29115:29273). While the influence of engagement on firm behavior can be supported by literature, some authors contest the influence of exclusion criteria (Kölbel et al., 2020; Dyck et al., 2019; Dimson et al., 2015). *SUSTAINABLE INVESTMENT B* suggested that investors get enrolled in sustainability not only because of normative aspects. One other main reason is economic in nature, with investors assuming that considering sustainability criteria will have a positive impact on the performance of their investments. This is backed by Jansson and Biel (2011) and Von Wallis and Klein (2015), who found that individual investors' decisions to adopt a sustainability approach is driven by the focus on long-term performance. Risk avoidance is another driver because reputational risks can materialize in financial losses. This is also supported by Jansson and Biel (2011), who found that institutional investors adopt sustainability approaches in order to reduce risks. Furthermore, financial institutions may also be interested in offering sustainable products because they see growth opportunities and benefits in terms of marketing, a conclusion also reiterated by Schueth (2003), who found that investment managers offer sustainable investment solutions to serve the demand of clients. *SUSTAINABLE INVESTMENT B* noted that consumers are important to getting companies enrolled in the sustainability network. Consumers can avoid certain brands and thus put pressure on companies. This finding is consistent with Millard (2017), who determined that consumers were a key driver in sustainably sourced coffee. Similarly, NGOs put pressure on companies and may trigger change, a fact supported by Spar and La Mure (2003), who showed that NGOs use consumers and public pressure to influence companies. The actor suggested that the media has the role of explaining controversies to consumers and "(...) can add value to the conversation to make sure people are correctly informed" (IN1, 25454:25606). As a result, companies may face bad publicity and thus come under pressure. The potential of medial pressure to move actors towards sustainable business practices is supported by literature (Jansson and Biel, 2011; Borghesi et al., 2014). The actor also emphasized the important role of sustainability standards, like Fairtrade or Rainforest Alliance, because they address social and environmental issues. The statement that sustainability standards may have a positive impact on social and environmental dimensions is confirmed by literature. For instance, Akoyi and Maertens (2018) find that sustainability standards may have a positive impact on cof-

fee farmers' income and productivity. Mitiku et al. (2017) derived similar results analyzing coffee certification schemes in Ethiopia. *SUSTAINABLE INVESTMENT B* explained that it analyzes the different standards with the goal of understanding the differences between them and how rigorous they are: "And you want to/ yeah, you don't want to just accept any certification. You want to know that the certification is working to achieve its goals" (IN1, 26513:26656). This actor would also encourage companies to move towards more rigorous standards over time. In the screening approach, it prefers those companies with stricter standards. But the actor acknowledged that it is not focusing on coffee standards. According to *SUSTAINABLE INVESTMENT B*, the SDGs provide a common language to explain the asset manager actions. Depending on the investment solution, managers map investments on a few SDGs where they make a material contribution. This practice was also examined by Chew and Childe (2019). These experts noted that SDGs helped to increase the interest among investors in impact strategies and spur the discussion about the impact of sustainability approaches for listed assets. Governments get actors mobilized for the sustainability network as well. By defining the sustainability challenges in their policymaking, politicians can provide a common definition of which ESG risks matter and should be addressed by investors. Additional actors can also be mobilized by education that creates awareness: "A lot of the schools now are starting from very young ages, have sustainability programs, so educating the general populous and consumers in the end about these issues" (IN1, 15302:15469). People are changing their behavior and are looking for sustainable products. This observation is consistent with that of Escrig-Olmedo et al. (2013) and Rosen et al. (1991), who found that education is positively related to the decision to choose sustainable investment solutions.

CHALLENGES IN THE TRANSLATION PROCESS

According to *SUSTAINABLE INVESTMENT B*, it is not possible to mobilize some investors for sustainability because they are skeptical about the benefits of sustainable investment solutions. A predominant reason for this is the definition of fiduciary duty, which, in the past, focused on maximizing shareholder value and did not integrate ESG risks. The actor also stressed that investors have different views and preferences that may be responsible for their not translating to the same sustainability network. This finding is consistent with the conclusion of Sandberg et al. (2009), who found that asset managers usually define their own sustainability approaches that reflect their preferences. Regulatory requirements could correct this obstacle: "That without the regulatory environment changing, it will be difficult to get real change in companies" (IN1, 16716:16820). But regulation of multinational companies is not easy: "Yeah, regulation is tougher I guess on this side because it's not so easy for the European government to enforce a change in the regulation in a foreign coun-

try” (IN1, 24180:24339). Higher costs of sustainable products are sometimes an obstacle, causing consumers not to purchase sustainable investment solutions and thus not to enroll in the sustainability network. This is backed by SSF (2019), which has found that concerns regarding higher costs compared to conventional strategies are a key barrier to growth of sustainable investment. *SUSTAINABLE INVESTMENT B* acknowledged that it has little exposure to coffee and thus does not cover the commodity thoroughly. The actor stressed the importance of impact measurement but at the same time pointed to the issue of improvable data quality. The quality of ESG data is also questioned by studies. For instance, Drempetic et al. (2019) argue that rating agencies have to rely on the sustainability information of the analyzed company, which can lead to lower data quality.

KEY FACTORS FOR DESIGNING STANDARDS

SUSTAINABLE INVESTMENT B explained that good standards are characterized by having an audit in place, sound quantitative metrics and traceability requirements. Having verification and quantitative metrics like performance level requirements is consistent with industry best practices for developing sustainability standards (ISEAL, 2014). The actor mentioned the standard of Bonsucro for sugar and RSPO for palm oil as sound examples. Engagement is likely to be more effective in generating impact than disengagement. This is also corroborated by literature. Dyck et al. (2019) and Dimson et al. (2015) show that engagement can influence companies in social and environmental performance. The actor stressed that the standard should come at reasonable costs and should not set the bars too high. This philosophy is consistent with ISEAL (2014), which calls for reducing the barriers to implementation and minimizing costs. *SUSTAINABLE INVESTMENT B* was rather skeptical about harmonization of standards for sustainable investments. In practice, it is easier to align general principles and coordinate engagement. The impact of coordinated engagement is also underpinned by literature (Dimson et al., 2015; Gond and Piani, 2012). The actor suggested that having processes and portfolios audited by a third party has advantages. But many different labels should be avoided. At the moment there are different national labels available (e.g. France and Belgium). The EU is working on a label, which is favorable in *SUSTAINABLE INVESTMENT B*'s point of view because it would provide standardization.

5.2.12 ACTOR IN2: AN ASSET MANAGEMENT COMPANY

IN2 is the Swiss-based asset management arm of a family-owned private banking and asset management group (hereinafter *SUSTAINABLE INVESTMENT C*). Clients are mainly institutional clients around the globe. They offer traditional asset classes and alternative assets and have a long history in responsible investments.

ASSEMBLAGE OF ACTORS BUILDING AN ACTOR-NETWORK

According to *SUSTAINABLE INVESTMENT C*, the decision to offer sustainable investment solutions was an initiative of the family owning the group. The motivation was driven by the conviction that responsibility is a key element in being able to pass family wealth from one generation to the other. According to the actor, considering sustainability criteria enables them to have a better understanding of the risk-return profile of an investment. Moreover, social responsibility is generally important to the family; it is convinced that investing activity has an important role in making a contribution to sustainable development. Another motivation to offer a sustainable investment solution was their clients' demand that significantly grew over time. *SUSTAINABLE INVESTMENT C* remarked that commodity investments are associated with several ESG controversies, including negative environmental impacts, human rights issues and poor working conditions. These controversies are addressed by the company's sustainability approach. The ESG analysis of companies includes assessing whether they are committed to industry standards and guidelines and process certified commodities. *SUSTAINABLE INVESTMENT C* identified several actors that are important in the process of deriving a sustainability network. Figure 5.13 shows the respective actors and associations between them. *SUSTAINABLE INVESTMENT C* suggested that asset man-

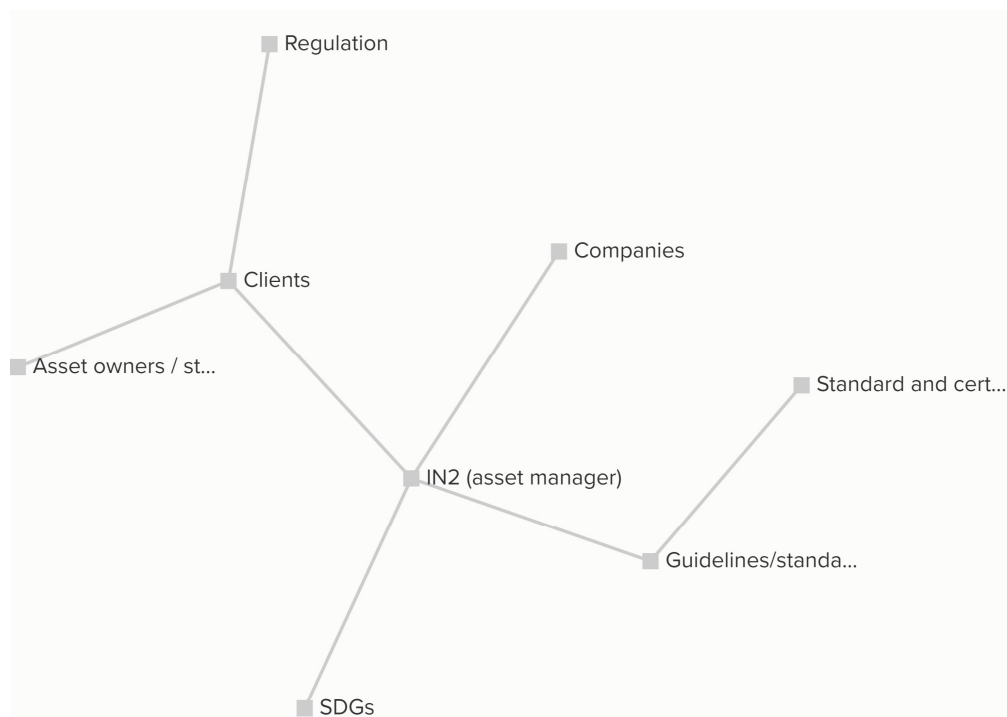


Figure 5.13: Actor-network by *SUSTAINABLE INVESTMENT C* (IN2)

Source: Own diagram based on kumu.io

agers have several strategies for getting companies enrolled in sustainability. By engaging with companies, asset managers can put pressure on them and trigger improvements in

the companies' business practices. They can also force companies to be more transparent in their disclosures. The impact of engaging approaches is also backed by literature. For instance, Dimson et al. (2015) and Dyck et al. (2019) show that engagement may influence companies in social and environmental dimensions. The ability to get companies translated to the sustainability network depends on the type of investment. In private equity, the investor usually has a larger stake in the firm, and it is easier to influence the company compared to listed equity, where investors usually hold a small allocation. *SUSTAINABLE INVESTMENT C* explained that its clients increasingly invest sustainably. There are several reasons why these clients get interested and enrolled in the sustainability network. One reason is financially motivated, where applying a sustainability approach gives a better understanding of the risk-return profile of an investment. The actor commented that by considering sustainability criteria, risks can be reduced. This motivation is supported by Jansson and Biel (2011). They found that individual investors decide to adopt a sustainability approach due to performance aspects, while institutional investors see it as a risk-reduction. Another reason is ethical motivation, which is also in line with results from Von Wallis and Klein (2015), who found that investors aim to support companies whose values are consistent with their own values. Another sustainability driver is also an investors' stakeholder background. For instance, labor union pension funds, where the asset owners wish to invest sustainably: "Or the USA too, for example. You have pension funds for trade unions, which then also say: 'Please take these points into account as well' " (IN2, 3929:4069). As a result, asset owners and their stakeholders have an important function in getting clients interested and enrolled. *SUSTAINABLE INVESTMENT C* noted that reputation management is also a motivation of investors to adopt a sustainability approach, because they do not want to be associated with certain controversies. Similarly, Jansson and Biel (2011) found that investment in controversial business activities can lead to negative media exposure and adversely affect reputation. Investing in sustainable companies can thus reduce this risk. The actor stressed that the SDGs have an important role in getting actors interested and enrolled. They give sustainability a direction and a benchmark that can be used for measuring impact. This practice is also consistent with those found by Chew and Childe (2019), who mention that investors use the SDGs to align their investments. Regulation is also a driver in sustainable investments: "(...) so in the institutional area for sure; it will ultimately also be driven by regulation. That you simply demand things there and then it is just gets done" (IN2, 9492:9669). The important role of regulation to get investors mobilized for the sustainable cause is also supported by Eurosif (2018) and SSF (2019).

CHALLENGES IN THE TRANSLATION PROCESS

SUSTAINABLE INVESTMENT C noted that the belief that sustainable investments deliver inferior returns compared to conventional strategies still prevails. This prevents actors from getting mobilized for the sustainability network. SSF (2019) also found evidence that performance concerns are still a barrier to sustainable investments. Another obstacle in the network-building process is the complexity of the topic. Clients do not know how to implement a sustainability approach and are confronted with a complex and manifold topic: “If you also talk to customers or those who would like to be, they are partly, so, not exactly overwhelmed but it is completely unclear to them what they actually ought to do now” (IN2, 10215:10425). Lack of a standard for sustainable investment additionally fuels this difficulty: “And people are somehow lost a little, that you say there is no standard and what should you exclude there now?” (IN2, 11268:11406). The comparison of sustainability approaches is thus quite difficult. The challenge of not having a generally agreed definition of sustainability has also been raised by Cerin and Scholtens (2011) and the OECD (2012). The taxonomy as part of the EU Action Plan goes in the direction of defining whether activities of companies are environmentally sustainable or not. The sustainability approach of *SUSTAINABLE INVESTMENT C* covers commodity-related companies but direct investments in commodities are largely not covered. Companies active in fossil fuels for which carbon intensity can be calculated constitute an exception. This lack of coverage of physical commodities also applies to investment strategies that have commodities in the opportunity set.

KEY FACTORS FOR DESIGNING STANDARDS

According to *SUSTAINABLE INVESTMENT C*, sound standards should be relevant by addressing prevalent challenges, defining clearly how they are implemented in practice and having monitoring in place. The actor mentioned the suboptimal example of the Swiss Federal Act on War Material whose goal is to prohibit financing of war material. This Federal Act rarely applies in practice and thus has limited impact. These suggestions are supported by industry best practices for developing sustainability standards. ISEAL (2014) recommends that credible standards give clear guidance in how they are implemented, and that they should address the most significant issues in the sector and have measurement processes in place. Furthermore, the actor stressed that there should be sanction mechanisms in case of violations. Auditing and certification are important. *SUSTAINABLE INVESTMENT C* acknowledged that in contrast to the physical side, auditing and certification are not very common in the financial industry (where there are a few national labels). In this context, the actor mentioned a deficit in PRI reporting, where reported items are not externally verified: “Because the other stuff is always very, it is also maybe a/ with all the PRI reporting it is not an audit. So you can really write whatever you like” (IN2, 32949:33119). According to *SUS-*

SUSTAINABLE INVESTMENT C, it makes sense that the process of a sustainability approach is certified. This includes an analysis of the process and what the portfolio as an outcome looks like. Having effective assurance mechanisms in place is also supported by industry best practices for developing sustainability standards (ISEAL, 2018). Impact measurement of the standard is important but *SUSTAINABLE INVESTMENT C* questioned data quality. This concern is also shared by others (Merker, 2018; Drempetic et al., 2019). The actor also argued that the standard should not be too strict from the beginning and raise the bar over time. Otherwise actors will be discouraged from adopting the standard. This philosophy is supported by ISEAL (2014), which has called for reducing the barriers to implementation. According to *SUSTAINABLE INVESTMENT C*, all affected actors (including investee companies) should be included in the development of the standard. This will ensure that the standard can be implemented in practice. The actor is skeptical about creating a harmonized standard. Investors usually have different needs and expectations that are unlikely to be captured by a harmonized standard: “That would be that too – with the standards or criteria themselves, it’s very difficult (...) to capture them in a standard. Because motivation too varies greatly. So you have customers who tend to be ethically oriented. They naturally have different expectations of what sustainable means to them than a state pension fund or something” (IN2, 12845:13247). Furthermore, the complexity of sustainability can hardly be reflected in one standard. While there is no particular literature on this topic about harmonization of sustainable investment approaches, studies in the field of physical sustainability standards show that standard variation allows for addressing different producer and consumer preferences (Manning et al., 2012). *SUSTAINABLE INVESTMENT C* acknowledged that a harmonized standard would also have advantages. For investors, it would be clear how to implement a sustainable investment approach. It would be beneficial for communication because what investors need would be clear: “And that everyone talks about the same thing” (IN2, 14701:14739). That would in turn have positive impacts on company reporting in terms of harmonization of certain ESG metrics. Furthermore, the assessment process would be easier for companies, as they would not have to complete questionnaires of several asset managers.

5.2.13 ACTOR BA1: A MULTINATIONAL BANK FOCUSING ON FOOD AND AGRICULTURE

BA1 is a large internationally operating bank based in a European country (hereinafter *THE SUSTAINABLE BANK*). In addition to traditional finance activities like providing mortgages the bank focuses on food and agriculture and finances most of the local farmers. The international financing portfolio includes internally operating food or consumer goods manufacturers, commodity traders and large farmers. Via its financing activities, *THE SUSTAINABLE BANK* is heavily exposed to many different agricultural sectors like fisheries, forestry,

livestock, soy, cocoa and coffee. With respect to coffee, the bank is more exposed to trading and processing than primary production. The bank applies a sustainability approach to all its activities and aims at making a contribution to improving food issues globally.

ASSEMBLAGE OF ACTORS BUILDING AN ACTOR-NETWORK

THE SUSTAINABLE BANK's motivation to adopt sustainability criteria and thus join the sustainability network is driven by an economic rationale. As the bank stressed: "You know, sustainability means long-term survival" (BA1, 6681:6730). The bank sees a close link between social and environmental sustainability and business continuity. For instance, it avoids dealing "(...) with companies who are so called stranded assets" (BA1, 6962:7026). Moreover, *THE SUSTAINABLE BANK* is ethically motivated. The bank believes that it can help clients improve their business practices and thus generate a positive impact for society and the environment. It explained the impact chain of its sustainable financing activities as follows: "(...) our policies impact our clients. And their policies or their practices which in turn have impact on their value chains or supply chains and people involved in it" (BA1, 8864:9035). That is, *THE SUSTAINABLE BANK*'s policies are passed along the supply chains and generate impact. The actor identified several sustainability issues in the coffee market: poor working and labor conditions, deforestation and loss of biodiversity, soil erosion and degradation, use of fertilizers, water pollution, water usage, pollution from processing waste and smallholder issues (BA1, company document). These issues can be verified in available literature (Rabobank, 2018; Sjoerd Panhuysen and Pierrot, 2018). *THE SUSTAINABLE BANK* named several actors that are important in building a sustainability network. Figure 5.14 shows the respective actors and associations between them. *THE SUSTAINABLE BANK* explained that it tries to get clients interested and enrolled in the sustainable cause with a sustainability policy framework for its financing activities. New clients applying for a corporate loan are assessed within the sustainability policy framework. This framework includes a number of thematic and sector policies. The relationship manager then determines which policies are relevant for the prospect and evaluates whether clients meet the criteria set out in those policies. Subsequently, prospects are categorized into: those with practices outside of policy, laggards, average performers and front runners. No loans are granted to the first category. Loans can be granted to laggards if these borrowers commit to defined improvements in their business practices. Improvements are verified in a review process. Existing clients are subject to an annual review, which represents a formal monitoring event. During this review, clients are again placed into one of the four categories. There may be ad hoc reviews triggered by controversial media publicity or NGO reports, in addition to the annual review. As *THE SUSTAINABLE BANK* commented: "It may happen that (...) during that year there is a media report or an NGO report or some other signal

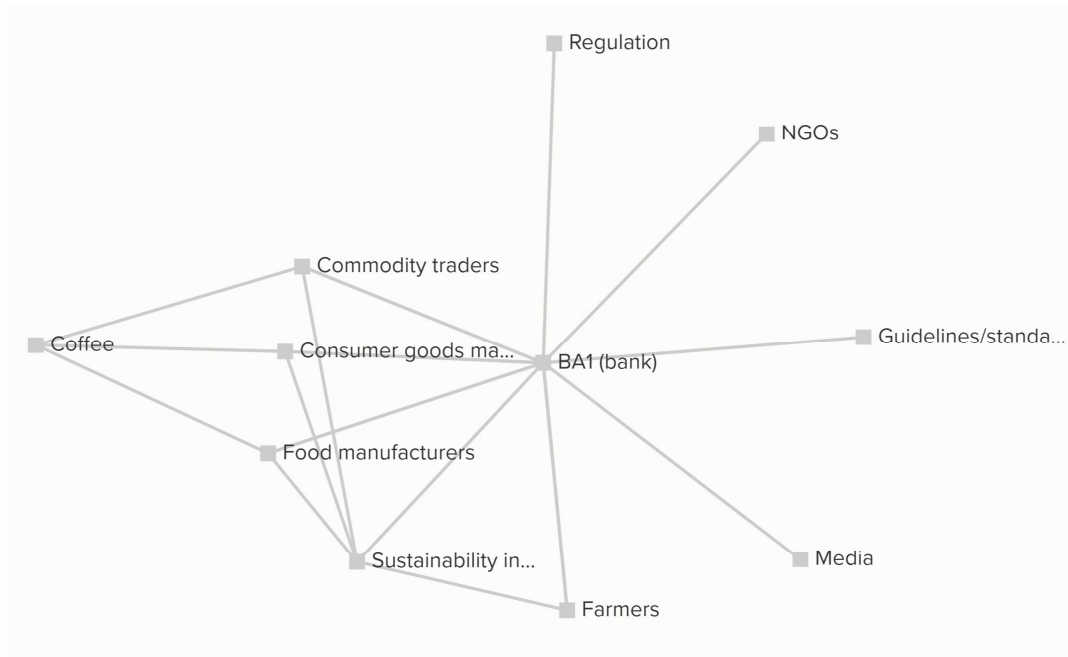


Figure 5.14: Actor-network by *THE SUSTAINABLE BANK* (BA1)

Source: Own diagram based on kumu.io

which highlights to us that despite our due diligence, there is an issue with that particular client or at least there is an alleged issue” (BA1, 5188:5437). If the accusations prove true, the bank enters an engagement process. The actor mentioned the hypothetical example of a palm oil company accused of sourcing from a plantation involved in deforestation, land grab or human rights issue. In such case, the bank checks whether these accusations can be verified and what steps the client intends to undertake to address these issues. If the client agrees on a plan (including defined deliverables and a timeline) to correct these issues, the business relationship will continue. This described practice of having an action plan in place for improving sustainability performance is also consistent with those of other financial institutions applying sustainability criteria, like the IFC (IFC, 2012). The policies of *THE SUSTAINABLE BANK* are also linked to industry best practices and physical sustainability initiatives. For example, membership in a specific coffee sustainability initiative is explicitly encouraged. By such means, the actor aims at associating the financial and physical worlds and thus supports the process of translation to the sustainability network. *THE SUSTAINABLE BANK* stressed that the media and NGOs play an important role because they draw attention to controversies. The bank uses this information to get a better picture of its clients and whether they uphold the sustainability policies. There is no literature available that analyzes the role of media and NGOs as information providers in this particular context. But the important role of media and NGOs in pointing out shortcomings and their potential to influence companies is supported by other studies (Collingwood, 2006; Jansson and Biel, 2011). According to *THE SUSTAINABLE BANK*, regulation is an important

actor in getting additional actors mobilized for the sustainable cause. To substantially grow the sustainability network, “(...) regulation internationally will inevitably be required” (BA1, 10602:10717). This finding is similar to those found in sustainable finance. SSF (2019) and Eurosif (2018) have found that regulation is a relevant driver for growth of sustainable investments.

CHALLENGES IN THE TRANSLATION PROCESS

THE SUSTAINABLE BANK noted that a key reason why actors do not translate to the sustainability network is short-termism. Actors are focused on short-term gains. But the actor stressed: “(...) short-term gains, you know, are not backed up by the longer-term gains” (BA1, 11184:11311). Long-term business prosperity is linked to sustainability. This concern is shared by Bansal and DesJardine (2014), who found that short-termism is an important barrier to implementing sustainable practices.

KEY FACTORS FOR DESIGNING STANDARDS

According to *THE SUSTAINABLE BANK*, the standard should be based on an assessment of the most significant sector issues that the standard addresses. This input is consistent with industry best practices for developing sustainability standards. ISEAL (2014) recommends that the standards address the most significant prevalent sustainability issues. Moreover, the actor explained that an ambition level should be stated and clear steps towards this ambition level taken. This allows measurement of progress and verification thereof towards partial or full compliance. This input is supported by ISEAL (2014, p. 10), which recommends that “(...) standards are set at a performance level that results in measurable progress towards the scheme’s sustainability objective”. *THE SUSTAINABLE BANK* stressed that the standard should be clearly defined for the affected actors and state what is expected from them and what is needed to achieve compliance: “And I’ve seen standards being most effective if they also have a certain level of guidance in terms of/ which can be written or in other shapes or forms or support, if you like, that actually make clear how to achieve that level of compliance, what needs to be done” (BA1, 23555:23819). This guidance can come in different forms. The actor noted that it is important that the standard does not set the bar too high from the beginning to exclude those that are not sustainability leaders already. *THE SUSTAINABLE BANK* supports a stepwise approach that supports farmers in moving towards compliance. This would mean that smaller farmers are not excluded. Both giving clear guidance on the implementation of the standard and reducing costs of implementation are supported by the recommendations for accessibility of ISEAL (2014). The actor highlighted the importance of incentives and disincentives to move actors in the direction of having higher sustainability performances. This system also includes

auditing and certification by an external party to verify whether the criteria and indicators are met. This is consistent with ISEAL (2018), which highlights the important role of sound assurance mechanisms. Impact measurement is important and adds to the credibility of the standard: “And of course, impact is the best component contributing to creditability of a standard” (BA1, 25726:25812). *THE SUSTAINABLE BANK* did not support harmonization of standards within a sector. According to the actor, the competition among standards has a positive impact on quality. Having different standards also has a distinctive function among actors. This finding is underpinned by literature. Manning et al. (2012) argue that standard multiplicity is also driven by heterogeneous consumer preferences. Development of the standard should include actors from the respective sector. That would ensure that the standard is practical, but sufficiently rigorous. NGOs should be included in the development process because they have strong expertise and different perspective on solutions. Furthermore, they provide access to a network of different stakeholders that can support the development of a standard. Including NGOs also enhances the credibility of the standard. Having the government included in the development process is beneficial according to *THE SUSTAINABLE BANK*. Understanding the position of the regulator and respective legislation has advantages. This may even allow joint understanding of the theory of change, while regulation may come up with a certain level of playing field that raises the bar for laggards. The idea of having different actors involved in the development process of the standard was also recommended by ISEAL (2014).

5.2.14 ACTOR BA2: A LARGE MULTINATIONAL BANK

BA2 is a large multinational bank headquartered in Switzerland (hereinafter *THE LARGE BANK*). The actor is active in retail banking, wealth management, corporate banking, investment banking and asset management. Headquartered in Switzerland, the bank also has representation in major financial centers around the world.

ASSEMBLAGE OF ACTORS BUILDING AN ACTOR-NETWORK

Several years ago, *THE LARGE BANK* decided to coordinate sustainability at group level. This decision came after the bank struggled with reputation issues and concluded that it not only has the function of allocating capital to projects with the highest risk-adjusted returns. The bank also needs social acceptance to stay in existence, it switched from a shareholder to a stakeholder approach. According to *THE LARGE BANK*, it targets competitive risk-adjusted returns but aims at generating societal value on top. The decision to adopt a sustainability approach across the business segments had several impacts on the business model. The bank applies sustainability criteria in the process of granting loans, and defined business activities that are no longer financed, like project-level finance for coal-fired power

plants. *THE LARGE BANK* explained that it builds on continuous improvement; it does not set the sustainability hurdles for clients too high from the beginning. It believes in a transition period in which business models adapt over time: “We don’t switch from zero to one hundred, but try to adapt the business models” (BA2, 8801:8900). The idea is that clients improve in sustainability dimensions over time. Implementing sustainability group-wide has far-reaching consequences for the bank: “And, in turn, this also means that we deliberately do not do business or no longer do business in the way we used to” (BA2, 10303:10441). While sustainability criteria apply to all new clients, only no fly-zones (e.g. non-acceptable controversial business practices that would end the business relationship) apply to existing clients. Once the loans of existing clients mature, these clients will have to fulfill the same standards as new clients. Sustainability criteria are also used in risk management as a tool to reduce business and reputational risk. *THE LARGE BANK* explained that it has no direct exposure to coffee but indirect exposure via investments in listed companies like Starbucks or Nestlé. The actor has identified several sustainability controversies in the coffee sector: the decline in prices, poverty among farmers, unequal value distribution along the coffee value chain (most occurring downstream), global warming, usage of fertilizers, child labor and forced labor. These challenges have also been determined by Sjoerd Panhuysen and Pierrot (2018) and Rabobank (2018). According to *THE LARGE BANK*, several actors are needed to address the prevalent issues in the coffee market. Figure 5.15 shows the respective actors and associations between them. The actor stressed that the SDGs play an important role in the network formation process. They are a tool to operationalize the term “sustainability”. One can derive a key performance indicator set based on the SDGs in order to measure impact. The bank explained that its goal is to use the SDGs as a unifying factor across the different business units. As every business unit defines its own set of criteria to approach sustainability, the SDGs will be the common element that provide a common language for unifying different financial actors: “But when I report this in parallel against the SDGs, I provide tools and a common language that helps me to bring different providers to a common denominator” (BA2, 25590:25790). The SDGs also serve as a benchmark for reporting purposes. They allow a reference point to be set and communicate to investors the difference between sustainable and conventional investments: “It helps me to set reference points. Right? So the question is: ‘What distinguishes sustainability from a conventional investment?’ Can I use SDGs in a way that is normally understandable for an end consumer, above all for private investors” (BA2, 27053:27314). But *THE LARGE BANK* acknowledged that using the SDGs as a tool for allocating capital and operationalizing them as a guideline for an investment strategy is challenging. This description of the role of SDGs is also underpinned by literature. Schramade (2017, p. 88) argues that they provide a framework and common language to align investments: “(...) a framework and common language for making an impact”. Setó-Pamies and Papaoikonomou (2020) find that the SDGs provide

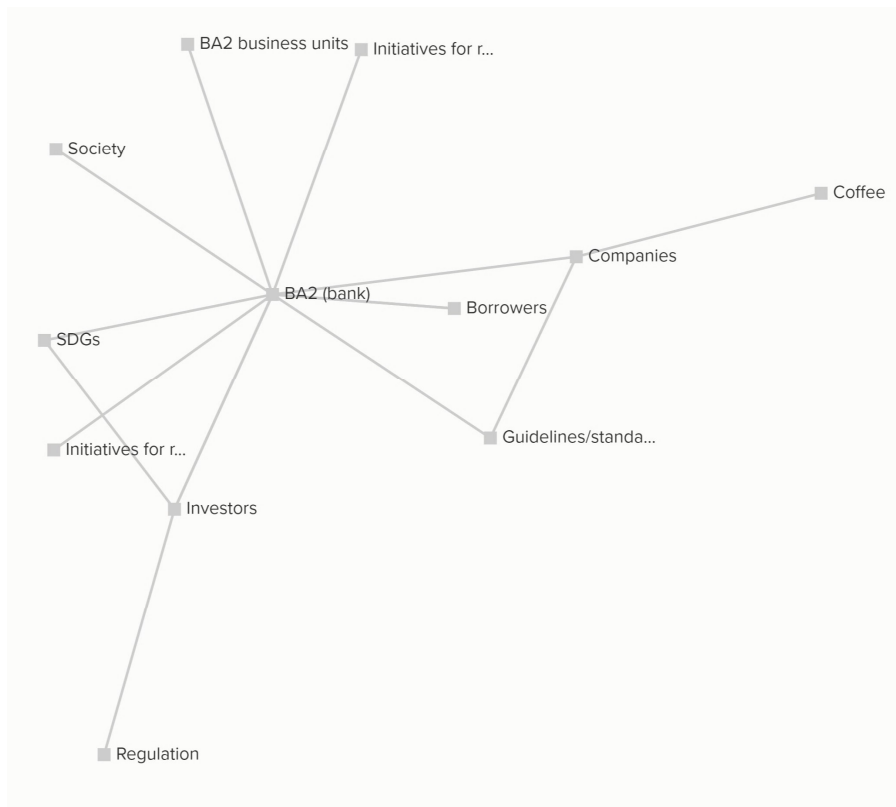


Figure 5.15: Actor-network by *THE LARGE BANK* (BA2)

Source: Own diagram based on kumu.io

a common language among heterogeneous actors and a common framework for understanding sustainable development. *THE LARGE BANK* highlighted that the clients of the bank, investors, decide to adopt a sustainability approach and thus join the sustainability network for several reasons. The actor noted that institutional clients are mainly interested in sustainability because of risk management. By considering sustainability criteria in the investment process, they aim to reduce financial and reputational risk. As *THE LARGE BANK* commented:

“Because naturally as an end investor, you never want to read or be asked the question: ‘Ah, did you read in the paper yesterday? Did you? Another dam has burst in Brazil. Really? This was the second time in three years and washed away a few people with it, including the poor TÜV Süd examiner. Are you guys invested in this?’ And you don’t want to say: ‘Yes, sure. But of course. We were right on/ We still assumed active risk.’ You want to say instead: ‘No, no, no, no’” (BA2, 30718:31214).

These findings are also supported by Jansson and Biel (2011), who determined that institutional investors become interested in adopting a sustainability approach to reduce financial and reputational risks. The actor explained that regulation is a driver in mobilization of institutional investors for sustainability. This is consistent with the conclusions of SSF (2019) and Eurosif (2018), which found that regulation is a driver of growth in sustainable

investment. Another driver for institutional clients enrolling in sustainability is the possibility for them to differentiate themselves from others. For some institutional investors, the ethical aspects are important, which is also supported by Jansson and Biel (2011). *THE LARGE BANK* stressed that private investors mainly enroll in the sustainability network because they want to align their investments with certain beliefs and values: “But these ethical components, this own value framework, this is central for the private investor” (BA2, 33345:33443). This remark is in line with findings by Jansson and Biel (2011), who determined that private investors adopt a sustainability approach due to their personal beliefs. Some investors demand dedicated impact investments. According to *THE LARGE BANK*, impact investments of institutional clients are mainly used as communication instruments and test balloons. The bank commented on impact investments as follows: “So impact investing, that is (...) that is the R&D Department of Sustainability. I would say, high attention is generated there” (BA2, 34533:34687). Sustainability initiatives are important for *THE LARGE BANK*. For instance, it has been a PRI signatory for several years. It is quite involved in this initiative. The important role of PRI is confirmed by several authors. For instance, Sievänen et al. (2013) highlight PRI’s role in supporting the accessibility of sustainable investment and motivating institutional investors to adapt a sustainability approach. Gond and Piani (2012) found that PRI supports the process of collective action to mobilize companies.

CHALLENGES IN THE TRANSLATION PROCESS

THE LARGE BANK explained that refraining from doing business with certain companies due to sustainability criteria also means foregoing business opportunities and thus short-term growth opportunities. This can be a challenge in mobilizing additional banks for the sustainability network. In order to grow the network, banks must be willing to forego business opportunities in the short term, which could hurt profitability. As a result, it will be challenging to mobilize some banks. This is consistent with conclusions of Bansal and DesJardine (2014), who argued that short-termism is an important barrier to sustainability. *THE LARGE BANK* explained that it has no direct exposure to coffee. It has indirect exposure to coffee via food companies like Nestlé. The actor stressed that it does not have an opinion about the individual coffee standards: “So about standards in the coffee market, whether they are UTZ or not, or Fairtrade, we really have no opinion on them at this time” (2243:2389). There are other challenges to getting clients interested in sustainability. In private banking, the age structure is tilted towards the older generation. And this generation is more difficult to mobilize. As *THE LARGE BANK* commented: “And you often find the attitude there: ‘That no longer concerns me. So that is for those who come after me’ ” (BA2, 42519:42635). This finding is consistent with Rosen et al. (1991), who determined that

younger investors are more likely to invest sustainably. *THE LARGE BANK* also mentioned the challenge that many actors along the supply chain are privately held and not accessible as investors. Therefore, they cannot be influenced in their investment decisions.

KEY FACTORS FOR DESIGNING STANDARDS

According to *THE LARGE BANK*, financial institutions have the function of allocating capital, and effective standards allow this to be done efficiently. The standard should allow mobilization of a large pool of investors. *THE LARGE BANK* commented that if only a single investor is committed to a standard, this will not lead to the desired goal:

“Because, if I, as an individual investor, put my convictions into practice, even though they might even be socially correct, but no one else does exactly the same thing, right, and there is opportunism at play there, then I’m gonna lose, and I will hardly achieve the desired goal of putting capital where it makes sense, not only in terms of return, but also socially” (BA2, 71174:71562).

The actor explained that the standard should be material for the affected actors along the supply chain; identify challenges in the market; prioritize them and define measures to address the issues. These inputs are consistent with industry best practices for developing physical sustainability standards. ISEAL (2014) recommended that the standard address the most important sustainability issues and have mechanisms in place that allow measuring progress towards the standard's goals. For developing the standard, *THE LARGE BANK* would focus on downstream actors. This is not in line with ISEAL (2014), which recommends consulting a broader actor base. The bank did not support the idea of a harmonized standard. It would be unlikely to find acceptance among market participants because every actor has its own understanding of sustainability. There is no literature that applies to this particular view of financial standards, but it can be supported by studies on physical sustainability standards. For instance, Manning et al. (2012) found that standard multiplicity allows for serving different consumer and producer preferences. The second challenge is that the standard is defined on a global level but would have to be applied on a national level and thus transposed into national legislation. This is quite a difficult undertaking.

5.2.15 ACTOR AC1: A SENIOR RESEARCHER

AC1 is a senior researcher at a Swiss university (hereinafter *THE RESEARCHER*). The actor's research interests include commodity markets, price-building processes, hedging strategies and risk management. Before entering academia, the actor worked for a commodity hedge fund. *THE RESEARCHER*'s current focus is on volatility in agricultural commodity prices where the actor primarily studies the impact of speculators on prices and what steps can be taken to minimize any adverse effects of speculation.

ASSEMBLAGE OF ACTORS BUILDING AN ACTOR-NETWORK

During the period *THE RESEARCHER* worked at the hedge fund, the importance of speculators in commodity markets grew significantly as investments in the asset class soared. This triggered the actor's research interest. *THE RESEARCHER* explained that sustainability controversies associated with investments in futures markets are mainly tied to potential adverse effects on price levels and volatility. For indirect investments in companies along the value chain, the exposure to sustainability controversies, including social and environmental issues, is broader. *THE RESEARCHER* identified several actors that are needed to address potential adverse effects in commodity markets and foster a sustainability network. Figure 5.16 shows the respective actors and associations between them. According

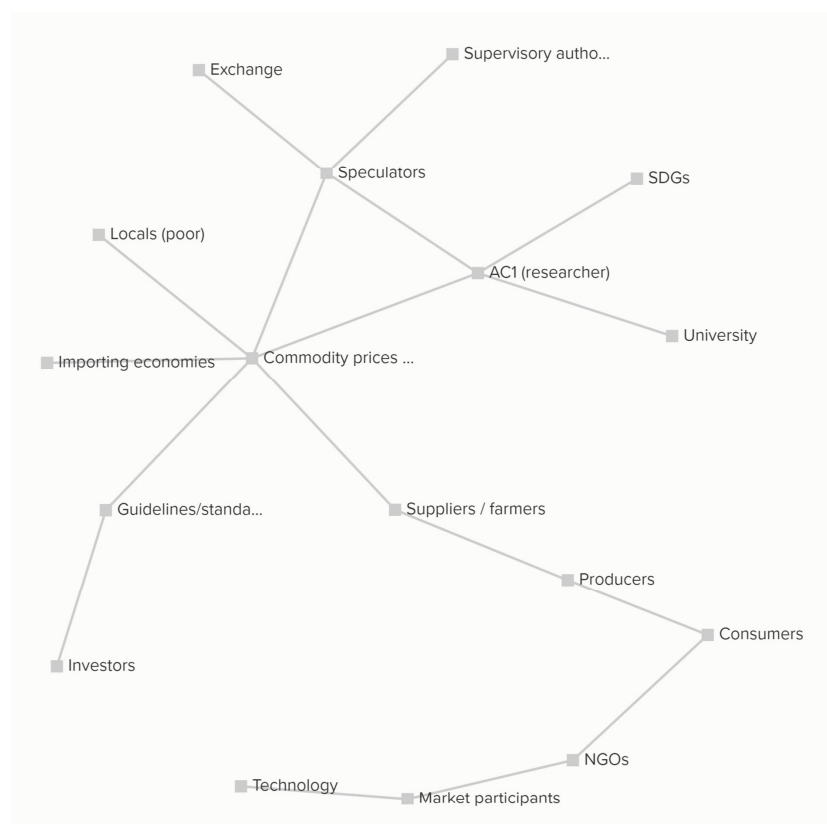


Figure 5.16: Actor-network by *THE RESEARCHER* (AC1)

Source: Own diagram based on kumu.io

to *THE RESEARCHER*, the SDGs assume an important role by representing overarching goals. *THE RESEARCHER*'s research topic is linked to SDGs 2 “End hunger, achieve food security and improved nutrition and promote sustainable agriculture” and SDGs 8 “Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all” (UN, 2020). The actor noted that the SDGs spurred establishing the link between sustainability and commodity futures markets. While there is no literature available to support this specific assertion, studies argue that the SDGs provide a common

framework and common language to define and discuss sustainable development among diverse actors. The market focused on the role of the supervisory authorities and regulation and not on sustainability in the past. *THE RESEARCHER* remarked that as a result, there are not many guidelines or standards for sustainable investment in commodity futures available. Existing guidelines are primarily those published by regulatory bodies focusing on position limits. *THE RESEARCHER* explained that with position limits, the regulator restricts the number of contracts held by speculators and thus aims to limit their impact. The actor stressed that the consumer has a key role in getting other actors along the supply chain interested and enrolled in the sustainable network. By demanding certified commodities, consumers impact producers, which in turn purchase sustainably sourced commodities from their suppliers. As *THE RESEARCHER* commented: “The role of the end consumer is, I believe, the key driver in this. So, if the end consumer doesn’t want it, it’s not going to happen. If they want it, they will put enough pressure on producers and suppliers” (AC1, 11815:12091). This conclusion is underpinned by literature. For instance, Millard (2017) has found that consumers are an important driver in the market for sustainably sourced coffee. The actor highlighted the fact that investors mainly decide to adopt sustainability criteria and exclude food commodities in order to avoid public criticism and ethical controversies. Due to the controversial debate about the role of investors in commodity markets, Lincke (2016) determined that some institutional investors refrain from investing in food commodities to avoid reputational risks. Whether this exclusion of these commodities makes sense was not discussed. Jansson and Biel (2011) found that managing reputational risks is an important driver in institutional investors adopting a sustainability approach. *THE RESEARCHER* explained that NGOs play an important role in society and in further development of standards. In uncovering scandals, they create awareness of issues and trigger improvements in processes. On the other hand, *THE RESEARCHER* criticized NGOs’ need for permanent campaigning. Some NGOs have become large organizations with high operating costs. As a result, they are dependent on donations mobilized by campaigning: “This means that they really do need a permanent stream of income and they generate it from donations. And to do so, they have to expose scandals in a way that is effective for the public” (AC1, 29430:29602). *THE RESEARCHER* added that this may have negative effects: “That then also has its negative sides. So you either have to find scandals or, I would say, scandals that cannot really be solved now” (AC1, 29603:29781). The role of NGOs to expose shortcomings and put pressure on companies is supported by studies (Spar and La Mure, 2003; Collingwood, 2006). The voiced criticism of NGOs is more difficult to find reiterated in literature.

THE RESEARCHER stressed that one challenge is the heterogeneous understanding of what sustainability means in different countries and also to different legal systems for imposing measures: “Yeah, I mean, of course every country has different legal systems, legal concepts and standards. Moral concepts too” (AC1, 16281:16420). Global alignment is a difficult undertaking. The concern of a lacking globally agreed definition of sustainability is also shared by others (OECD, 2012; Cerin and Scholtens, 2011). While *THE RESEARCHER* acknowledged an important role of the SDGs, disadvantages were also cited. At the moment, there is no prioritization of the 17 SDGs with their 169 targets. It is difficult to optimize these 169 targets in an overall context and there will be trade-offs in achieving the individual goals: “And here, I believe, there will be distortions in that sometimes not such important objectives get prioritized, perhaps just now (...) So there will always be conflicts of interest between these individual goals that cannot be achieved” (AC1, 4873:5179). This is consistent with Spangenberg (2017), who emphasized the challenge represented by the impossibility of implementing all SDGs and the need for prioritization. The actor also explained that the SDGs have the goal of limiting the price volatility of food commodities. But it is not stated how this should be done. According to the actor, these measures are given over to the regulator and the researcher is skeptical about that: “I dare to doubt whether this is really expedient at the moment, because their application doesn’t start with the price formation process, but one level higher” (AC1, 5651:5794). The regulator does not take measures at the heart of the issue the price-building process, but on a global level by imposing position limits on individual actors it intends to control globally. And *THE RESEARCHER* remarked that this will not bring about an efficient market and that it violates equal treatment of market participants. Excluding specific market participants will not result in a fair price-building process, remarked the actor. This skepticism regarding the effectiveness of position limits is also shared by others. For instance, Gwilym and Ebrahim (2013) found that position limits have counter-productive effects and interfere with market efficiency. Similar conclusions were drawn by Ahn (2011). *THE RESEARCHER* also noted that at present, there are no derivative contracts on sustainably sourced commodities. Exchanges may have tried to launch those contracts but there was a lack of liquidity. Exchanges can only implement sustainability criteria that are globally accepted and if there is sufficient liquidity. Market participants trade those contracts for which there is underlying physical demand. Furthermore, to establish contracts for sustainably sourced commodities would require coordination among exchanges. This would be challenging because exchanges are in competition with each other and aim to distinguish themselves from others. *THE RESEARCHER* also added the difficulty in agreeing on standard criteria because there are numerous standards. The actor also stressed that investment standards usually do not address issues associated with

price volatility. Investors normally focus on the exclusion of food commodities from commodity indices and funds in order to avoid any negative impact. But *THE RESEARCHER* is skeptical about the benefits of excluding certain commodities as financial actors play an important role in the market as liquidity providers. This argumentation is also underpinned by literature. Irwin et al. (2009) highlighted the important role of investors participating in the market and providing liquidity to commercial actors.

KEY FACTORS FOR DESIGNING STANDARDS

According to *THE RESEARCHER*, a standard for sustainable investment in commodities should address the effects of price volatility. From time to time, speculators may have an adverse impact on price volatility of commodity futures. Statistical metrics can be used to measure this impact, which can be mitigated by taking respective actions. But the actor acknowledged that it is challenging to get actors mobilized for these statistical approaches. Commodities typically have a small allocation in a portfolio and thus exhibit less relevance. Furthermore, the price-building process of commodities is quite complex to understand.

5.2.16 ACTOR NG1: AN INTERNATIONAL NGO BASED IN SWITZERLAND

NG1 is a large environmental organization (hereinafter *THE NGO*). The NGO is based in Switzerland and operates globally. *THE NGO* characterized its role as teaming up with private and public sector actors to foster the demand for sustainable products and services and less pollutive production.

ASSEMBLAGE OF ACTORS BUILDING AN ACTOR-NETWORK

THE NGO identified a number of sustainability challenges in the coffee sector. The environmental challenges include illegal land conversion for coffee growing, unsustainable growing methods, lack of climate resilience, water usage and usage of fertilizers. The social challenges encompass, for instance, poor working conditions and a living wage. These challenges are consistent with those named by other authors (Sjoerd Panhuysen and Pierrot, 2018; Rabobank, 2018). Besides itself and its work, *THE NGO* stressed that a number of other actors are important to foster sustainability in the market. Figure 5.17 shows the respective actors and associations between them. The actor explained that it has a number of strategies to get other actors interested and enrolled in sustainability. In campaigning, the NGO triggers actions to tackle certain issues. Its goal is to provide information about controversies and create awareness. The influence of NGOs' campaigning is also confirmed by literature (Millard, 2017; Spar and La Mure, 2003). The reason is that cooperating is a strategy in which *THE NGO* enters into partnerships with companies to foster

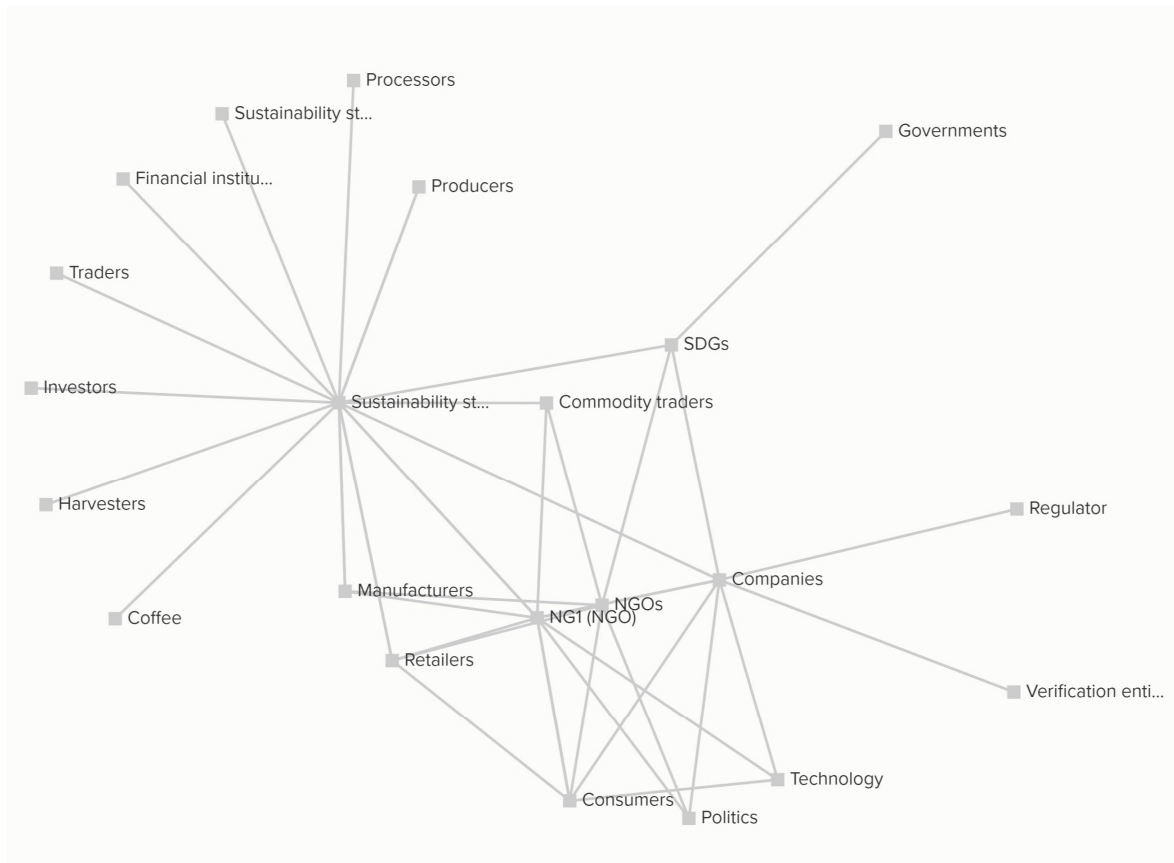


Figure 5.17: Actor-network by *THE NGO* (NG1)

Source: Own diagram based on kumu.io

and promote sustainable products and services. This role is also highlighted by other studies. For instance, Argenti (2004) explored the collaboration of Starbucks with NGOs in the field of sustainably sourced coffee. With its third strategy, *THE NGO* initiates and leads multi-stakeholder approaches. The actor remarked that it supports sustainability initiatives in the development of standards, and together with other business actors like retailers, determines the shares of labeled products in their product line. To mobilize consumers for the sustainable cause, *THE NGO* makes recommendations for credible sustainability standards. According to the actor, environmental standards are key to making sourcing and production of commodities less pollutive: “Demanding environmental standards for commodities is an indispensable means of making their extraction and production less harmful to the environment” (NG1, 852:999). Credible multi-stakeholder standards, in turn, mobilize companies (e.g. processors/manufacturers, traders, producers and harvesters), NGOs, governments and other actors to work towards mutual goals that benefit businesses, society and the environment. Standards also help companies to increase sustainable business practices in order to address their negative impacts along the supply chains. This role is supported by other studies. For instance, Akoyi and Maertens (2018) and Mitiku et al. (2017) found that sustainability standards address social challenges associated with coffee production.

The actor stressed the importance of independent certification to verify the sustainability efforts made by companies. This statement is corroborated by authors like Jahn et al. (2005) or ISEAL (2018), which emphasize the important role assurance mechanisms play in the credibility of standards. Certification is sometimes used by companies to manage risks. *THE NGO* mentioned the example of palm oil, whose social and environmental challenges in production have significant risks for investors. For risk management purposes, financial institutions like the IFC require their clients that are exposed to palm oil to be certified by the Roundtable on Sustainable Palm Oil (RSPO). This statement can be supported by public materials (RSPO, 2019). *THE NGO* stressed that companies are also interested in adapting sustainability standards because, in this manner, they can improve management practices and increase the traceability and transparency of their supply chains. This, in turn, can result in better relationships between suppliers and purchasers. According to *THE NGO*, technology allows transparency and traceability and is thus an important actor. This finding is consistent with that of El Bilali and Allahyari (2018), who determined that technology fosters sustainability in food systems. Regulation is important in enforcing minimum requirements and is thus key in getting actors mobilized for the sustainability network. Furthermore, *THE NGO* explained that the SDGs may get actors interested and enrolled in the sustainability network. They constitute a holistic framework that provides a common language and common sustainability goals for various actors to jointly work towards achieving them. Assertion of this role of SDGs is also shared by other studies that stress that the SDGs provide a common framework with a common language for different types of actors around the world (Schramade, 2017; Setó-Pamies and Papaoikonomou, 2020).

CHALLENGES IN THE TRANSLATION PROCESS

The actor highlighted that the success of the translation process is driven by the credibility and practicability of the sustainability standard. For instance, the standard implementation should be verified by an independent and credible certification body to mobilize actors for the sustainable cause. Moreover, *THE NGO* stressed that if the standard setting body fails to include actors that implement the standard in practice during the development process it may hinder those actors from being mobilized for the sustainability network. Other challenges were indirectly addressed by pointing to key factors for designing standards (see next section).

KEY FACTORS FOR DESIGNING STANDARDS

THE NGO identified several principles that are key for designing effective sustainability standards. The standard should be compliant with relevant national, regional and international laws, and most importantly, standards. The standard should not only focus on minimizing

negative social or environmental impacts but also foster positive impacts. The actor explained that the standard should define an initial reference point along with performance and process indicators. This is consistent with industry best practices for developing sustainability standards (ISEAL, 2014). The standard should have processes implemented to measure impacts and monitor compliance with the defined criteria. There should be a process for rigorous assessment of conformity in place, including defined mechanisms in case of non-conformity. The standard should be independently verified by an accredited certification body. This is consistent with ISEAL (2014) and ISEAL (2018). The standards should be adapted to local practices to reflect the local conditions (legal, social and geographical). This is consistent with ISEAL (2014), which recommends adapting the standard locally to ensure consistent understanding of the standard criteria. The standard and certification scheme should take the interests of the relevant actors, including those of small producers and vulnerable actors, into account. This is similar to the ISEAL (2014) recommendations to engage with the affected actors in the development process of the standard.

5.3 ZOOMING OUT: ASSEMBLAGE OF INDIVIDUAL NETWORKS TO AN AGGREGATED NETWORK

The previous section provided portraits of the actors in the sustainable Swiss coffee network. The sustainability network differs from the conventional one in that actors follow sustainable practices to address prevalent social and environmental issues. Individual networks were constructed to enhance the understanding of the local practices and the network the actors are embedded in, on the basis of these insights. In this section, these individual networks are consolidated into an aggregated network.[†] This consolidation illustrates how the portrayed actors are associated with each other and how they span the coffee network. While actors are mainly based in Switzerland, their practices and associations have a wider spatial dimension. For instance, while trading is organized from Switzerland, the physical movement starts in local markets in Southeast Asia or South America. The actors' practices and associations are consequently global. Figure 5.18 shows the complex and widely branched aggregated network.

The illustration of the network shows that there are nodes or actors that exhibit a significant amount of associations. They are central for the network and serve as key bridges within the network. These central actors[‡] include[§] *processing and retail companies, trading companies, financial institutions (finance providers), investment managers, asset owners, standard and certification schemes, consumers, NGOs, the SDGs and investor initiatives.*

[†]Terms for the actors were harmonized where possible during this consolidation.

[‡]These central actors have been identified by ranking the betweenness and closeness centrality measure values of the respective actors.

[§]The following sequence does not represent a ranking in terms of the respective actor's importance.

These actors translate to the sustainability network for heterogeneous motivations and interests in joining it. There are naturally other important actors within the network. There is no intention here to marginalize any of them, however it is the key bridges, in particular, that are of interest in analyzing the role of standards for sustainable investment in network formation. All other actors were presented in the previous chapter. For instance, coffee is the non-human actor that is produced, traded, processed and consumed. It is the basis for the coffee network but not a central actor for studying how investment standards impact the local practices of the actors along the supply chain.

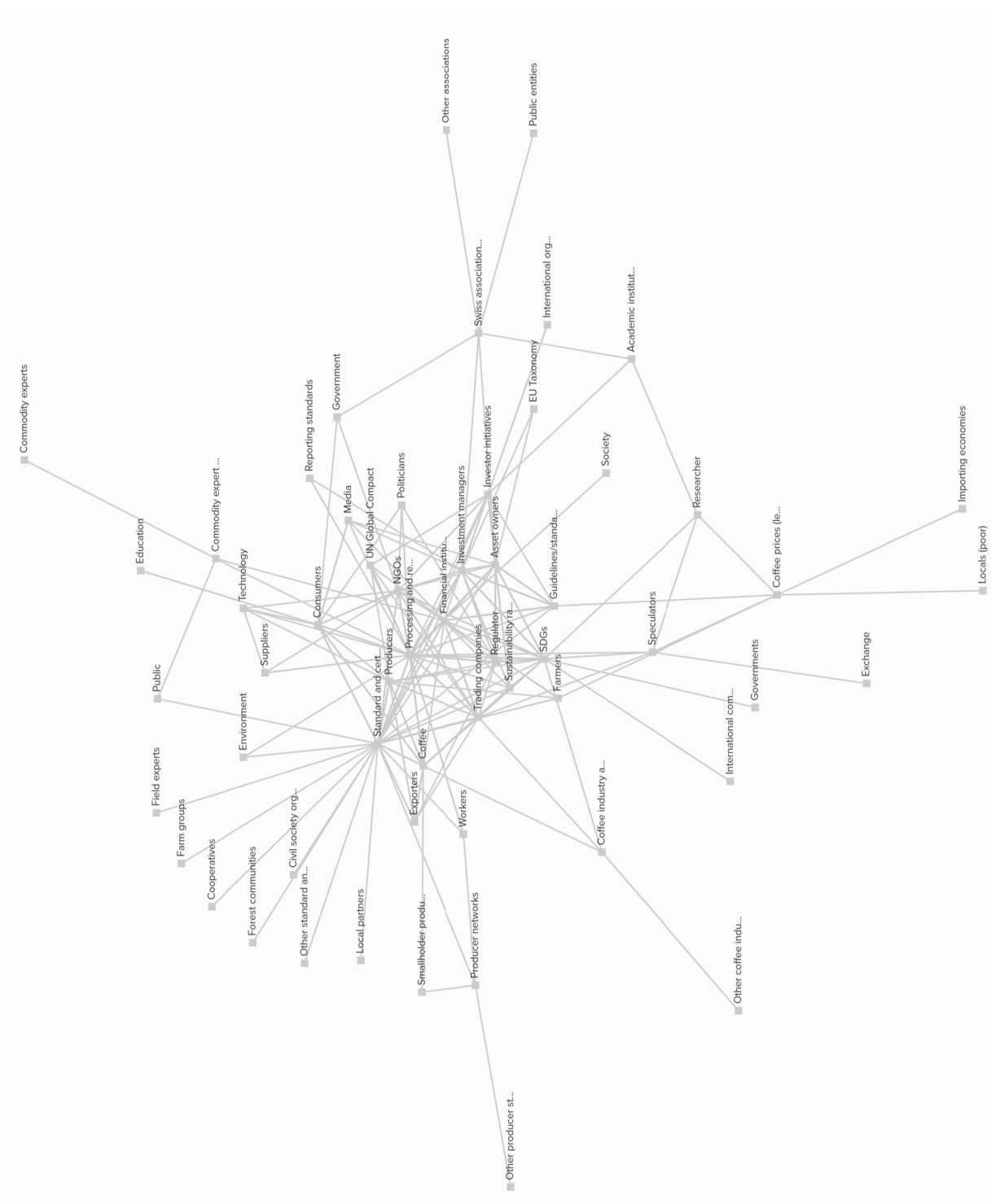


Figure 5.18: Aggregated actor-network (Source: Own diagram based on kumu.io)



Figure 5.19: Focus on processing and retail companies

Source: Own diagram based on kumu.io

Processing and retail companies include actors that transform coffee as a raw product to finished goods sold to end consumers. They have associations with many different actors within the sustainability network (see Figure 5.19). These include food and consumer goods manufacturers, roasters and retailers. These actors implement sustainability standards in practice. They may define their own standards and guidelines or align them with existing ones. In applying sustainability standards to suppliers, they pass the sustainability criteria along the supply chain and mobilize actors for the sustainable cause. In so doing, they also have an impact on the local practices of exporters and producers (including farmers). The motivations to implement sustainable business practices are manifold. One is financially for easier access to capital from financial institutions. Moreover, in the case of listed companies, their shares attract money from sustainable investment managers. A second reason why processing and retail companies get enrolled in the sustainability network is demand from consumers. Processors and retailers react to consumer purchasing behavior and source sustainable products to meet their demand. Thirdly, processing companies join the sustainability network for ethical reasons. Motives include assuming responsibility and contributing to sustainable development. External pressure by NGOs or the media is yet another trigger for getting processors enrolled.

Figure 5.20 shows the position of *trading companies* within the sustainability network and associations with other actors. Their business consists of buying sustainable coffee in pro-

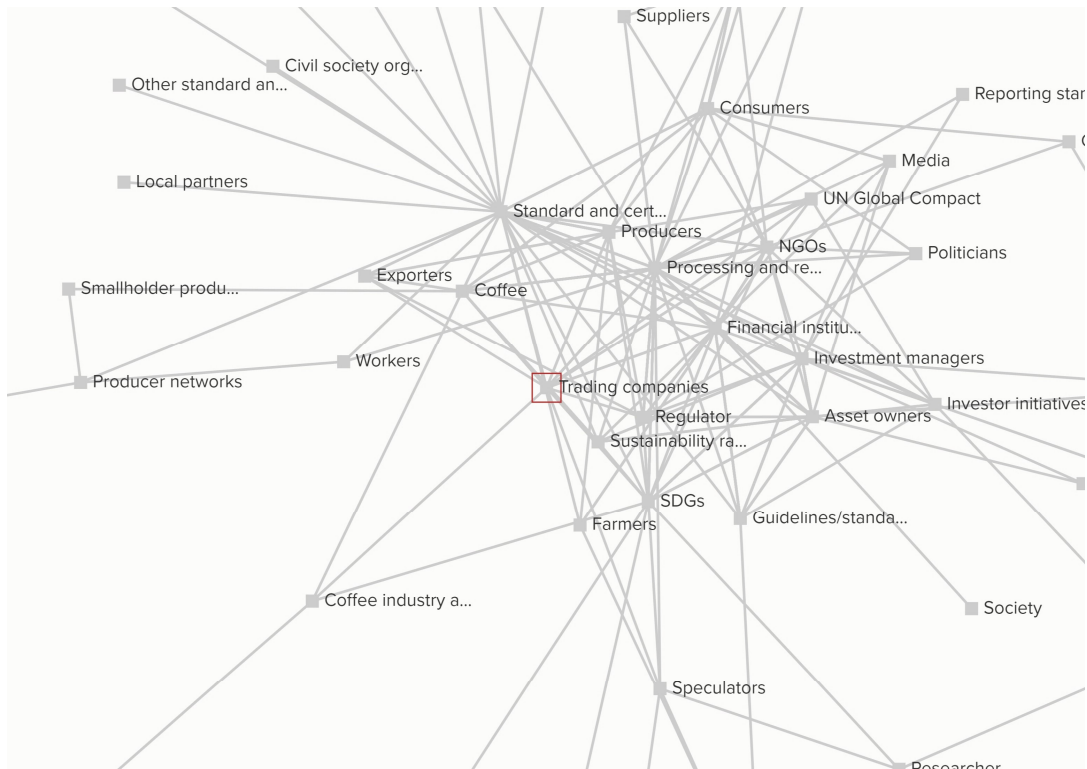


Figure 5.20: Focus on trading companies

Source: Own display based on kumu.io

ducing countries and delivering it to consuming countries to supply processing companies. Depending on the trading company's business model, it may also be involved in processing and roasting coffee. Traders mainly react to the demand of processors and roasters and get enrolled in the sustainability network that way. Additional reasons for enrollment are also easier access to capital from financial institutions (finance providers) and a potential means of attracting investments from investment managers. Sustainable, long-term partnerships to producers constitute another motive. Traders are interested in securing a long-term supply. Social and environmental aspects of production and trade are considered important in achieving that. Trading companies also want to assume responsibility. They may, moreover, be exposed to pressure from NGOs and the media that has an impact on their practices.

Financial institutions (finance providers) finance the actors along the supply chain by granting them loans.[¶] The associations with the respective actors are shown in Figure 5.21. In requiring borrowers like trading and processing & retail companies to meet sustainability criteria, financial institutions get these companies interested and enrolled in the sustainability network. These sustainability criteria are defined by the financial institutions themselves or aligned with existing criteria. Although financial institutions have minimum sustainability requirements for granting loans, they usually define sustainability targets with

[¶]Financial institutions in this study refers to the corporate banking activities of financial institutions, with primary focus on the lending business.



Figure 5.21: Focus on financial institutions

Source: Own diagram based on kumu.io

borrowers that the borrowers must meet over time. In not setting the sustainability hurdles too high from the beginning, financial institutions mobilize additional actors for sustainability. Financial institutions have several motivations for why they join the sustainability network. One reason is economic in nature. Social and environmental sustainability and long-term business continuity are considered to be related. For instance, financial institutions avoid borrowers that are seen as stranded assets in the long term. Another motive for adopting sustainability criteria is ethical, as this generates added value for the environment and society. Some financial institutions see sustainability as an element in distinguishing themselves from their competitors. Regulation is also a driver in getting these actors enrolled in the sustainability network. Furthermore, the decision to adopt a sustainability approach may be driven by external pressure from NGOs and the media and thus be a strategy to manage reputational risks.

Investment managers manage assets on behalf of asset owners and are associated with many different actors (see Figure 5.22). For sustainable investment portfolios, investment managers define their own sustainability approaches that may be aligned with existing sustainability initiatives. These approaches usually define minimum standards with respect to business practices and activities and criteria for engagement with companies. The goal is to influence investee companies towards upholding sustainability standards and improving their ESG metrics. Investment managers have exposure to coffee via buying debt and equity



Figure 5.22: Focus on investment managers

Source: Own diagram based on kumu.io

securities of companies involved in coffee, like food processing companies and coffeehouse chains. They may also have direct exposure to coffee with derivatives like futures. In the case of buying debt securities of a company, investment managers, like financial institutions, provide loans. In buying equity securities of sustainable companies, they provide additional demand for these stocks, which may have favorable effects on the valuation of companies. There are several reasons why investment managers join the sustainability network. The demand of asset owners is a driver for getting them interested and enrolled, and they consequently see growth opportunities in offering sustainable investment solutions. Another reason is found in the positive effects on the risk-return profile of their investments. Some investment managers are ethically motivated. They want to assume responsibility and seek positive social and environmental impact.

Asset owners mandate investment managers to invest their assets on behalf of them and are thus closely linked to the investment managers (see Figure 5.23).^{||} Asset owners may be institutional investors, like pensions funds, or private clients. Their motivations to adopt a sustainability standard are similar to the ones of investment managers. Asset owners may be ethically motivated, and aim to generate a positive social and environmental impact and contribute to sustainable development. They may also be financially motivated, in which

^{||}Asset owners may also manage their assets themselves. For reasons of simplicity, it is assumed that they hire external managers to manage their funds.

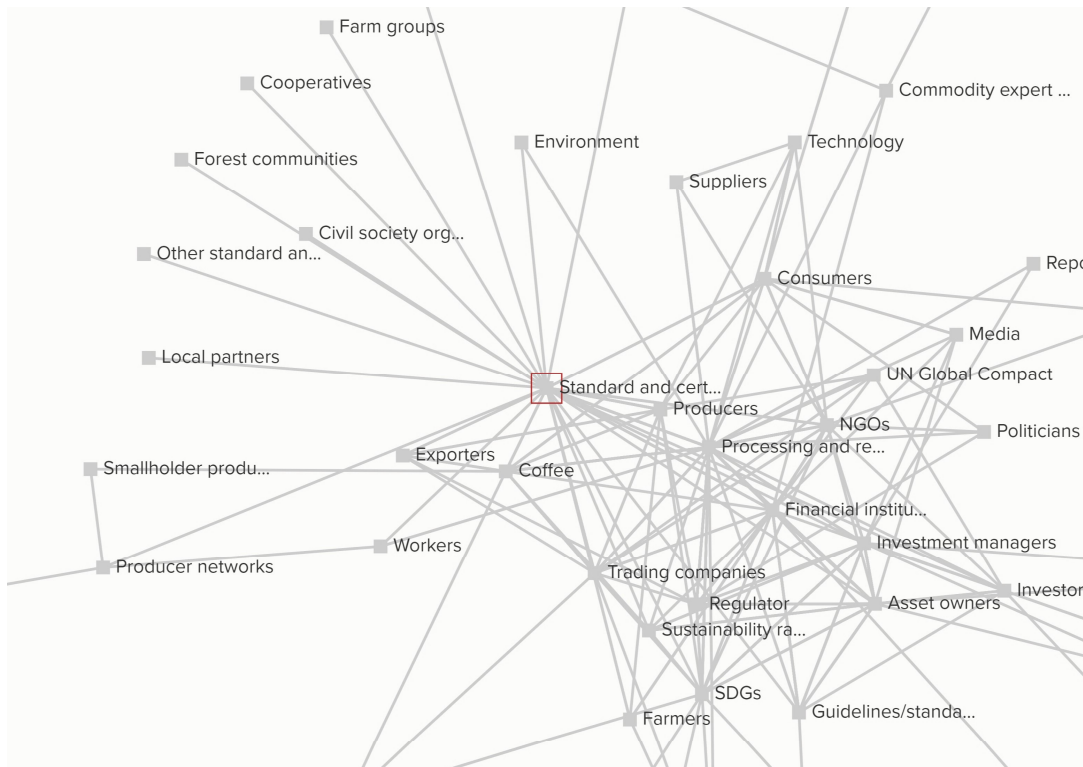


Figure 5.24: Focus on standard and certification schemes

Source: Own diagram based on kumu.io

Consumers are the actors that ultimately demand sustainable products. With their purchasing behavior, they influence other actors further down the supply chain. As a result, consumers have direct and indirect associations with the actors within the network (see Figure 5.26). By boycotting products from certain companies, they can exert pressure. Consumers must be convinced in order to buy sustainably sourced products and thus be willing to accept higher prices. NGOs, the media, standard and certification schemes and companies inform and sensitize consumers about sustainability issues they can address by buying sustainable products.

Figure 5.26 shows the location of *NGOs* within the network and their associations with other actors. NGOs identify social and environmental challenges and address them with several strategies. By informing the public and creating awareness of sustainability issues they mobilize numerous actors along the supply chain. With campaigning NGOs point out shortcomings and put pressure on companies, financial institutions, investment managers and asset owners. Furthermore, they work together with farmers and companies on the ground to improve sustainability challenges. Their motivation to join the sustainability network is usually socially or environmentally driven. Some interviewees mentioned that some NGOs are, like standard and certification schemes, large organizations that are business-oriented (AP1, PT1). Therefore, a business rationale may be the motivation for participating in the sustainability network.

The *SDGs* are non-human actors in the sustainability network. They comprise 17 goals for sustainable development with 169 targets. They are officially presented in 17 icons in color or black/white, or as a color wheel (United Nations, 2020). As shown in Figure 5.27, they are associated with many of the actors in the network. For the respective actors, they are more than mere icons. They are a common denominator. They constitute a global framework with a common language and common goals for different heterogeneous actors. As such, they support the translation process of actors to the network. The SDGs allow operationalization of sustainability and provide a benchmark for sustainability goals against which actors can measure their sustainability efforts.



Figure 5.27: Focus on the SDGs

Source: Own diagram based on kumu.io

Investor initiatives for sustainable investment encourage and support the adoption of sustainable investment practices. They are connected to several actors within the network (see Figure 5.28). They help investment managers and asset owners in implementing sustainable investment approaches in practice. Investor initiatives share knowledge and good practices and provide learnings. They collaborate with academic institutions and other investor initiatives. Furthermore, they may coordinate engagements with companies on defined ESG issues. During engagements, they become, together with lead investors, the spokesmen for a larger group of investors and speak to engaged companies on the investors' behalf. The motivation to launch the initiatives by investment managers and asset owners often has normative reasons. These actors want to express that investment activity has a

social and environmental responsibility.

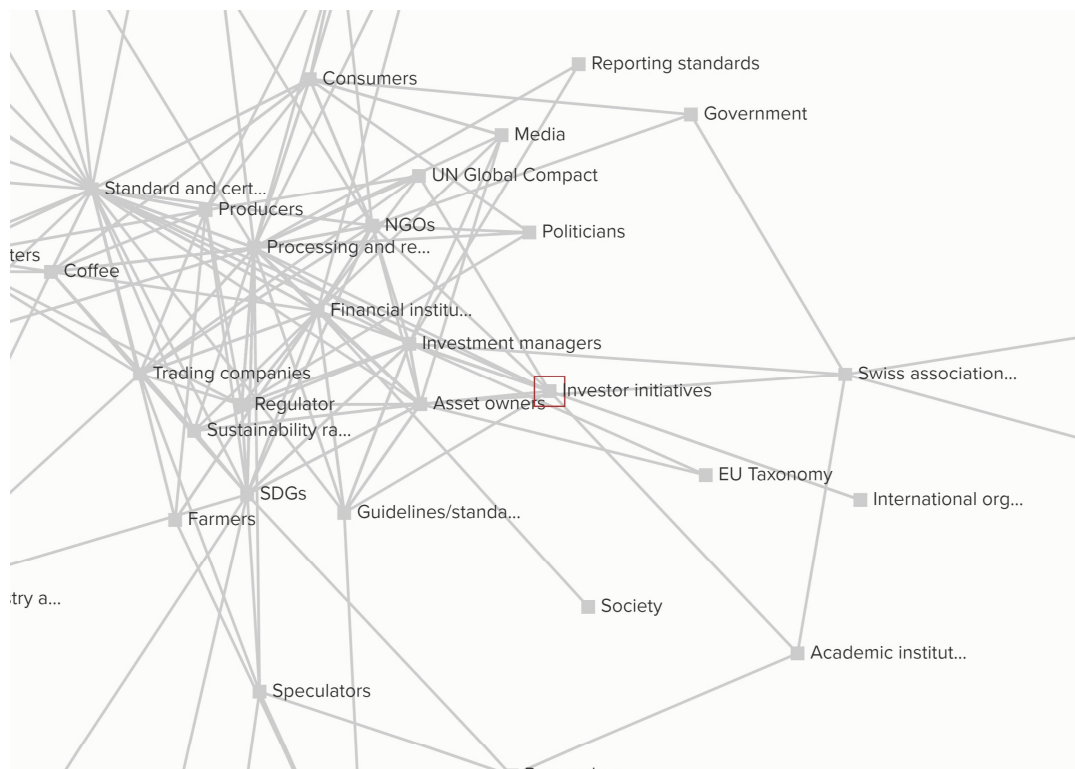


Figure 5.28: Focus on investor initiatives

Source: Own diagram based on kumu.io

6

Discussion

The findings from the previous chapter have furnished insights into the assemblage of different actors to the Swiss coffee network. It has been demonstrated that to successfully broaden sustainability, different types of actors must be mobilized. While investors, investor initiatives and companies are important actors in this process, the results emphasized the role of non-business actors like consumers, NGOs, and non-human actors like the SDGs. The Swiss coffee market was depicted as a network based on these actors and associations between them. The literature acknowledges that the SDGs play an important role by providing a global framework with a common language (Schramade, 2017; Setó-Pamies and Papaoikonomou, 2020). This study's findings with regard to individual accounts have demonstrated how the SDGs find their way into the daily practices of heterogeneous actors and have cemented their role as a common denominator with respect to definition of and alignment to sustainability goals. In a similar manner, the findings reveal that heterogeneity is also found in the motivations of actors joining the sustainability network. These include ethical and values-based motives and more business-oriented considerations. The latter include profit and return as well as risk and reputation management motives. The demand of consumers as a key driver for sustainability was also highlighted. These findings are underpinned by literature (Jansson and Biel, 2011; Von Wallis and Klein, 2015; Millard, 2017; Spar and La Mure, 2003). Although it has been verified that investors play an important role in getting other actors mobilized for the sustainable cause, the findings have shown that financial and non-financial actors are not normally intertwined. Most of the interviewed financial actors (investors, banks and associations) do not explicitly cover coffee in their sustainability assessments of portfolios. Several financial actors acknowledged that their sustainability approaches do not require physical sustainability standards. The findings per-

mit us to better understand how standards for sustainable investment in commodities must be designed to be effective in practice. Key aspects are not limited to describing the advantages and disadvantages of sustainability approaches, such as negative screening or engagement. They are more holistic and offer inputs for designing standard systems including the standard as such, as well as monitoring and assurance mechanisms. Standard systems based on these inputs address the issues raised in literature. For instance, some interviewees called for having the standards for sustainable investment externally verified, which would address the charge made of some approaches being more aspirational than rigorous (Clapp, 2017; Richardson, 2009). In the next sections, the focus is on the role of standards for sustainable investment in commodities.

6.1 THE ROLE OF STANDARDS FOR SUSTAINABLE INVESTMENT IN THE FORMATION OF A SUSTAINABILITY NETWORK

This section discusses the role of standards for sustainable investment in the process of actors translating to the sustainability network. Sustainability standards are defined by asset owners and/or investment managers in the course of adopting a sustainability approach. For the remainder of this section, investment managers and asset owners are referred to as investors. Standards exhibit several criteria or “strategies”. Positive and negative screening as well as engagement were those strategies most frequently cited in the interviews. These also belong to the widely applied sustainability strategies according to Eurosif, the leading European membership organization for sustainable finance (Eurosif, 2018). Several actors, moreover, mentioned dedicated impact investments. Despite the fact that this sustainability approach is becoming more popular, it is still a niche approach compared to the latter three. During a negative screening, companies with controversial business practices or controversial business activities are excluded from a portfolio. One example of controversial business practices is violation of the UNGC (e.g. violations of human rights). One example of controversial business activities is the production of weapons. The standard’s criterion for excluding a company is usually based on the turnover’s share of the controversial activity (Ethos, 2016). For instance: a company’s sales exposed to weapons amount to over 5 percent of the global turnover, so it is excluded from the portfolio of the investor. This 5 percent would be defined in the standard. In a positive screening the investor selects companies that are sustainability leaders in their sectors. To identify eligible companies the investor defines minimum requirements with respect to ESG performance. With this threshold the investor can control the standard’s strictness. Such sector ratings are usually based on a number of sector-specific rating criteria (ISS ESG, 2020; inrate, 2018). Collection and evaluation of the ESG data can be performed by the investors themselves or outsourced to a sustainability rating agency.

With an engagement approach, investors actively aim at influencing companies to adopt ESG criteria and improve their ESG performance. The ethical goal of sustainability standards is normally to generate positive social and environmental impact. Figure 6.1 shows a simplified visualization of the impact chain of sustainable investment. This graph is based on the interviews with investment managers, banks, the investor initiative and the association for sustainable investment. The results in a simplified form are consistent with the description of the theoretical impact chain of sustainable investment by other authors (Goodall and Malmberg, 2013; Kölbel et al., 2020). By adhering to the defined standard for sustain-

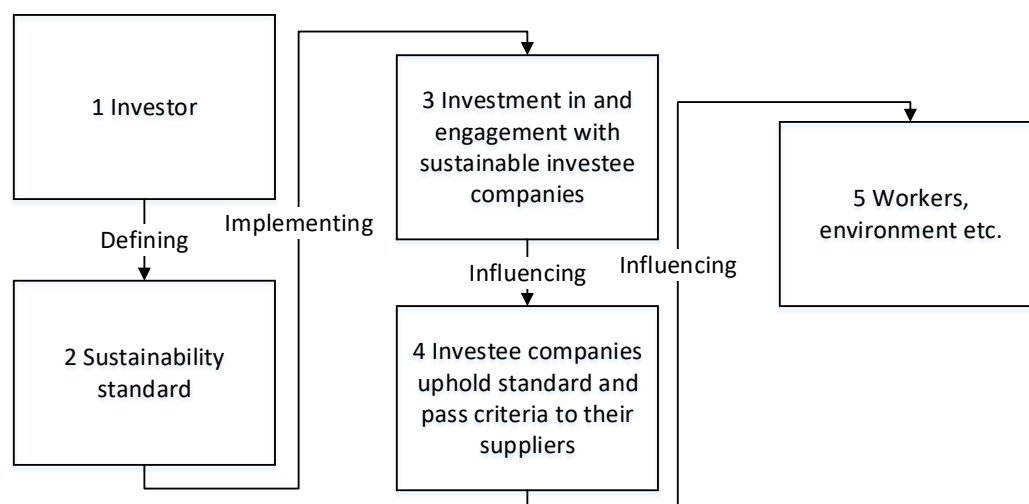


Figure 6.1: Impact chain of standards for sustainable investment
Source: Own diagram

able investment the investor selects sustainable companies and engages with them. Companies must uphold the standard criteria to get funding from sustainable investors or attract interest in their stocks. In this manner, companies are influenced by the investor and the criteria of the sustainability standard are passed along the supply chain and can generate positive social and environmental change.

6.1.1 FROM LOCAL PRACTICE TO LOCAL PRACTICE – STANDARD CRITERIA TRICKLE DOWN THE SUPPLY CHAIN

Application of the ANT lens brought additional value to the field by enabling an alternative view of the impact chain of standards for sustainable investments and a rich understanding of their potential role in practice. The findings show that standards for sustainable investment are seen as non-human actors that transport “agencies over great distance” and are thus able to mobilize different actors for sustainability (Latour, 2005, p. 221). Standards circulate from actor to actor, from local practice to local practice, from company to company, from country to country and thus shape the global network and may trigger collective action.

Combining the gathered data from both worlds, from financial and physical actors, one can get an idea of the assembled impact chain of financial and physical sustainability standards.

This can be illustrated with a brief example: In its sustainable investment standard, an investor in Switzerland stipulates that investee companies must process sustainably sourced coffee. Eligible sustainability standards include well-known coffee standard and certification schemes like 4C, Fairtrade and Utz-Rainforest Alliance (RFA) (Sjoerd Panhuysen and Pierrot, 2018). A UK-based investee food company decides to adopt a sustainability standard to attract capital from the aforementioned investor. As a result, it purchases sustainable coffee sourced from local exporters, from a Swiss-based trading company. Exporters obtain the coffee from certified producers. And local producers apply the standard criteria in their daily practices. For example, they use compliant pesticides only and ensure that these pesticides are safely handled. They prevent child labor and ensure workplace safety. By such means, local conditions in sourcing countries can be improved and positive impact generated. Audits and certification guarantee that the actors along the supply chain comply with the standard. While the translation from practices of financial actors to those of physical coffee actors seems straightforward, findings have shown that this direct link is not necessarily given. Although sustainability standards are well established among physical actors, they are not established among investors. They are often not incorporated as a requirement in the standard for sustainable investment for a number of reasons: lack of coverage of coffee and its sustainability issues, lack of assessment of sustainability standards, and perceived lack of materiality for investors (see AF1, IN2, IN4 and BA2). As a result, the two worlds of physical actors and investors appear fairly separated from each other, despite the fact that they have common social and environmental goals and both are relevant actors in the formation of the sustainability network. The ANT-inspired view on the standards for sustainable investment calls for a closer link between physical and financial standards. This thus supports the translation of financial standards into the local practices of physical actors.

6.1.2 MOBILIZING GOVERNANCE – ALL ACTORS FOR THE SUSTAINABLE CAUSE

The previous section demonstrated how the application of ANT resources results in investment standards trickling down to the local practices along the supply chain. While Figure 6.1 illustrated the impact chain of sustainable investment in a linear manner, this section ‘zooms out’ to the aggregated network and interdependencies between the respective actors. The aggregated view shows that the traditional vertical dimensions in supply chain theories and finance studies are extended to horizontal dimensions where non-firm actors play a significant role. By way of illustration continuing with the previous example: Investee companies are not only influenced by investors. Consumers, too, are key actors in forming the sustainability network, as they are those actors that ultimately purchase the sustainably

sourced products. One interviewee referred to consumers as “end investors” (PT1). Consumers must be convinced in order to pay a higher price for sustainable coffee products and join the network. Otherwise, network stability is at risk. Companies will not expand processing of sustainable products if there is little demand and growth opportunities. In such case, there would be limited demand for trading sustainably sourced coffee and less incentive to adopt sustainable business practices in coffee production. The desired social and environmental impact would not take place. Ultimately, this would adversely affect sustainable investors whose return depends on the sales of sustainable investee companies. This study has shown that a risk-return profile of sustainable investments that is comparable to one of conventional investments is a key success factor for mobilizing investors. Therefore, less demand would not only generate the risk that companies and related actors along the supply chain would loosen the links to the sustainability network. Less demand would lead to lower profits, which in turn would harm investors. As a result, there is also a risk that investors would loosen the links to the sustainability network. This example highlights the

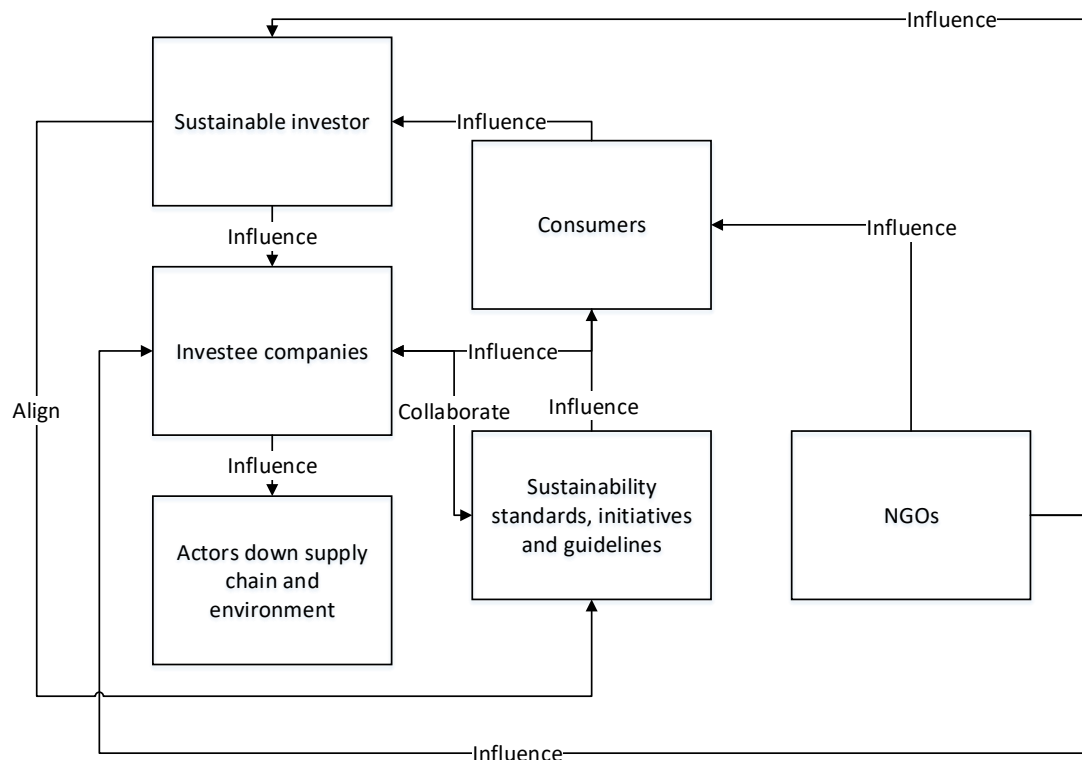


Figure 6.2: Extended impact chain of standards for sustainable investment
Source: Own diagram

need to mobilize consumers for the sustainability network. Their mobilization strengthens the network. The analysis has shown that several strategies of actors aim at mobilizing consumers and are thus important in the formation of the sustainability network. NGOs and the media inform consumers about sustainability issues and sensitize them. In this manner, they are able to mobilize consumers for the sustainable cause. Standard and certification

schemes have a similar effect. With their marketing efforts, they create awareness of social and environmental challenges. In supporting their clients in communicating the benefits of sustainability standards to address these issues, they help to mobilize consumers as well. Furthermore, such schemes' labels are at the interface to the consumers. Labels indicate to consumers in a simple manner that the production of the good they are purchasing upheld certain sustainability standards. This important role of labels is also underpinned by literature (Van Loo et al., 2015; De Boer, 2003).

The success and effectiveness of standards for sustainable investment in terms of potential impact on the ground is highly dependent on the translation of different actors within the network. The linear Figure 6.1 is thus too simplistic and does not account for the numerous associations. An extension of the latter is shown in Figure 6.2 that depicts a selection of direct and indirect network associations that are relevant for generating impact. The findings have shown that companies are influenced by several actors in a multi-centric manner. Financial players should not be viewed in isolation; instead their sustainable practices should go hand in hand with the practices of other actors within the network. Using ANT's resources calls for consideration of all relevant actors within the network in the development of standards for sustainable investment – whether they are vertical actors along the supply chain, or financial or other actors directly or indirectly associated with them. “Relevant” would be determined by the degree of their ability to mobilize other actors for sustainability. As such, the governance role of standards for sustainable investment is viewed as a mobilizing structure.

6.2 ANT-INSPIRED VIEW ON DESIGNING STANDARDS FOR SUSTAINABLE INVESTMENT

In this section, insights from the analysis are used to further explore relevant aspects in the designing of standards for sustainable investment. The following principles are inspired by the credibility principles of the *ISEAL Code of Good Practice for Setting Social and Environmental Goals (ISEAL Code)* (ISEAL, 2014).^{*} ISEAL is the global membership organization for sustainability standards and was mentioned by several interviewees (AP1, SI2, BA1, NG1). Furthermore, NGO NG1 and the sustainability standard organization SI2 explicitly mentioned the ISEAL Code as a reference document for the development of physical sustainability standards. Getting inspiration for the development of standards for sustainable investment from physical ones seems to be reasonable because the discussion about designing physical standards is significantly more advanced.

^{*}The ISEAL Credibility Standards were reviewed as of the end of 2019 and are currently in the consultation phase.

PRELIMINARY COMMENTS AND THE SCOPE OF THE FINANCIAL STANDARD SYSTEM

The following ideas for designing financial sustainability standards are based on the insights from analyzing the Swiss coffee network and are inspired by ANT resources. The insights from ANT are thereby operationalized in order to derive inputs for designing standards. The output of this analysis are good practices for developing standards for sustainable investment. The effectiveness of financial standards is expressed by their ability to mobilize actors for the sustainability network. This refers to mobilization of financial actors, physical actors along the supply chain, consumers, NGOs and many more. That is, financial actors' practices are passed to the actors along the supply chain and help to achieve the social and environmental goals within the network. The financial standard system must apply a holistic approach with respect to coverage of coffee investments. It should include indirect and direct investments in coffee as well as different investment strategies. While the ideas may also apply to other commodities or other asset classes, this study does not call for this generalization. For the remainder of this section, financial standard systems include standards for sustainable investment, monitoring and assurance mechanisms.

ALIGNMENT WITH SUSTAINABILITY GOALS

The analysis has shown that financial actors usually define their own standard. Harmonization with one globally agreed standard is not supported because a proprietary approach allows for differentiation among competitors and competition among standards is seen as beneficial. From an ANT point of view, this harmonization is not essential for successful translation of actors to the sustainability network as long as the individual actors align their sustainability efforts with those of the network. That is, they agree on global network sustainability goals and define their own strategy to achieve them. Such alignment results in standardization of the social and environmental goals among investors. This also allows for alignment of other actors within the network and limits the number of translations (Callon, 1990). Actors adapt their procedures to contribute to overarching network goals. In this manner, decentralized local practices among heterogeneous actors are coordinated and assembled to global ones (Latour, 2005).

However, this raises the question of whether a definition of globally agreed social and environmental goals is realistic or purely utopic? The analysis has shown that the interviewed actors have a common denominator with respect to sustainability goals for aligning their sustainability efforts: the SDGs. The SDGs are seen as a globally agreed framework for defining sustainability challenges and goals. This framework provides a common language and can be used for benchmarking purposes. As such, the SDGs are a reasonable candidate for this overarching definition of sustainability goals among the actors within the network. Choosing the SDGs for defining sustainability addresses two challenges raised

by interviewees for mobilizing actors: lack of definition of the term “sustainability” (AF1, SI1, IN1) and lack of established standards for sustainable investment (AF3, IN4, IN2). With individual financial standards evaluated in terms of contributions to achieve the SDGs, a global standard becomes redundant because actors already align their practices and work towards the achievement of these goals without the need for a global standard. The first principle for defining a standard for sustainable investment is thus:

→ *Principle 1 – aligning goals: financial standard system aligns its definition of sustainability in terms of social and environmental goals to globally agreed sustainability goals.*

ADDRESSING PREVALENT SUSTAINABILITY ISSUES

The standard system identifies the material sustainability issues in the coffee sector and defines a strategy to address them (SI1, IN4, BA2). For instance, the coffee sector issues include forced and child labor, soil erosion and degradation and inappropriate use of pesticides (non-exhaustive list). It is important to emphasize that for investors themselves, it is difficult and costly to map all the issues they are exposed to and define strategies to address them. This challenge can be overcome by their aligning their standards to existing sustainability standards and requiring investee companies to uphold them (see also *Principle 5*). Relevance is not limited to financial actors but extends to the associated actors within the network. This enables getting different heterogeneous actors along the supply chain mobilized for the network. Furthermore, the standard system seeks to improve the situation along the supply chain. Having a material impact mobilizes additional actors and stabilizes the network. Identifying the significant issues and strategies to remedy them addresses the “greenwashing” challenge raised (AP2, AF1, IN4). The second principle, being also consistent with ISEAL (2014), is summarized as follows:

→ *Principle 2 – addressing issues: financial standard system addresses the sustainability challenges in the coffee sector.*

DEFINING PERFORMANCE LEVELS AND CRITERIA

The financial standard system defines performance levels and criteria that are adequate to work towards the sustainability goals defined in *Principle 1* (mentioned by ten[†] interviewees). There are minimum requirements that must be fulfilled from the start and performance levels that must be reached over time. Let us take the issue of addressing the inappropriate use of pesticides. There is a list of prohibited pesticides that producers are not allowed to use (minimum requirement). Performance levels have been implemented for the handling

[†]See AF1, AP1, AP2, SI1, SI2, IN4, IN2, BA1, BA2, NG1.

of pesticides. For instance, a producer may start with 50 percent of total workers with access to the storage facility trained in the appropriate usage of pesticides. Over a defined period of time, this producer must reach a level of 100 percent. These performance levels are passed from financial actors to investee companies, which in turn pass them to their suppliers. In this way, the performance levels trickle down the supply chain, resulting in decentralized local practices becoming aligned with performance levels and criteria. These levels and criteria are the basis for verifying compliance with the standard, and measuring progress. They are thus an important element in designing the standard system and for a successful translation process. These insights are also consistent with what is stated in ISEAL (2014).

—> *Principle 3.1 – being rigorous: standard system defines performance levels and criteria that allow for checking conformity and measuring progress.*

INTRODUCING VERIFICATION

The standard system has rigorous mechanisms in place to check compliance with the standard. This requirement was mentioned by nine[‡] interviewees and is consistent with mechanisms recommended by ISEAL (2014). These ensure that financial actors and those along the supply chain adhere to the standard criteria and do not betray the notion of the sustainability network. Mechanisms are in place for sanctioning in case of non-conformity (SI1, SI2, IN4, IN2, NG1). Compliance is checked by means of external verification and certification (mentioned by eight[§] interviewees) to add credibility. The scope of verification includes the process and respective portfolios. Although external verification and certification are well established in physical standard systems, they are not common in the financial industry. But, the analysis has shown that several interviewees that are financial actors (AF3, IN2, IN4, BA1) support their introduction in the financial area as well. *Principle 5* highlights boundary conditions needed for convincing financial actors to carry out external verification and certification.

—> *Principle 3.2 – being rigorous: standard system exhibits a compliance assessment and adequate sanction mechanisms in case of non-conformity.*

INTRODUCING IMPACT MEASUREMENT

The standard system carries out impact measurement to guarantee that the standard is effective in addressing social and environmental challenges (AF1, AP1, SI1, IN2, BA1, NG1)

[‡]See AP1, AP2, SI1, SI2, IN4, IN1, IN2, BA1, NG1.

[§]See AF2, AP1, AP2, SI1, IN4, IN2, BA1, NG1.

which is also consistent with ISEAL (2014). The social and environmental goals from *Principle 1* serve as a benchmark to measure impact. For instance, the efforts in promoting the appropriate use of agrochemicals contribute to the SDGs 12 “Responsible Consumption and Production”. Impact assessment seeks to mobilize actors along the supply chain. If actors within the sustainability network begin to question the effectiveness of their sustainability efforts, they may start to loosen their links to the network, resulting in network stability at risk.

→ *Principle 3.3 – being rigorous: standard system carries out an impact assessment.*

CLEARLY FORMULATING THE STANDARD

The financial standard aims for all affected actors including investors, investee companies, auditors and other actors down the supply chain to understand the criteria and what is expected from them (AP2, SI2, IN4, BA1). Given the clear guidance, actors along the supply chain adopt the criteria in their daily practices, which supports achievement of the social and environmental goals. Furthermore, clear guidance limits the number of translations and supports the network-building process. These insights are also consistent with those by ISEAL (2014).

→ *Principle 3.4 – being rigorous: standard is clearly formulated, and all affected actors understand the requirements.*

INCLUDING AFFECTED ACTORS IN THE DEVELOPMENT PROCESS

Affected actors and those that are key to solving the sustainability issues are included in the development of the standard. No affected actor is marginalized *a priori*. Development involves, for instance, investment managers, asset owners, investee companies and NGOs (AF1, AF2, AF3, IN4, IN2, BA1). The aim of having the respective actors included in the development process seeks to produce practical standards. For instance, companies have on-the-ground experience that offers valuable insights. This resource supports the process of heterogeneous actors along the supply chain translating to the network. Furthermore, having non-firm actors like NGOs included helps to mobilize consumers for the sustainability network as they create awareness for sound sustainable practices. These insights on including the affected actors are also similar to those found by ISEAL (2014, p. 9), which recommends to include those actors “(...) that are likely to have an interest in the standard or that are likely to be affected by its implementation”. This principle is difficult and costly to implement for investors themselves as they are usually exposed to multiple issues in different sectors. As a result, there will be numerous affected actors to be considered. This

challenge can be overcome by aligning the investors' standards with the respective existing sustainability standards and requiring investee companies to uphold them (see *Principle 5*).

→ *Principle 4.1 – engaging with actors: standard system includes affected actors in the development process.*

ENGAGING WITH INVESTEE COMPANIES AND DERIVATIVE EXCHANGES

The financial standard favors a strategy that is based on engagement with investee companies (AF3, IN1). Close dialogue with investee companies should move them towards sustainable business practices. In such a way, they become interested in sustainability and can be enrolled in the sustainability network. The standard encourages teaming up with other investors to generate the strength necessary to get companies interested. This can be done by joining engagements organized by investor initiatives like the PRI. Investor initiatives represent the assets of many investors. Companies are therefore more likely to listen to investors' requests and the probability of a successful influence is thus greater. Investor initiatives themselves become the spokesmen of the larger group of sustainable investors and communicate with investee companies on behalf of the investors. A sustainability standard that includes engagement is also backed by empirical support. A number of studies show that engagement with investee companies has an impact (Kölbel et al. (2020); Dimson et al. (2015); Dyck et al. (2019)). Engagement also applies to futures investments. Investors should support the creation of futures on sustainably sourced commodities and represents this issue in dialogue with futures exchanges. Having a convergent and growing network ensures that there is also physical demand for futures on sustainably sourced commodities. This means that investors will find enough liquidity to trade these futures.

→ *Principle 4.2 – engaging with actors: standard builds on engagement with investee companies and futures exchanges.*

BEING ACCESSIBLE

The financial standard is built on *continuous improvement* (IN2, BA1). Although investee companies must fulfill minimum requirements in order to attract investments, the investor defines and communicates sustainability targets the companies have to reach over time. By not setting the hurdles too high, the financial standard is able to mobilize additional actors for the sustainability network. This is illustrated in the example for *Principle 3.1* about pesticides management. The standard has minimum requirements and defined performance levels. For instance, the minimum requirement for adopting the standard is 50 percent of total workers having access to the storage facility must be trained in safely handling pesti-

cides. Over each of the next five years, an additional 10 percent of the workers must be trained in order to reach a 100 percent level in five years. The financial standard is based on *alignment* with existing physical sustainability standards, initiatives, and guidelines (e.g. OECD guidelines, Fairtrade, 4C and Utz-RFA) (IN4). This ensures that financial standards translate to the local practices of the actors along the supply chain and that non-financial actors are mobilized for the network. Alignment avoids standard multiplicity, reduces the costs for the actors along the supply chain and thus supports the translation process. Furthermore, the standard system should minimize the *costs* for all actors that implement the criteria along the supply chain (AF3, IN4, IN1). Not setting the costs too high enables more actors to be mobilized for the sustainable cause. *Communication* of the financial standard is adapted to the conditions and local practices of the respective actors, including investors, investee companies and other actors along the supply chain. The form can be of any type, including different material and non-material artifacts that support the translation process (Latour, 2005; Callon, 1990). These include factsheets, detailed guidance documents and videos. The aspects *continuous improvement*, *alignment*, *costs* and *communication* are also consistent with those considered by ISEAL (2014).

→ *Principle 5 – being accessible: standard system is accessible for all actors.*

7

Conclusion

Using the theoretical resources enabled by ANT, this research has demonstrated how heterogeneous actors join forces to form a sustainability network analyzed by means of the example of the Swiss coffee network. It highlighted, in particular, the role of standards for sustainable investment to mobilize different actors. Standards for sustainable investment are one important type of non-human actors that transport agencies from local practice to local practice. The study's empirical foundation permitted a more nuanced understanding of the local practices of the individual actors and the networks they are embedded in. Furthermore, it allowed for analysis of the microprocesses involved in actor translation. These microprocesses revealed the motivations of the different actors to translate to the sustainable cause as well as the challenges for mobilizing actors to join the network. For instance, an association between financial and non-financial actors cannot necessarily be assumed. The findings show that financial actors do not normally take into account the sustainability issues of individual commodities or do not usually consider physical sustainability standards for coffee in their investment standards. Finally, the different individual networks were assembled to an aggregated network. In this aggregated network, key human and non-human actors were identified that are important for passing on sustainability criteria within the network. As stated above, one key non-human actor is the SDGs. They are the common denominator across the actors within the network. The SDGs provide a global framework for sustainability goals.

The insights gathered were used to make recommendations for relevant aspects in the designing of standards for sustainable investment. The definition of standards for sustainable investment was extended to a standards system that encompasses the standard itself and assurance and monitoring mechanisms. Based on the network analysis, this paper has

argued that the effectiveness of standards for sustainable investment is driven by the standards' ability to get actors translated to the sustainability network. It is of crucial importance that investors define criteria that trickle down the supply chains and that are integrated into the daily practices of all actors. Based on the analysis, relevance has been concluded for the following five principles for designing standards for sustainable investment: *aligning goals, addressing issues, being rigorous, engaging with actors* and *being accessible*. In Principle 1, the financial standard system's definition of sustainability in terms of social and environmental goals is aligned to globally agreed sustainability goals. Favorable candidates for these globally agreed sustainability goals are the SDGs. Principle 2 emphasizes the need for the financial standard system to address prevalent sustainability challenges. Principle 3 requires that the standard system defines performance indicators that allow checking conformity and measuring progress. Furthermore, the standard system must comprise a compliance assessment and adequate sanction mechanisms, in case of non-conformity. The assessment is also complemented by an impact assessment. The standard is clearly formulated in order for all affected actors to understand what is expected of them. Principle 4 calls for the inclusion of the affected actors in the development process. Engagement with actors like investee companies is seen as the preferred approach compared to those approaches based on exclusion. Principle 5 calls for the standard to be accessible for all actors and for lowering the barriers to implementation.

After summarizing the contributions, it is important to acknowledge the limitations of this study and suggest areas for further research. The literature on sustainable finance has neglected, for the most part, analysis of the optimal design of standards for sustainable investment. Further research will likely pick up on this topic and research it in detail. This study was aimed at making an early contribution to this important research field, in the hopes of inspiring other researchers to continue. Future research could thoroughly explore the optimal development process of standards systems for sustainable investment. For instance, which stakeholders to include in the development process in order to generate practical standards. Given the findings of this thesis, analyzing the role of physical market stakeholders in the development process would be well worthwhile. Furthermore, it is recommended to investigate the determinants of success in defining standards criteria to generate the greatest impact. In this context, the role of the SDGs in linking different types of actors is an important area of future research. These criteria could be built up over time on the basis of emerging empirical evidence. As the idea of a comprehensive standards system is new in sustainable finance, important aspects of assurance and monitoring mechanisms could also be studied in more detail. In this context, the question of suitable authorities to oversee and enforce standard criteria could be examined. In light of the wide spatial dimension of investee companies' supply chains some interviewees recommended assessing the suitability of international organizations as overarching authorities. While this

study does not claim generalizability, future studies may strive for that. They may include more commodities and could also analyze non-commodity-specific cases. Moreover, they might also address this study's limitation of small sample size. Future research on physical coffee markets can be expected to explore several aspects of standards development more thoroughly. For instance, standards based on data intelligence will likely be researched. Given the large amounts of data at present and the tools necessary to analyze it, means a more data-driven standards system is required. Furthermore, a future focus in the sector will likely be on measurement of the standards' impact and providing this information to buyers in order to increase transparency.

As a final remark, the author would like to stress that researching the optimal design of standards systems for sustainable investment is of crucial importance to the financial sector's future as a responsible and reliable player in the global economy. Financial capital plays an important role in sustainable development. Sound standard systems for sustainable investment have the potential of helping to solve sustainability challenges in the respective markets. Such optimally designed standards are thus for the benefit of us all – society and also our environment.



Appendix

A.1 GRAPH OF THE SDGs



Figure A.1: The Sustainable Development Goals (SDGs)
Source: United Nations

Interview preparation

Version: 21.07.19, Financial Institution

Alex Tobler

PhD Candidate
University of St. Gallen
Institute for Business Ethics

Supervisor

Prof. Dr. Florian Wettstein
University of St. Gallen
Institute for Business Ethics

Alex Tobler

alexander.tobler@student.unisg.ch

Figure A.2: Interview guide financial institution page 1
Source: Own display

Financial Institution

Allgemeine Fragen

1. Beschreiben Sie bitte kurz Ihre Organisation und Ihre Rolle im Markt
2. Bietet Ihre Organisation nachhaltige Anlagelösungen an?
Falls ja, weshalb?
3. Was ist dabei die Rolle von Technologie?
4. Welche Richtlinien und Standards (inkl. Nachhaltigkeitsinitiativen) sind für Sie relevant?
5. Beschreiben Sie bitte die Wirkungskette von Standards und Richtlinien im Finanzbereich
6. Wie gross ist bei Ihnen der Anteil an nachhaltigen Anlagelösungen?
7. Wie kann erreicht werden, dass mehr Investoren nachhaltig anlegen?

Fragen in Bezug auf Kaffee

8. Wie sind Sie in Kaffee investiert?
(Jede Form von Exposure zu Kaffee, direkt oder entlang der Liefer- bzw. Wertschöpfungskette)
9. Was sind die Kontroversen und Herausforderungen im Kaffeemarkt? Was sind potentielle Kontroversen im Rahmen Ihrer Geschäftstätigkeit?
10. Was für eine Rolle spielen Standards und Richtlinien?
11. Was sind die Vor- und Nachteile bestehender Standards und Richtlinien am Beispiel von Kaffee?
12. Wie sind Standards und Richtlinien im Finanzbereich mit denen im physischen Bereich verknüpft?
13. Was zeichnet effektive Standards und Richtlinien aus?
14. Wie sollen effektive Standards und Richtlinien ausgestaltet werden?

Figure A.3: Interview guide financial institution page 2
Source: Own display

Bibliography

- Ahn, D. P. (2011). Improving energy market regulation. techreport, Council on Foreign Relations.
- Akoyi, K. T. and Maertens, M. (2018). Walk the talk: Private sustainability standards in the Ugandan coffee sector. *The Journal of Development Studies*, 54(10):1792–1818.
- Aktas, N., De Bodt, E., and Cousin, J.-G. (2011). Do financial markets care about SRI? Evidence from mergers and acquisitions. *Journal of Banking & Finance*, 35(7):1753–1761.
- Amel-Zadeh, A. and Serafeim, G. (2018). Why and how investors use ESG information: Evidence from a global survey. *Financial Analysts Journal*, 74(3):87–103.
- Argenti, P. A. (2004). Collaborating with activists: How Starbucks works with NGOs. *California management review*, 47(1):91–116.
- Arjaliès, D.-L. and Bansal, P. (2018). Beyond numbers: How investment managers accommodate societal issues in financial decisions. *Organization Studies*, 39(5-6):691–719.
- Auld, G. (2010). Assessing certification as governance: effects and broader consequences for coffee. *The Journal of Environment & Development*, 19(2):215–241.
- Bansal, P. and DesJardine, M. R. (2014). Business sustainability: It is about time. *Strategic Organization*, 12(1):70–78.
- Barbier, E. B. and Burgess, J. C. (2017). The Sustainable Development Goals and the systems approach to sustainability. Economics Discussion Papers 2017-28, Kiel Institute for the World Economy.
- Barclays (2019). Risk on, funds in, commodities AUM up. Barclays Commodities Investor Chartbook, Barclays.
- Bennett, E. A. (2017). Who governs socially-oriented voluntary sustainability standards? Not the producers of certified products. *World Development*, 91:53–69.
- Berns, M., Townend, A., Khayat, Z., Balagopal, B., Reeves, M., Hopkins, M. S., and Kruschwitz, N. (2009). The business of sustainability: What it means to managers now. *MIT Sloan Management Review*, 51(1):20–26.
- Bitzer, V., Francken, M., and Glasbergen, P. (2008). Intersectoral partnerships for a sustainable coffee chain: Really addressing sustainability or just picking (coffee) cherries? *Global Environmental Change*, 18(2):271–284.

Bloomberg (2017). Index Methodology: The Bloomberg Commodity Index Family. Technical report, Bloomberg.

Bloomberg (2019). Rabobank leads groundbreaking credit facility for Mercon. Website: <https://www.bloomberg.com/press-releases/2019-05-13/rabobank-leads-groundbreaking-credit-facility-for-mercon> [20.08.2020].

Borghesi, R., Houston, J. F., and Naranjo, A. (2014). Corporate socially responsible investments: CEO altruism, reputation, and shareholder interests. *Journal of Corporate Finance*, 26:164–181.

Brandstetter, L. and Lehner, O. M. (2015). Opening the market for impact investments: The need for adapted portfolio tools. *Entrepreneurship Research Journal*, 5(2):87–107.

Braun, V. and Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2):77–101.

Bridges Ventures (2012). Sustainable & impact investment. How we define the market. Technical report.

Brown, E., Derudder, B., Parnreiter, C., Pelupessy, W., Taylor, P., and Witlox, F. (2007). Spatialities of globalization: Towards an integration of research on world city networks and global commodity chains. Working paper, Globalization and World Cities Research Network.

Bull, B. and McNeill, D. (2019). From market multilateralism to governance by goal setting: SDGs and the changing role of partnerships in a new global order. *Business and Politics*, 21(4):464–486.

Busch, L. and Juska, A. (1997). Beyond political economy: Actor networks and the globalization of agriculture. *Review of International Political Economy*, 4(4):688–708.

Bush, S. R., Oosterveer, P., Bailey, M., and Mol, A. P. (2015). Sustainability governance of chains and networks: A review and future outlook. *Journal of Cleaner Production*, 107:8–19.

Callon, M. (1984). Some elements of sociology of translation: Domestication of the scallops and the fishermen of St Brieuc Bay. *The Sociological Review*, 32(S1):196–233.

Callon, M. (1990). Techno-economic networks and irreversibility. *The Sociological Review*, 38(S1):132–161.

Capelle-Blancard, G. and Monjon, S. (2012). Trends in the literature on socially responsible investment: Looking for the keys under the lamppost. *Business Ethics: A European review*, 21(3):239–250.

- Castleberry, A. and Nolen, A. (2018). Thematic analysis of qualitative research data: Is it as easy as it sounds? *Currents in Pharmacy Teaching and Learning*, 10:807–815.
- Castree, N. (2002). False antitheses? Marxism, nature and actor-networks. *Antipode*, 34(1):111–146.
- Cerin, P. and Scholtens, B. (2011). Linking responsible investments to societal influence: Motives, assessments and risks. *Sustainable Development*, 19(2):71–76.
- Cheng, I.-H. and Xiong, W. (2014). Financialization of commodity markets. *Annu. Rev. Financ. Econ.*, 6(1):419–441.
- Chew, E. and Childe, M. (2019). *Sustainable Development Goals: Harnessing Business to Achieve the SDGs Through Finance, Technology and Law Reform*, chapter How Asset Managers Can Better Align Public Markets Investing with the SDGs, pages 143–166. Wiley Online Library.
- Chiputwa, B., Spielman, D. J., and Qaim, M. (2015). Food standards, certification, and poverty among coffee farmers in Uganda. *World Development*, 66:400–412.
- Clapp, J. (2017). Responsibility to the rescue? Governing private financial investment in global agriculture. *Agriculture and Human Values*, 34(1):223–235.
- Clark, G. L., McGill, S., Saito, Y., and Viehs, M. (2015). Institutional shareholder engagement with Japanese firms. *Annals in Social Responsibility*, 1(1):30–56.
- Coe, N. M., Dicken, P., and Hess, M. (2008). Global production networks: Realizing the potential. *Journal of Economic Geography*, 8(3):271–295.
- Collingwood, V. (2006). Non-governmental organisations, power and legitimacy in international society. *Review of International Studies*, 32(3):439–454.
- Crawford, C. S. (2005). *Encyclopedia of Social Theory*. SAGE Publications.
- Daniel, S. (2012). Situating private equity capital in the land grab debate. *The Journal of Peasant Studies*, 39(3):703–729. Land Grab Farmland.
- Daviron, B. and Vagneron, I. (2011). From commoditisation to de-commoditisation ... and back again: Discussing the role of sustainability standards for agricultural products. *Development policy review*, 29(1):91–113.
- De Boer, J. (2003). Sustainability labelling schemes: The logic of their claims and their functions for stakeholders. *Business Strategy and the Environment*, 12(4):254–264.
- de Schutter, O. (2010). Food commodities speculation and food price crises: Regulation to reduce the risks of price volatility. Briefing Note 2, United Nations.

- Deaton, A. and Laroque, G. (1992). On the behaviour of commodity prices. *The Review of Economic Studies*, 59(1):1–23.
- Deaton, A. and Laroque, G. (1996). Competitive storage and commodity price dynamics. *The Journal of Political Economy*, 104(5):896–923.
- Del Fabbro, O. (2019). Relationale Existenzweisen von Maschinen. In *Mensch-Maschine-Interaktion*, pages 63–70. Springer.
- Delmas, M. A. and Burbano, V. C. (2011). The drivers of greenwashing. *California management review*, 54(1):64–87.
- Dietz, T., Grabs, J., and Chong, A. E. (2019). Mainstreamed voluntary sustainability standards and their effectiveness: Evidence from the Honduran coffee sector. *Regulation & Governance*, pages 1–23.
- Dimson, E., Karakaş, O., and Li, X. (2015). Active Ownership. *The Review of Financial Studies*, 28(12):3225–3268.
- Dragusanu, R., Giovannucci, D., and Nunn, N. (2014). The economics of fair trade. *Journal of economic perspectives*, 28(3):217–36.
- Drempetic, S., Klein, C., and Zwergel, B. (2019). The influence of firm size on the ESG score: Corporate sustainability ratings under review. *Journal of Business Ethics*, pages 1–28.
- Dubuisson-Quellier, S. and Lamine, C. (2008). Consumer involvement in fair trade and local food systems: Delegation and empowerment regimes. *GeoJournal*, 73:55–65.
- Dunham, L. M. and Singal, V. (2016). *CFA Institute Investment Foundations Program Curriculum*, chapter Equity Securities, pages 309–341. CFA Institute.
- Dyck, A., Lins, K. V., Roth, L., and Wagner, H. F. (2019). Do institutional investors drive corporate social responsibility? International evidence. *Journal of Financial Economics*, 131(3):693–714.
- El Bilali, H. and Allahyari, M. S. (2018). Transition towards sustainability in agriculture and food systems: Role of information and communication technologies. *Information Processing in Agriculture*, 5(4):456–464.
- Escrig-Olmedo, E., Muñoz-Torres, M. J., and Fernandez-Izquierdo, M. A. (2010). Socially responsible investing: sustainability indices, ESG rating and information provider agencies. *International Journal of Sustainable Economy*, 2(4):442–461.
- Escrig-Olmedo, E., Muñoz-Torres, M. J., and Fernández-Izquierdo, M. Á. (2013). Sustainable development and the financial system: Society’s perceptions about socially responsible investing. *Business Strategy and the Environment*, 22(6):410–428.

- Ethos (2016). Exclusion criteria. Company document (online available), Ethos Foundation.
- Etikan, I., Musa, S. A., and Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1):1–4.
- Eurosif (2018). European SRI Study. Technical report, Eurosif.
- EVPA (2015). A practical guide to measuring and managing impact. Technical report, European Venture Philanthropy Association.
- EY and UNGC (2016). The state of sustainable supply chains: Building responsible and resilient supply chains. Technical report, Ernst & Young and United Nations Global Compact.
- Fairtrade (2013). Powering up smallholder farmers to make food fair: A five point agenda. Technical report, Fairtrade Foundation.
- Filho, W. L., Azeiteiro, U., Alves, F., Pace, P., Mifsud, M., Brandli, L., Caeiro, S. S., and Disterheft, A. (2018). Reinvigorating the sustainable development research agenda: the role of the Sustainable Development Goals (SDG). *International Journal of Sustainable Development & World Ecology*, 25(2):131–142.
- FLO (2015). Fairtrade International Standards and related information. Technical report, Fairtrade International.
- FLO (2017a). About Fairtrade. Website: <https://www.fairtrade.net/about-fairtrade.html> [20.08.2017].
- FLO (2017b). Aims of Fairtrade Standards. Website: <https://www.fairtrade.net/standards/aims-of-fairtrade-standards.html> [26.08.2017].
- FLO (2017c). Fairtrade: Our standards. Website: <https://www.fairtrade.net/standards/our-standards.html> [27.08.2017].
- FLO (2017d). Fairtrade: Standards. Website: <https://www.fairtrade.net/standards.html> [26.08.2017].
- FLO (2017e). The Fairtrade System. Website: <https://www.fairtrade.net/about-fairtrade/fairtrade-system.html> [20.08.2017].
- Friede, G., Busch, T., and Bassen, A. (2015). ESG and financial performance: aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment*, 5(4):210–233.
- FT (2015). Commodity price falls trigger big drop in assets. Website: <https://www.ft.com/content/3a45da66-9690-11e4-a83c-00144feabdc0> [18.08.2020].

- Gad, C. and Jensen, C. B. (2010). On the consequences of post-ANT. *Science, Technology, & Human Values*, 35(1):55–80.
- García-Sánchez, I.-M., Rodríguez-Ariza, L., Aibar-Guzmán, B., and Aibar-Guzmán, C. (2020). Do institutional investors drive corporate transparency regarding business contribution to the Sustainable Development Goals? *Business Strategy and the Environment*, 29(5):2019–2036.
- Gereffi, G., Guinn, A., and Bamber, P. (2014). Burundi in the coffee global value chain: Skills for private sector development. Technical report, Duke University Center on Globalization, Governance and Competitiveness.
- GIIN (2016). Achieving the Sustainable Development Goals: The role of impact investing. Technical report, Global Impact Investing Network.
- Given, L. M. (2008). *The SAGE encyclopedia of qualitative research methods*. Sage publications.
- Gond, J.-P. and Boxenbaum, E. (2013). The glocalization of responsible investment: Contextualization work in France and Québec. *Journal of Business Ethics*, 115(4):707–721.
- Gond, J.-P. and Piani, V. (2012). Enabling institutional investors' collective action: The role of the principles for responsible investment initiative. *Business & Society*, 52(1):64–104.
- Goodall, E. and Malmberg, K. (2013). Understanding the Impact of Your Investments – Measuring Environmental and Social Performance. Technical report, PRI Association.
- Goodman, L. A. (1961). Snowball sampling. *Annals of Mathematical Statistics*, 32(1):148–170.
- Gorton, G. and Rouwenhorst, K. G. (2006). Facts and fantasies about commodity futures. *Financial Analysts Journal*, 62(2):47–68.
- Grabs, J. (2020). Assessing the institutionalization of private sustainability governance in a changing coffee sector. *Regulation & Governance*, 14(2):362387.
- Gresham (2019). Alternative risk premia in commodities. Gresham Research, Gresham Investment Management.
- Grim, D. M. and Berkowitz, D. B. (2018). ESG, SRI, and impact investing: A primer for decision-making. Vanguard Research, Vanguard.
- Guay, T., Doh, J. P., and Sinclair, G. (2004). Non-governmental organizations, shareholder activism, and socially responsible investments: Ethical, strategic, and governance implications. *Journal of Business Ethics*, 52(1):125–139.

- Gwilym, R. and Ebrahim, M. S. (2013). Can position limits restrain 'rogue' trading? *Journal of Banking & Finance*, 37(3):824–836.
- Haase, M., Seiler, Y., and Zimmermann, H. (2016a). The impact of speculation on commodity futures markets – A review of the findings of 100 empirical studies. *Journal of Commodity Markets*, 3:1–15.
- Haase, M., Zimmermann, Y. S., and Zimmermann, H. (2016b). Ein alternativer Rohstoffindex. *Schweizer Personalvorsorge*, 29(6):91–92.
- Hancock, J. (2005). *An Investor's Guide to Ethical & Socially Responsible Investment Funds*. Kogan Page Limited.
- Heinkel, R., Kraus, A., and Zechner, J. (2001). The effect of green investment on corporate behavior. *Journal of Financial and Quantitative Analysis*, 36(4):431–449.
- Hilpold, C. and Kaiser, D. G. (2013). *Alternative Investment-Strategien*. Wiley Finance, 2 edition.
- Hixon, S., Tao, H., and Wolle, S. (2018). Implementing a multi-factor commodity strategy: A practitioner's approach. Technical report, Invesco.
- Hong, H. and Kacperczyk, M. (2009). The price of sin: The effects of social norms on markets. *Journal of Financial Economics*, 93(1):15–36.
- Horowitz, L. S. (2012). Translation alignment: Actor-network theory, resistance, and the power dynamics of alliance in New Caledonia. *Antipode*, 44(3):806–827.
- Hughes, A., Wrigley, N., and Buttle, M. (2008). Global production networks, ethical campaigning, and the embeddedness of responsible governance. *Journal of Economic Geography*, 8(3):345–367.
- IFC (2012). Interpretation note on financial intermediaries. techreport, International Finance Corporation.
- inrate (2018). Inrate's ESG impact rating methodology: Corporations (equities & bonds). techreport, inrate.
- Irwin, S. H. and Sanders, D. R. (2011). Index funds, financialization, and commodity futures markets. *Applied Economic Perspectives and Policy*, 33(1):1–31.
- Irwin, S. H., Sanders, D. R., and Merrin, R. P. (2009). Devil or angel? The role of speculation in the recent commodity price boom (and bust). *Journal of Agricultural and Applied Economics*, 41:393–402.
- ISEAL (2014). ISEAL Code of Good Practice for Setting Social and Environmental Standards. techreport Version 6.0, ISEAL Alliance.

ISEAL (2018). Assuring Compliance with Social and Environmental Standards: ISEAL Code of Good Practice. techreport, ISEAL Alliance.

ISS ESG (2020). ESG corporate rating. techreport, ISS ESG.

Ivanova, M. R. (2017). Institutional investors as stewards of the corporation: Exploring the challenges to the monitoring hypothesis. *Business Ethics: A European Review*, 26(2):175–188.

Jahn, G., Schramm, M., and Spiller, A. (2005). The reliability of certification: Quality labels as a consumer policy tool. *Journal of Consumer Policy*, 28(1):53–73.

Janesick, V. J. (2010). *Handbook of Qualitative Research*, chapter The Choreography of Qualitative Design: Minuets, Improvisations, and Crystallization, pages 379–399. Sage Publications.

Jansson, M. and Biel, A. (2011). Motives to engage in sustainable investment: a comparison between institutional and private investors. *Sustainable Development*, 19(2):135–142.

Jarosz, L. (2000). Understanding agri-food networks as social relations. *Agriculture and Human Values*, 17:279–283.

Jena, P. R., Chichaibelub, B. B., Stellmachera, T., and Grote, U. (2012). The impact of coffee certification on small-scale producers' livelihoods: A case study from the Jimma Zone, Ethiopia. *Agricultural Economics*, 43:429–440.

Joergens, C. (2006). Ethical fashion: Myth or future trend? *Journal of Fashion Marketing and Management*, 10(3):360–371.

Kapstein, E. B. (2018). Governing the global land grab. *Global Policy Volume*, 9(2):173–183. Land Grab Farmland.

Kayser, L., Paris, M., and Ross, L. (2011). Structuring a commodities portfolio. Russel Research, Russel Investments.

Kölbel, J. F., Heeb, F., Paetzold, F., and Busch, T. (2020). Can sustainable investing save the world? Reviewing the mechanisms of investor impact. *Organization & Environment*, 0(0):1–21.

Latour, B. (1983). *Science Observed: Perspectives on the Social Study of Science*, chapter Give Me a Laboratory and I will Raise the World, pages 141–170. Sage Publications.

Latour, B. (1986). Visualization and Cognition. *Knowledge and Society*, 6(1):1–40.

Latour, B. (1996). On actor-network theory: A few clarifications. *Soziale Welt*, 47(4):369–381.

Latour, B. (1999). On recalling ANT. *The Sociological Review*, 47(1):15–25.

- Latour, B. (2005). *Reassembling the Social: An introduction to Actor-Network Theory*. Oxford University Press.
- Law, J. (1987). In *The social construction of technological systems*, chapter Technology and heterogenous engineering: The case of Portuguese, pages 111–134. MIT Press.
- Law, J. (1992). Notes on the theory of the actor-network: Ordering, strategy, and heterogeneity. *Systems practice*, 5(4):379–393.
- Law, J. (1999). After ANT: Complexity, naming and topology. *The Sociological Review*, 47(1S):1–14.
- Lernoud, J., Potts, J., Sampson, G., Garibay, S., Lynch, M., Voora, V., Willer, H., and Wozniak, J. (2017). The State of Sustainable Markets – Statistics and Emerging Trends 2017. Technical report, International Trade Centre (ITC).
- Lincke, D.-M. (2016). Commodities as an asset class: Delivering beta and beyond. *CFA Institute Conference Proceedings Quarterly*, 33(1):1–10.
- Lozano, R. (2015). A holistic perspective on corporate sustainability drivers. *Corporate Social Responsibility and Environmental Management*, 22(1):32–44.
- Majoch, A. A. A., Hoepner, A. G. F., and Hebb, T. (2017). Sources of stakeholder salience in the responsible investment movement: Why do investors sign the Principles for Responsible Investment? *Journal of Business Ethics*, 140(4):723–741.
- Manning, S., Boons, F., von Hagen, O., and Reinecke, J. (2012). National contexts matter: The co-evolution of sustainability standards in global value chains. *Ecological Economics*, 83:197–209.
- Marshall, C. and Rossman, G. B. (2016). *Designing Qualitative Research*. Sage Publications, 6 edition.
- McNellis, P. E. (2009). Foreign investment in developing country agriculture – the emerging role of private sector finance. FAO Commodity and Trade Policy Research Working Paper No. 28, FAO.
- Merker, C. K. (2018). Four challenges in the ESG market: What's next? Website: <https://blogs.cfainstitute.org/investor/2018/07/18/four-challenges-in-the-esg-market-whats-next/> [16.08.2020].
- Merton, R. K., Fiske, M., and Kendall, P. L. (1990). *The Focused Interview: A Manual of Problems and Procedures*. The Free Press, 2 edition.
- Michaelis, L. (2003). The role of business in sustainable consumption. *Journal of Cleaner production*, 11(8):915–921.

Michelson, G., Wailes, N., Van Der Laan, S., and Frost, G. (2004). Ethical investment processes and outcomes. *Journal of Business Ethics*, 52(1):1–10.

Millard, E. (2017). Still brewing: Fostering sustainable coffee production. *World Development Perspectives*, 7-8:32–42.

Mitiku, F., De Mey, Y., Nyssen, J., and Maertens, M. (2017). Do private sustainability standards contribute to income growth and poverty alleviation? A comparison of different coffee certification schemes in Ethiopia. *Sustainability*, 9(2):246.

Muradian, R. and Pelupessy, W. (2005). Governing the coffee chain: The role of voluntary regulatory systems. *World Development*, 33(12):2029–2044.

Murdoch, J. (1997). Inhuman/nonhuman/human: Actor-network theory and the prospects for a nondualistic and symmetrical perspective on nature and society. *Environment and Planning D: Society and Space*, 15(6):731–756.

Murdoch, J. (2000). Networks – a new paradigm of rural development? *Journal of Rural Studies*, 16(4):407–419.

National Research Council (2003). *Protecting Participants and Facilitating Social and Behavioral Sciences Research*. National Academies Press.

OECD (2012). Defining and measuring green investments: Implications for institutional investors' asset allocations. OECD Working Papers on Finance, Insurance and Private Pensions 24, OECD.

oekom research (2016). oekom Corporate Responsibility Review 2016. Technical report, oekom research.

Pirrong, C. (2014). The economics of commodity trading firms. Technical report, Trafigura.

Ponte, S. (2019). *Business, Power and Sustainability in a World of Global Value Chains* Ponte, Stefano. *Business, Power and Sustainability in a World of Global Value Chains (S.viii)*. Zed Books. Kindle-Version. Zed Books Ltd, Zed Books Ltd.

PRI (2012). Responsible investment in farmland: A compendium of case studies. Technical report, PRI Association.

PRI (2015). Responsible investment in farmland: Report 2014-2015. Technical report, PRI Association.

PRI (2017). The SDG Investment Case. Technical report, PRI Association.

PRI (2020a). About the PRI. Website: <https://www.unpri.org/pri>.

- PRI (2020b). EU Sustainable Finance Taxonomy. Website: <https://www.unpri.org/sustainable-markets/eu-sustainable-finance-taxonomy/4567.article> [10.08.2020].
- Rabobank (2018). Rabobank sustainability policy framework. techreport, Rabobank Group.
- Rasche, A., Waddock, S., and McIntosh, M. (2013). The United Nations Global Compact: Retrospect and prospect. *Business & Society*, 52(1):6–30.
- Raynolds, L. T. (2002). Consumer/producer links in fair trade coffee networks. *Sociologia Ruralis*, 42(4):404–424.
- Raynolds, L. T. (2009). Mainstreaming fair trade coffee: From partnership to traceability. *World Development*, 37(6):1083–1093.
- Rego, A., e Cunha, M. P., and Polónia, D. (2017). Corporate sustainability: A view from the top. *Journal of Business Ethics*, 143(1):133–157.
- Reinecke, J., Manning, S., and von Hagen, O. (2012). The Emergence of a Standards Market: Multiplicity of Sustainability Standards in the Global Coffee Industry. *Organization Studies*, 33(5-6):791–814.
- Richardson, B. J. (2007). Financing sustainability: The new transnational governance of socially responsible investment. *Yearbook of International Environmental Law*, 17(1):73–110.
- Richardson, B. J. (2009). Keeping ethical investment ethical: Regulatory issues for investing for sustainability. *Journal of Business Ethics*, 87(4):555–572.
- Rivoli, P. (2003). Making a difference or making a statement? Finance research and socially responsible investment. *Business Ethics Quarterly*, 13(3):271–287.
- Rosen, B. N., Sandler, D. M., and Shani, D. (1991). Social issues and socially responsible investment behavior: A preliminary empirical investigation. *Journal of Consumer Affairs*, 25(2):221–234.
- RSPO (2019). RSPO Annual Communications of Progress 2019: International Finance Corporation (ifc). techreport, Roundtable on Sustainable Palm Oil.
- Ruben, R. and Fort, R. (2011). The impact of fair trade certification for coffee farmers in Peru. *World Development*, 40(3):570–582.
- Ruggie, J. G. (2001). The Global Compact as learning network. *Global Governance: A Review of Multilateralism and International Organizations*, 7(4):371–378.

- Sandberg, J., Juravle, C., Hedesström, T. M., and Hamilton, I. (2009). The heterogeneity of socially responsible investment. *Journal of Business Ethics*, 87(4):519–533.
- Scalet, S. and Kelly, T. F. (2010). CSR rating agencies: What is their global impact? *Journal of Business Ethics*, 94(1):69–88.
- Schramade, W. (2017). Investing in the UN Sustainable Development Goals: Opportunities for companies and investors. *Journal of Applied Corporate Finance*, 29(2):87–99.
- Schueth, S. (2003). Socially responsible investing in the United States. *Journal of Business Ethics*, 43(3):189–194.
- Schwegler, R. and Amstutz, C. (2017). Sustainability in the Swiss retail banking sector: WWF rating of the Swiss retail banking sector 2016/2017. techreport, WWF Switzerland and Inrate.
- Setó-Pamies, D. and Papaoikonomou, E. (2020). Sustainable Development Goals: A powerful framework for embedding ethics, CSR, and sustainability in management education. *Multidisciplinary Digital Publishing Institute*, 12:1762.
- Sievänen, R., Sumelius, J., Islam, K. M. Z., and Sell, M. (2013). From struggle in responsible investment to potential to improve global environmental governance through UN PRI. *International Environmental Agreements: Politics, Law and Economics*, 13(2):197–217.
- Singal, V. (2016). *CFA Institute Investment Foundations Program Curriculum*, chapter Derivatives, pages 343–365. CFA Institute.
- Sjoerd Panhuysen, S. and Pierrot, J. (2018). Coffee barometer 2018. Technical report.
- Spangenberg, J. H. (2017). Hot air or comprehensive progress? A critical assessment of the SDGs. *Sustainable Development*, 25(4):311–321.
- Spar, D. L. and La Mure, L. T. (2003). The power of activism: Assessing the impact of NGOs on global business. *California management review*, 45(3):78–101.
- SSF (2019). Swiss Sustainable Investment Market Study 2019. techreport, Swiss Sustainable Finance.
- Star, S. L. (1991). *A sociology of monsters: essays on power, technology, and domination*, chapter Power, Technology and the Phenomenology of Conventions: On being Allergic to Onions, pages 26–56. Routledge.
- Strähle, J. and Gräff, C. (2007). *Green fashion retail*, chapter The role of social media for a sustainable consumption, pages 225–247. Springer.
- Strambach, S. and Surmeier, A. (2018). From standard takers to standard makers? The role of knowledge-intensive intermediaries in setting global sustainability standards. *Global Networks*, 18(2):352–373.

Strauss, A. L. (1987). *Qualitative analysis for social scientists*, chapter Introduction - Part I, pages 1–21. Cambridge University Press.

STSA (2018). A journey along the commodity chain. Technical report, STSA.

Sue, V. M. and Ritter, L. A. (2012). *Conducting Online Surveys*. Sage Publications, 2 edition.

Tayleur, C., Balmford, A., Buchanan, G. M., Butchart, S. H., Ducharme, H., Green, R. E., Milder, J. C., Sanderson, F. J., Thomas, D. H., Vickery, J., et al. (2017). Global coverage of agricultural sustainability standards, and their role in conserving biodiversity. *Conservation Letters*, 10(5):610–618.

Taylor, P. L., Murray, D. L., and Raynolds, L. T. (2005). Keeping trade fair: governance challenges in the fair trade coffee initiative. *Sustainable Development*, 13(3):199–208.

Telser, L. G. (1981). Why there are organized futures markets. *Journal of Law & Economics*, 24(1):1–22.

Tobler, A., Haase, M., and Sigg, P. (2017). *Handbook on Sustainable Investments*, chapter Integrating Sustainability into Commodity Investing, pages 129–133. CFA Institute Research Foundation.

Trafigura (2018). Commodities demystified: A guide to trading and the global supply chain. Technical report, Trafigura.

Turcotte, M.-F., Reinecke, J., and den Hond, F. (2014). Explaining variation in the multiplicity of private social and environmental regulations: a multi-case integration across the coffee, forestry and textile sectors. *Business and Politics*, 16(1):151–189.

Ugarte, S., D'Hollander, D., and Tregurtha, N. (2017). SDGs mean business: How credible standards can help companies deliver the 2030 Agenda. Technical report, WWF.

UN (2020). The 17 Goals. Website: <https://sdgs.un.org/goals> [28.08.2020].

UNCTAD (2011). Price formation in financialized commodity markets: The role of information. Technical report, UNCTAD.

UNCTAD (2014). Investing in the SDGs: An action plan. World investment report 2014, UNCTAD.

United Nations (2015). Sustainable Development Goals kick off with start of new year. Website: <https://www.un.org/sustainabledevelopment/blog/2015/12/sustainable-development-goals-kick-off-with-start-of-new-year/> [16.09.2018].

United Nations (2020). Sustainable Development Goals: Guidelines for the use of the SDG logo including the colour wheel, and 17 icons. techreport, United Nations.

Van Duuren, E., Plantinga, A., and Scholtens, B. (2016). ESG integration and the investment management process: Fundamental investing reinvented. *Journal of Business Ethics*, 138(3):525–533.

Van Loo, E. J., Caputo, V., Jr., R. M. N., Seo, H.-S., Zhang, B., and Verbeke, W. (2015). Sustainability labels on coffee: Consumer preferences, willingness-to-pay and visual attention to attributes. *Ecological Economics*, 118:215–225.

Vanguard (2012). The role of fixed income as part of a diversified investment strategy. Research Brief, Vanguard.

Vanguard (2015a). Investment fundamentals: An introduction to the basic concepts of investing. Technical report, Vanguard.

Vanguard (2015b). Understanding bonds: How they work and why your adviser might recommend them. Technical report, Vanguard.

Von Wallis, M. and Klein, C. (2015). Ethical requirement and financial interest: A literature review on socially responsible investing. *Business Research*, 8(1):61–98.

Weber, O. (2018). *Designing a Sustainable Financial System*, chapter Financial Sector Sustainability Regulations and Voluntary Codes of Conduct: Do They Help to Create a More Sustainable Financial System?, pages 383–404. Palgrave Macmillan.

Whittaker, J. (2006). Reflecting on Callon with a case of fair trade coffee. Research report, University of Exeter.

Woods, C. and Urwin, R. (2010). Putting sustainable investing into practice: A governance framework for pension funds. *Journal of Business Ethics*, 92(Supplement 1):1–19.

Yang, S., Song, Y., and Tong, S. (2017). Sustainable retailing in the fashion industry: A systematic literature review. *Sustainability*, 9(7):1266.

Yin, R. K. (2003). *Case study research: Design and methods*, volume 5. Sage Publications, 3 edition.

Yin, R. K. (2011). *Qualitative Research from Start to Finish*. The Guilford Press.

Yin, R. K. (2018). *Case Study Research and Applications: Design and Methods*. Sage Publications.

Curriculum vitae

Name Alexander Tristan Tobler

Studies

2017 — 2021	Ph.D. Programme in Organisation Studies and Cultural Theory, University of St. Gallen	St. Gallen
2013 — 2015	CFA Programme	
2010 — 2012	Master of Arts in Banking & Finance, University of Zurich	Zurich
2006 — 2010	Bachelor of Arts in Banking & Finance, University of Zurich	Zurich
2005 — 2006	University of St. Gallen	St. Gallen

Work experience

08/20 — now	Zürcher Kantonalbank Head Investment Architecture	Zurich
03/15 — 07/20	Berner Kantonalbank AG Head Investment Advisory Portfolio Manager	Berne
04/14 — 02/15	Picard Angst AG Portfolio Manager	Pfäffikon SZ
01/08 — 03/14	ALNUA Investment Managers Head Portfolio Management Portfolio Manager Financial Analyst	Zurich